

PA COUNCIL OF TROUT UNLIMITED
POLICY STATEMENT ON ARTIFICIAL INTELLIGENCE DATA CENTERS
SEPTEMBER 2025
Revised August 2026

The purpose of this statement is to provide general information and guidance to our chapters and members pertaining to the development of AI Data Centers in Pennsylvania in regards to potential impacts to our cold water resources. While PATU recognizes the importance and economic benefit of AI Data Centers, we are promoting responsible development thereof. PATU also recognizes that the technology driving AI Data Center development is continuously evolving in the interest of increasing environmental sustainability.

What is an AI Data Center?

An AI data center is a specialized data center designed to handle the immense computational demands of artificial intelligence workloads, utilizing advanced hardware like GPUs and TPUs, high-speed networking, and massive storage to efficiently train and deploy AI models and applications. Unlike traditional data centers, AI data centers require significant power and advanced cooling systems due to the continuous, resource-intensive nature of AI tasks.

Why are AI Data Centers coming to Pennsylvania?

Pennsylvania has always been blessed with abundant natural resources. Unfortunately, unfettered extraction of these resources like lumber and coal have historically led to some of the worst examples of environmental degradation to our cold water habitat. Pennsylvania's abundance of water for cooling, abundant land and interstate access, and available energy including natural gas makes the state attractive for AI Data Center development.

What are PATU's concerns regarding development of AI Data Centers and potential impacts on our cold water resources?

- Siting
 - AI data center acreage varies significantly, but the trend is toward massive campuses ranging from several dozen acres to over 1,000 acres. In the Pocono region of Pennsylvania, a developer is planning a 1,000-acre campus with 34 buildings across two townships.
 - Land use decisions in Pennsylvania are handled at the municipal level through zoning boards and municipal government.
 - These large campuses dramatically increase the amount of impervious surface, Impervious surfaces, like roads and rooftops, negatively impact the environment by increasing stormwater runoff, causing pollution, and altering natural water cycles. This leads to issues like flooding, habitat destruction, and decreased water quality.
- Water consumption.
 - Water is used to cool the processor chips. Water use for cooling is primarily sourced from municipal water, wells and recycled or reclaimed water. Municipal water sources are primarily surface water (rivers, lakes, and reservoirs) and groundwater (from underground aquifers). While water consumption can vary greatly based on the size of the facility and differences in cooling technology, large data centers can consume up to

5 million gallons per day, equivalent to the water use of a town populated by 10,000 to 50,000 people.

- The cooling process involves multiple stages where water is lost. In typical chilled water systems, water is cooled in central chillers, and then circulated through cooling coils that absorb heat from data center air. The heated water then passes to cooling towers where it interacts with outside air, allowing heat to escape. During this evaporative cooling process, significant amounts of water are permanently lost to the atmosphere.
 - The industry is continually developing new cooling technologies that would require less water consumption like immersion cooling and direct to chip cooling.
 - Due to the high demand for electricity required to operate the AI Data Centers, water is also consumed in the production of electricity by thermal power plants (coal, natural gas, nuclear) by boiling water to produce steam that drives turbines.
- Energy use.
 - The massive energy demand is outstripping the growth of renewable energy sources, driving up overall electricity consumption. Many data centers are still powered by electricity grids that rely heavily on fossil fuels, leading to substantial carbon dioxide emissions and contributing to climate change.
 - The extensive use of diesel backup generators adds to emissions .

Therefore, the PA Council of Trout Unlimited has the following recommendations pertaining to the development of AI Data Centers.

1. Promote the PennFuture [model zoning ordinance](#) with suggested provisions addressing water consumption, power consumption, noise, and aesthetic concerns.
2. Attend local municipal meetings to gather information, ask questions and address any potential impacts to our cold water resources.
3. Promote use of appropriate sites like brownfields (former industrial sites) instead of using forest, farmland and other natural areas.
4. Because of the large impervious surface created by these developments, robust riparian buffers and best management practices should be utilized to control storm water to ensure no impact to our cold water resources if sited in sensitive areas. Stormwater management should incorporate green infrastructure to manage stormwater onsite through plant uptake and ground infiltration to eliminate off-site discharges to the extent possible.
5. Promote development and use of more sustainable cooling methods and energy use.
6. Increase transparency of actual water consumption. Utilize the water feasibility study found in PennFuture's model zoning ordinance.
7. Promote renewable energy sources both on campus, e.g. rooftop solar and in support of the grid.
8. Increase transparency of energy use.

National Trout Unlimited Policy Framework for Responsible Data Center Development.

[TroutUnlimitedDataCenterPolicy_5_4_26.pdf](#)