

**Andrew Dehoff, P.E., Executive Director, Susquehanna River Basin Commission**

**Testimony for The Center for Rural Pennsylvania Board of Directors**

**“Data Centers: Mapping the Landscape Across State, Local, Industry, and Environmental Perspectives”**

**April 17, 2026**

The Susquehanna River Basin Commission (SRBC) was formed by a mutual agreement via Compact by the federal government and our member states, New York, Pennsylvania and Maryland, on December 24, 1970. Each state and the federal government has one commissioner, making up what is basically our board of directors. Typically, the governor of each state appoints someone from their environmental department, such as the Secretary of PA’s Department of Environmental Protection, to represent the state. The federal government is represented by the US Army Corps of Engineers.

The Susquehanna River drains about half of Pennsylvania, roughly through the center of the Commonwealth. Generally our purpose is to foster coordinated water resource management within the river basin for the good of the residents, businesses and aquatic ecosystem. That covers all arenas from flood preparedness and drought management, to water supply allocations and water quality interests. To the east, the Delaware River Basin Commission has mostly similar duties. There is a Potomac River Basin commission in the south, but it does not have regulatory authority. There is no similar commission in the western part of the state, including in the Ohio River Basin.

With that background, why is SRBC interested in data centers? With Pennsylvania poised to become a hub for data centers, there are many things to consider – power demands, consumer pricing, land use, job creation, tax revenue to name a few. But one of the most critical aspects of data center development, and that of most interest to the Commission, is the potential demand for high water use.

Data centers have existed in Pennsylvania for years without the need for very much water, or very much power for that matter. It is the newest generation of data center, often called hyperscale data centers, designed to handle massive amounts of data with growing demands of cloud computing for purposes like artificial intelligence and cryptocurrency, that are proving to require larger amounts of power and with that an associated high demand for water.

Why the high demand for water at a building running computers? The high-speed computing that is performed at hyperscale data centers generates a lot of heat that must be dissipated to avoid harm to the servers. Traditionally, water based cooling methods have provided a convenient and cost effective way to achieve the needed cooling by transferring excess heat to the water and evaporating it. That’s where SRBC comes in. Our regulatory authority is over the withdrawal and consumption of water. Consumptive use is an activity that does not return water to its source, such as evaporative cooling processes. Our states do NOT regulate this activity, so SRBC does so on their behalf.

The consumption of water matters for drought management. If we're in a dry spell and massive amounts of water are being taken from our waterways and not returned, that has implications for downstream users and their ability to rely on the rivers for their own purposes.

At the hyperscale level, a single data center campus can evaporate millions of gallons of water per day, potentially putting a significant strain on the local water resources. With that anticipated water demand, hyperscale data centers could be among the largest consumers of water in Pennsylvania, especially when considered as a whole. To put it in perspective, millions of gallons a day is more water than is used by most communities with public drinking water systems. Most industrial facilities use less than one million. A typical, fully-irrigated golf course will potentially use up to half a million per day when the sprinklers are all turned on.

SRBC regulates any withdrawal over 100,000 gallons per day and any water consumption over 20,000 gpd. We issue what we call approvals, basically permits, for those activities so we can manage the usage. Our approvals can, and often do, include some restrictions on water use during droughts. Our regulations also require that consumptive users mitigate for their water use during droughts; in other words, offer some offset so that downstream users and the aquatic ecosystem are not significantly adversely impacted. That can take the form of finding alternative sources, employing water conservation, or paying a fee to SRBC for us to undertake mitigation collectively on their behalf.

So where will the data centers get the water they need? That depends largely on what type of cooling method is chosen. Using traditional evaporative cooling methods, it is unlikely that a hyperscale data center will be able to obtain enough water from the local public water supplier. So if the data center is proposing to supply its own water from groundwater wells or a nearby stream or river, careful review will be necessary to ensure that the volume of water needed can be safely supported by the source without depleting it, without denying water to existing users, and without harming aquatic habitat and wildlife.

Developing new water sources takes time – for permitting, to build infrastructure such as pipelines and large pumps, to secure the power needed to run the pumps – so these centers run the real risk of wanting to be up and running before the water supply is in place. That's why it is critical that we have discussions about water before companies finalize site selection and begin design and construction.

Now is the perfect time to discuss alternative cooling methods such as dry or hybrid cooling. This type of innovative technology greatly reduces the water demands without compromising feasibility. And we've proved it with power plants.

