

# AI Data Center Development and the Pinelands Regulatory Context



CMP Policy and Implementation Committee

March 27, 2026

# Presentation Outline

- **Data centers:** evolving footprints and impacts
- **CMP standards:** permitted uses, management areas, and environmental standards
- **CMP review processes:** ordinances and development applications
- **Conclusion and Discussion**

**The Commission has not received any applications for the development of data center in the Pinelands.**

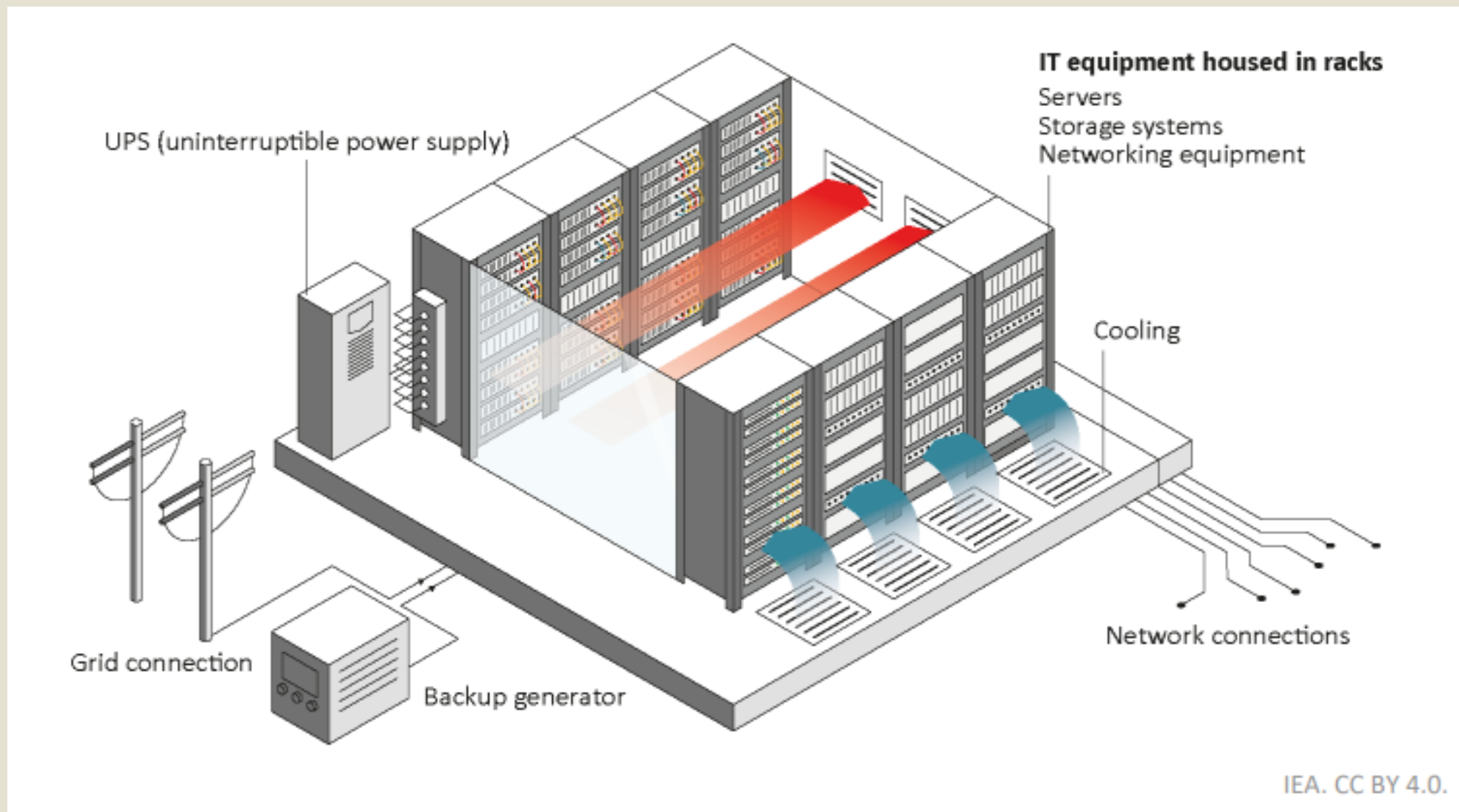
# Data centers

Evolving footprints and impacts

# What is a data center?

- Facilities that house servers and digital infrastructure supporting cloud computing, AI, and data storage
- Operate continuously (24/7) with significant power and cooling demands
- Types:
  - Enterprise
  - Colocation and service provider
  - Hyperscale

