

James City County Ordinance Water Consumption Contrast

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IMPORTANT

This is not an official New Kent County document and is not legal advice.

James City County’s Data Center Policy on Water Consumption Constraints

James City County’s water consumption guidelines are a reasonable baseline of guidance, but they are substantially softer and less enforceable than the most effective water-related constraints currently in effect in Virginia and progressive model ordinances.

(Note: Your request asks for a contrast against the most effective *noise* guidelines. Water rules and noise rules address different impacts and are not directly comparable. The assessment below therefore evaluates the listed water guidelines against the strongest *water* standards now in use or recommended, which is the coherent and useful comparison. If you intended a literal water-vs-noise comparison, that would not yield meaningful policy insights.)

James City County Guidelines (as provided)

- Connect to a public water system; do not use wells for any water needs.
- Consult the public water purveyor to confirm sufficient capacity, incorporate suggested water-reducing measures, and submit evidence of consultation with the initial SUP application.
- Prefer closed-loop liquid cooling systems or other methods that reduce water usage to the least possible.
- Submit and obtain approval of a Water Conservation Agreement covering maintenance schedules for closed-loop systems, irrigation limits, drought-tolerant landscaping, and water-conserving fixtures/appliances.

These are framed as “should” guidance for Special Use Permit review rather than mandatory zoning performance standards.

Contrast with the Most Effective Water Constraints Currently in Effect

The strongest current approaches convert similar concepts into binding, quantifiable, and ongoing requirements. Key examples include York County, Virginia’s ordinance and progressive model/language used by advocacy groups and other localities:

1. Public-water connection and well prohibition James City uses advisory language (“should”). York County makes connection to a public water system *mandatory* and explicitly *prohibits* wells. This is a hard barrier against local aquifer impacts—particularly important in the Coastal Plain where DEQ modeling has shown limited sustainable groundwater yields for large users.

2. Capacity confirmation and long-term accountability James City requires consultation and evidence at the SUP stage. Stronger rules (York County and similar) require a formal letter from the water purveyor that states the *full operating capacity* volume the facility will use. They

further require re-verification every five years confirming that actual use remains within the approved amount. Expansion beyond a defined threshold (commonly 25%) triggers a new public process. This prevents post-approval demand creep and gives the locality continuing leverage.

3. Cooling technology and minimization of water use James City prefers closed-loop systems or “other methods to reduce usage to the least possible.” More effective standards require or strongly mandate closed-loop, non-evaporative, dry-cooler, or direct-to-chip liquid cooling that approaches zero routine evaporative loss. They also require specific conservation methods (rainwater harvesting, recycling/reuse systems) that must be approved by the locality and shown on the site plan. Preference or requirement for reclaimed/recycled municipal wastewater (where available) appears in progressive guidance and is already used by major operators. Industry reference designs increasingly achieve near-zero on-site evaporative consumption; the best ordinances push projects toward that performance level rather than leaving it discretionary.

4. Conservation agreements, drought priority, and impact analysis James City’s Water Conservation Agreement is useful for operational details. Stronger packages add:

- Mandatory public disclosure of projected water demand (average and peak).
- Hydrogeologic or water-impact studies before approval.
- Explicit prioritization of potable/domestic uses during drought or shortage.
- Developer responsibility for any required infrastructure upgrades.
- Pollution-prevention measures for cooling-related discharges or chemicals.

Sierra Club-style local guidelines and model ordinances emphasize these elements along with best-available-technology efficiency standards and protection of private wells.

5. Quantification and metrics James City sets no numeric targets (e.g., Water Usage Effectiveness / WUE or absolute volume caps). Leading practice increasingly requires disclosure of projected WUE or gallons-per-kWh/MW figures and favors systems that drive on-site cooling water toward zero under normal conditions. Some proposals also include rainwater-harvesting mandates for a percentage of roof area.

Summary Assessment

James City’s guidelines correctly identify the key risks (groundwater dependence, high evaporative demand, lack of conservation discipline) and point applicants toward better practices. They are not, however, among the most effective constraints currently in effect. The stronger packages convert the same ideas into mandatory public-water connection with well bans, quantified full-capacity utility letters with periodic re-verification and expansion limits, required near-zero-evaporative cooling plus reuse/harvesting, public impact analysis, and drought prioritization of potable water.

For a highly restrictive New Kent ordinance, the most protective approach would adopt James City’s core direction but harden it into zoning performance standards modeled on York County and progressive guidance: mandatory public-water connection and well prohibition, full-capacity utility letters with five-year re-checks and expansion caps, required closed-loop or equivalent

near-zero-evaporative systems, approved conservation/reuse measures shown on plans, public water-impact analysis, and explicit priority for domestic uses during shortages. This would produce a measurably stronger water regime than the current James City guidance. See York County re-verification protocols for data centers below:

York County, Virginia’s re-verification protocols for data centers are codified in Section 24.1-489.1 of the Zoning Ordinance (Standards for data centers). They form part of the performance standards adopted in June 2025 (Ordinance No. 25-16(R)) and apply to special use permit (SUP) approvals.

Core Requirements

Initial approval (at SUP application):

- Applicants must submit a letter from the electric utility purveyor confirming sufficient proximity and availability to a substation and transmission lines **with sufficient capacity** to serve the proposed data center. The letter must specify the amount of energy and voltage level the facility will use **at full operating capacity**.
- Applicants must submit a letter from the public water purveyor indicating sufficient capacity to serve the proposed data center. The letter must specify the amount of water the facility will use **at full operating capacity**.
- Capacity certification is based on the project’s full/ultimate build-out (not just initial phases).

Ongoing re-verification:

- The data center **shall submit a letter from the electric utility and public water purveyor every five (5) years**, verifying that the data center is using the **same amount of electricity and water as was approved**.
- This is a mandatory, recurring obligation tied to the approved SUP.

Expansion limits linked to the protocol:

- The data center may expand its usage of electricity or water by **no more than twenty-five percent (25%)** of the amount originally approved.
- Any increase beyond 25% is treated as an amendment to the special use permit and is subject to the standards and procedures in Section 24.1-115(d). This requires Board of Supervisors review after a duly advertised public hearing. The Board may attach additional conditions. The applicant bears the cost of advertising and hearings.

Context and Intent from Adoption

During the June 17, 2025 Board meeting, supervisors (notably Supervisor Holroyd) explicitly added the five-year re-verification language, the “with sufficient capacity” phrasing, and the 25% expansion cap. The goal was to prevent “creep” in demand—e.g., denser servers increasing load without a larger building footprint—and to protect the broader community from infrastructure

costs or grid/water strain being passed on to ratepayers. Capacity letters are required for the facility at full capacity so future growth cannot occur without review.

Related Supporting Rules

- All data centers must connect to a public water system; wells are prohibited.
- Water conservation methods (e.g., rainwater harvesting, recycling) must be employed, approved by the County, and shown on the site plan.
- The five-year letters cover both electricity and water.

In short, the protocol creates a closed loop: initial full-capacity certification → five-year utility confirmation that usage has not increased → hard 25% expansion ceiling that triggers a new public SUP process if exceeded. This is one of the clearer ongoing accountability mechanisms among Virginia localities regulating data centers.