

Data Center Series Forum #2 Summary: Water and Data Centers

Purpose:

Data centers are increasingly essential to regional economic growth and government operations. At the same time, they present new challenges for water utilities and local governments related to demand uncertainty, peak use, infrastructure planning, and public trust. The forum brought together utilities, regional planners, researchers, local governments, industry, and policy organizations to ground the discussion in facts and identify practical paths forward.

Key Takeaways:

- **Data center water demand is highly variable.** Water use depends on cooling technology, IT load, climate, and operations, with unknown tenants and evolving AI workloads complicating long-term planning.
- **Peak demand, not average use, drives regional risk.** Short-duration, high-demand periods (often during hot, dry conditions) create the greatest strain on water and energy infrastructure.
- **The Potomac River requires basin-wide, cumulative impact management.** As a shared and vulnerable resource, regional coordination is essential because individual projects may appear manageable while cumulative impacts pose significant risk.
- **New growth must cover the cost of new infrastructure.** Early coordination between utilities, planners, and economic development teams helps ensure new development pays for the infrastructure it needs and avoids higher costs for existing customers.
- **Policy and land-use tools matter.** Zoning overlays, infrastructure ordinances, and transparent data sharing help guide where and how data centers are built and reduce unintended impacts.
- **Regional coordination is critical.** Water, energy, land use, and technology decisions are tightly linked, and coordinated regional planning enables economic growth while safeguarding long-term system reliability.

Implications for Decision Makers:

- **Early engagement matters:** Utilities must be involved before land use and economic development decisions are finalized.
- **Transparency is critical:** Better data sharing improves planning and public trust.
- **Regional coordination is essential:** Water, land use, and energy decisions in one jurisdiction affect others.
- **Policy alignment works:** Zoning, adequate public facilities ordinances, consumptive use regulations, and targeted incentives can manage cumulative impacts effectively.

Bottom Line:

Data centers do not create entirely new water challenges, but they intensify existing vulnerabilities. Proactive coordination, transparent data, disciplined land-use policy, and sustained regional collaboration are essential to support economic growth while maintaining long-term water reliability and affordability.