# What is a data center?



# What is a data center?

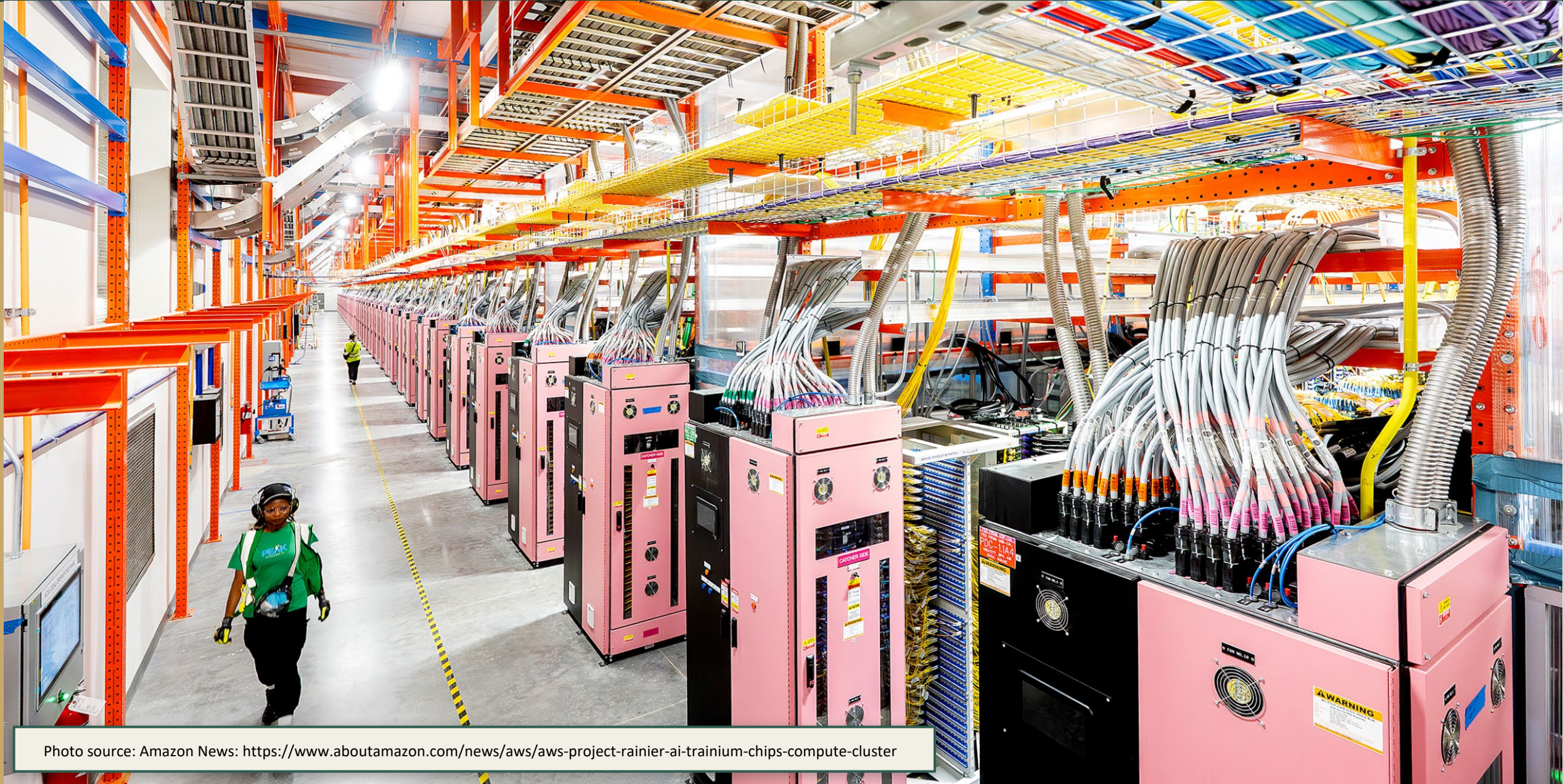


Photo source: Amazon News: <https://www.aboutamazon.com/news/aws/aws-project-rainier-ai-trainium-chips-compute-cluster>