In 2015, 93 million gallons per day (equivalent to 75%) of all reported consumptive water use in the basin was attributed to existing power generation. At the same time, several new gas-fired power plants were being proposed, each with 6-10 million gallons per day of additional demand.

At the SRBC it's our job to plan ahead to sustainably manage the amount of water available in our basin. We recognize the need to balance strong economic growth with everyday human needs and a healthy environment. Part of striking that balance is looking for ways to conserve, reduce and mitigate water use.

So in response, our commissioners adopted a resolution that encouraged and offered incentives to use dry cooling technology for new power generation. Dry cooling uses ambient air to cool and condense steam, drastically lowering the amount of water consumed. Although at first resistant to the additional up-front costs and the threat of loss of efficiency in power generation, each of the four new plants that were constructed employed dry cooling, with impressive results.

Through 2024, more than 45 billion gallons of water use has been avoided by the four plants. That's as much as a 98% reduction of demand. One facility significantly reduced their public water supply demand, which helped them to meet their NPDES/discharge requirements. And because they didn't have to co-locate with a water source, one was able to be sited at the intersection of transmission and gas lines, avoiding the need to extend a costly electrical transmission line. Each plant also saved, and continues to save, operational costs through permitting incentives and lesser fees.

Now, witnessing another potential large water user enter the scene, our commissioners expanded that resolution to encourage data centers and other emerging facilities to consider the use of dry, hybrid, or other water-saving technologies for cooling purposes. Many big tech companies are pledging to go greener with new, less water-intensive cooling methods at new data centers. It is incumbent upon elected officials in Pennsylvania to ensure they follow-through on their promises.

There is good news early in the data center game here in the Susquehanna River Basin. Despite the dozens of proposals we're hearing about in the news, just as you are, the Commission has issued only one hyperscale data center permit to date – Amazon Data Services in Salem Township, Luzerne County. They are approved for 129,000 gallons per day of consumptive use. That's less than the average golf course uses for irrigation. They are using a form of hybrid cooling, having implemented water-saving technology that we advocate for.

We have one other application in house, which is asking to use less than 70,000 gallons of public wastewater. The project has stalled at the local level. And we had one other application withdrawn because the cooling technology they chose put them under our permitting thresholds entirely.

**So again, it is extremely important to note that data center water usage varies greatly depending on the cooling technology chosen.** Data centers that use dry cooling can potentially be below our regulatory thresholds as they use minimal water amounts. Ones using evaporative cooling could use millions of gallons per day. Although we do not have any applications for that type of set-up in our basin at this time, that does not mean they will not be proposed in the future.

It has been our experience that the large corporations (Amazon, Microsoft, etc.) have interest in utilizing water saving technology over full evaporative cooling – at least in early proposals in our Basin. It is often the land developers who have yet to find a tenant that propose higher water usage to start as they are unsure what the final design may become.

But even if every future data center chooses dry cooling, water will still take a hit. In other parts of the country, and potentially locally in the near future, new power plants are being proposed solely to provide



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the electricity needed to run these facilities. Just like data centers, power plants also generate heat that must be dissipated, and traditionally (prior to our dry cooling push) have relied on evaporative cooling. Power plants are already by far the largest users of water in the Susquehanna River Basin, and in Pennsylvania as a whole.

Smart planning ahead for both new data centers and power plants will be key moving forward. Pennsylvania Department of Environmental Protection's Permit Application Consultation Tool (PACT) has proven effective at identifying potential challenges early in the process. The Susquehanna River Basin Commission (SRBC) should continue to be included in group coordination meetings that arise from use of the tool. In addition, it is important that data center developers schedule pre-application meetings with us very early in the planning process. We know this is just the very beginning of an expanding industry, one we're ready to accommodate with the proper balancing – not unlike, in many ways, the dawn of fracking in our basin.

Our regulations exist so that all users of the basin's water resources have reliable, conflict-free, and sustainable water supply for current and future generations, even as demographic, economic, and climate conditions evolve. We believe we have the necessary technology, knowledge and structure in place to incorporate hyperscale data centers into the mix in the same fashion.

### ***About the Susquehanna River Basin Commission***

*The Susquehanna River Basin Commission is a federal/interstate government agency responsible for protecting and wisely managing the water resources within the 27,500 square-mile Susquehanna River Basin without regard to political boundaries. The Susquehanna rises and flows through New York, Pennsylvania, and Maryland into the Chesapeake Bay. For more information on the Commission, visit [www.srbc.gov](http://www.srbc.gov)*