# Scale/Growth Trends

- Rapid growth driven by AI, cloud storage, and digital demand
- Increasing facility size
  - Conventional data center: 10-25 MW
  - Hyperscale, AI-focused data center: 100 MW+
- Preference for locations with access to:
  - High-capacity electric transmission
  - Fiber connectivity
  - Available land for expansion
- Often co-located with other industrial or logistics uses

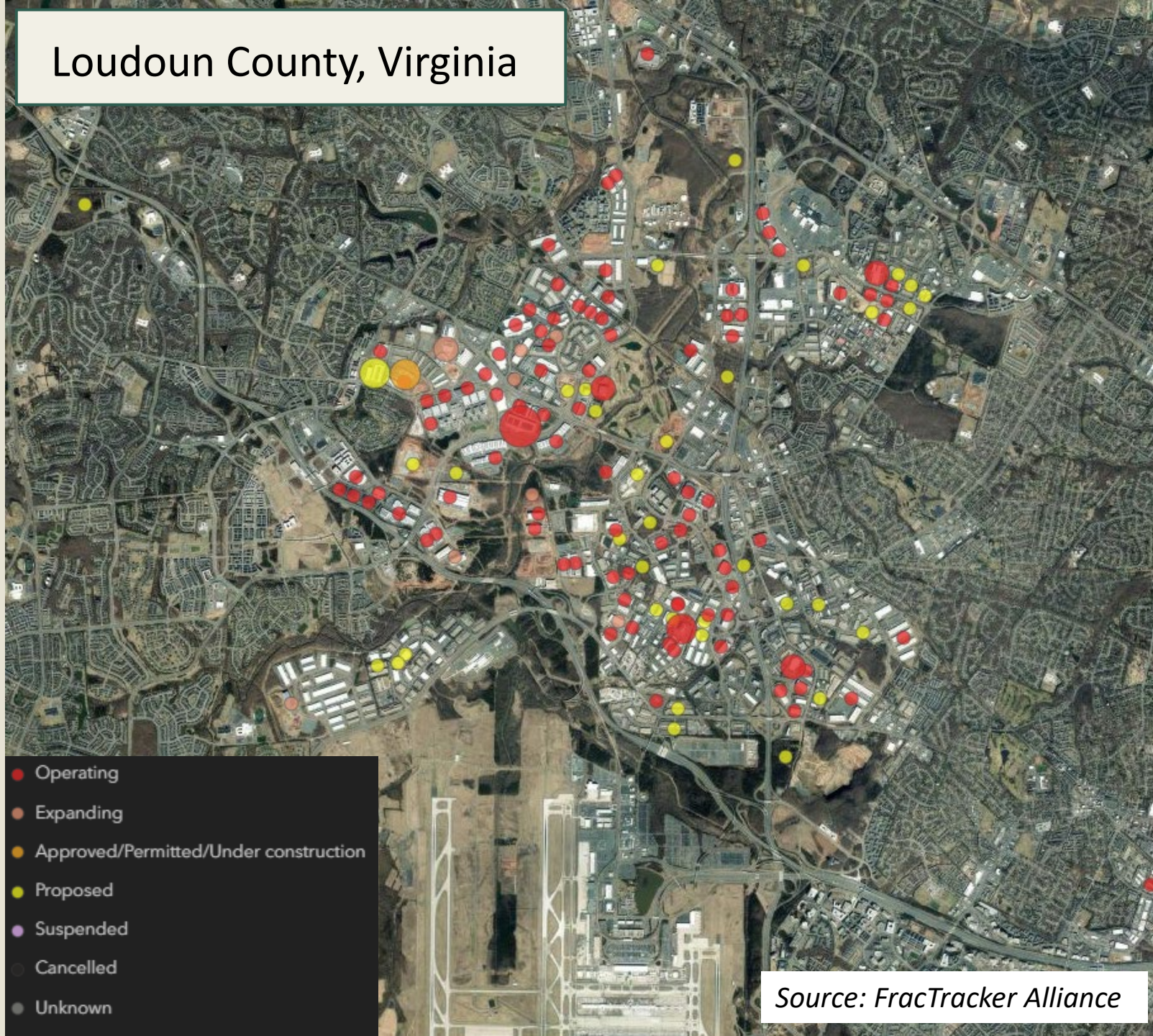


## Amazon data center (New Carlisle, Indiana)

Photo source: New York Times: <https://www.nytimes.com/2025/06/24/technology/amazon-ai-data-centers.html>

- 1,200-acre site (previously farmland)
- 30 x 200,000 sq.ft. data centers planned
- 2.2 GW of power consumption – drawing from nuclear, coal and renewables

# Loudoun County, Virginia



Source: *FracTracker Alliance*

# Impacts: Energy, Water, Land Use

- High electricity demand and associated infrastructure needs
  - Large data centers are exploring behind-the-meter power generation as well as battery energy storage systems
- Water usage as part of HVACs for cooling electronics
- Land consumption: large building footprints
- Potential noise and visual impacts
- Compatibility considerations with surrounding land uses

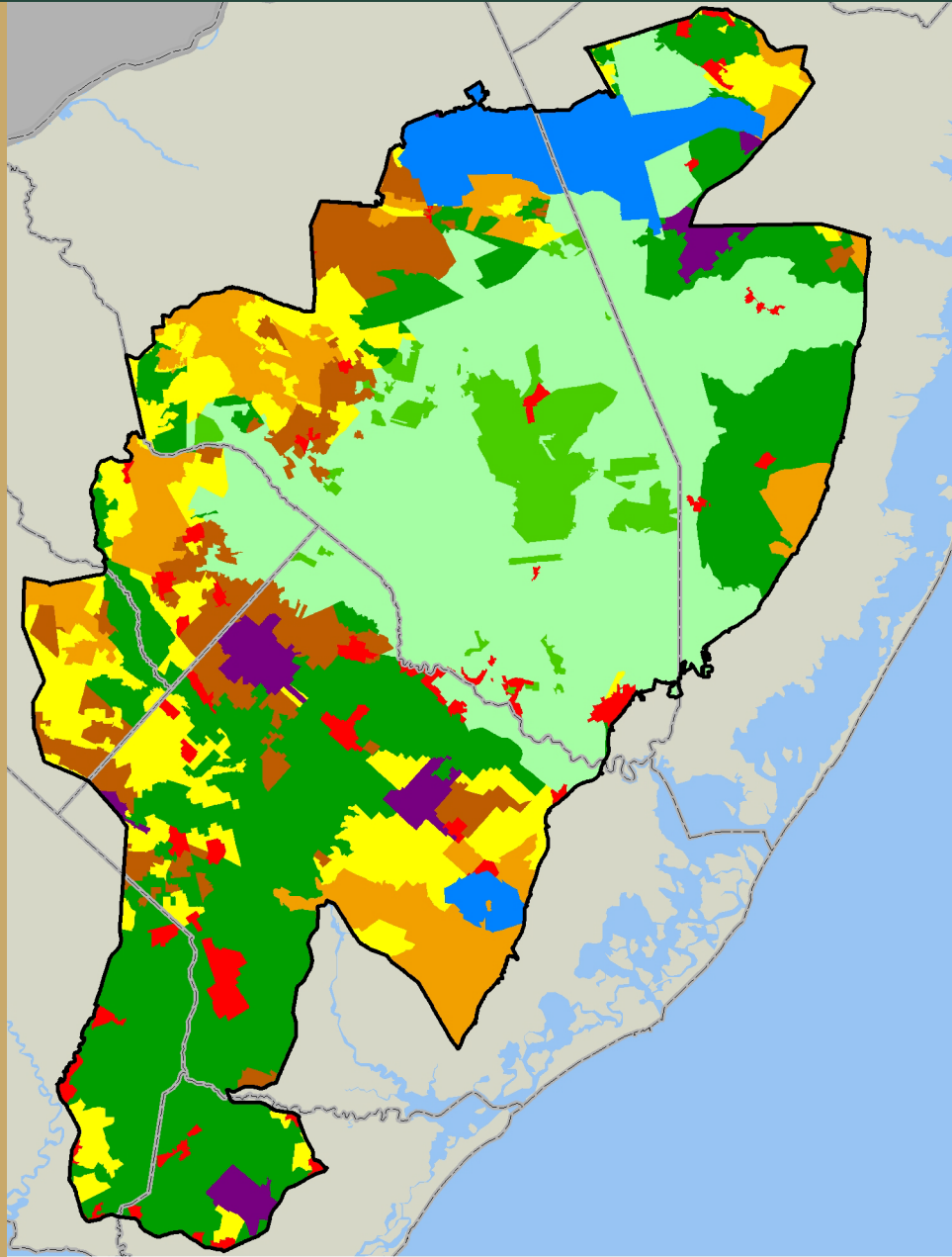
# CMP standards

Permitted uses, management areas, and  
environmental standards

# CMP Framework

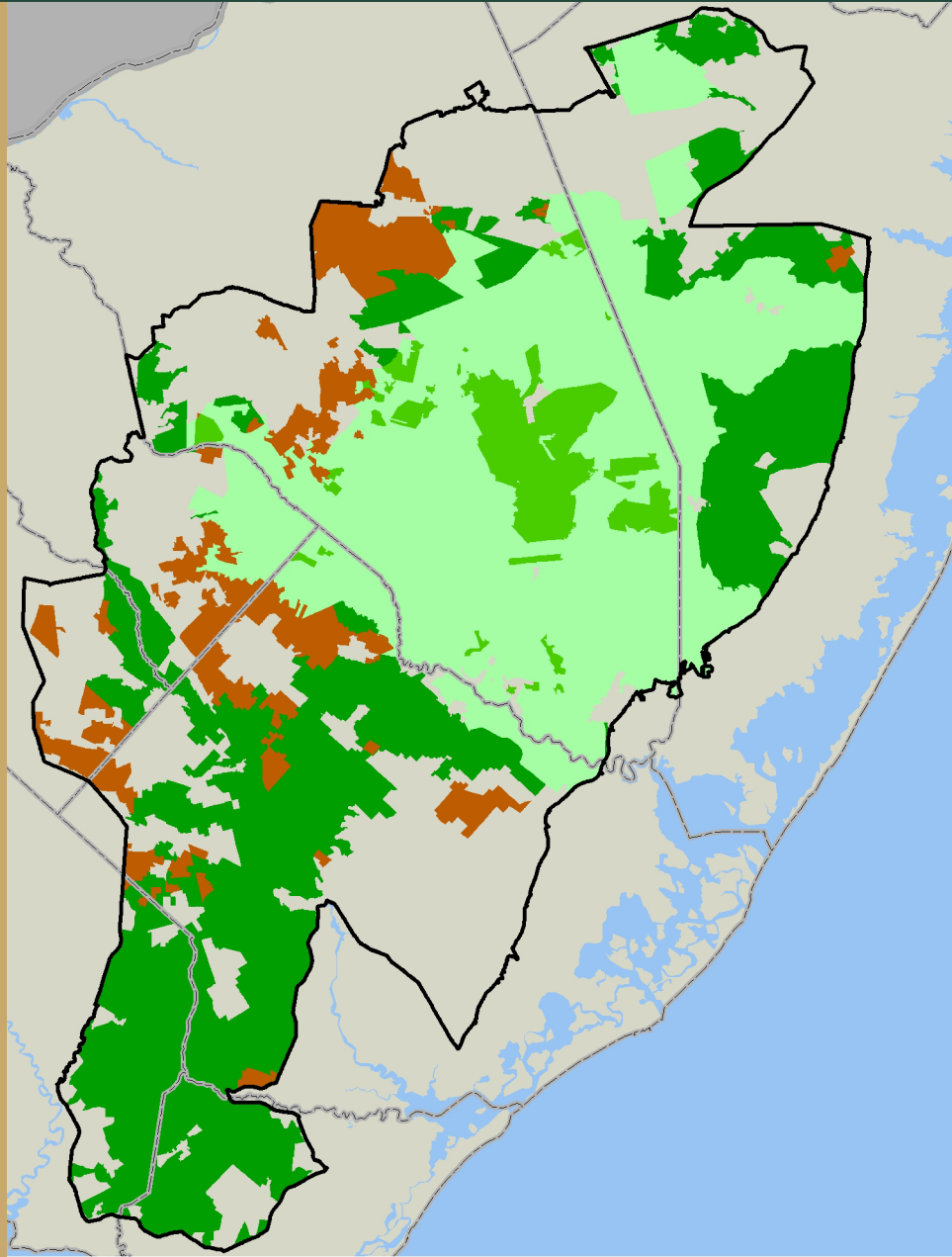
- **Standards** (Subchapters 5 and 6)
  - Land use and intensities (by management area)
  - Environmental standards (everywhere)
- **Review Processes** (Subchapters 3 and 4)
  - Local master plans and land development regulations
  - Development applications

# Management Areas



- Preservation Area District (and Infill Areas)
- Special Agricultural Production Areas
- Forest Areas
- Agricultural Production Areas
- Rural Development Areas
- Pinelands Villages
- Pinelands Towns
- Regional Growth Areas
- Military/Federal Installation

# Permitted Uses by Management Areas



 **Preservation Area District (and Infill Areas)**

 **Special Agricultural Production Areas**

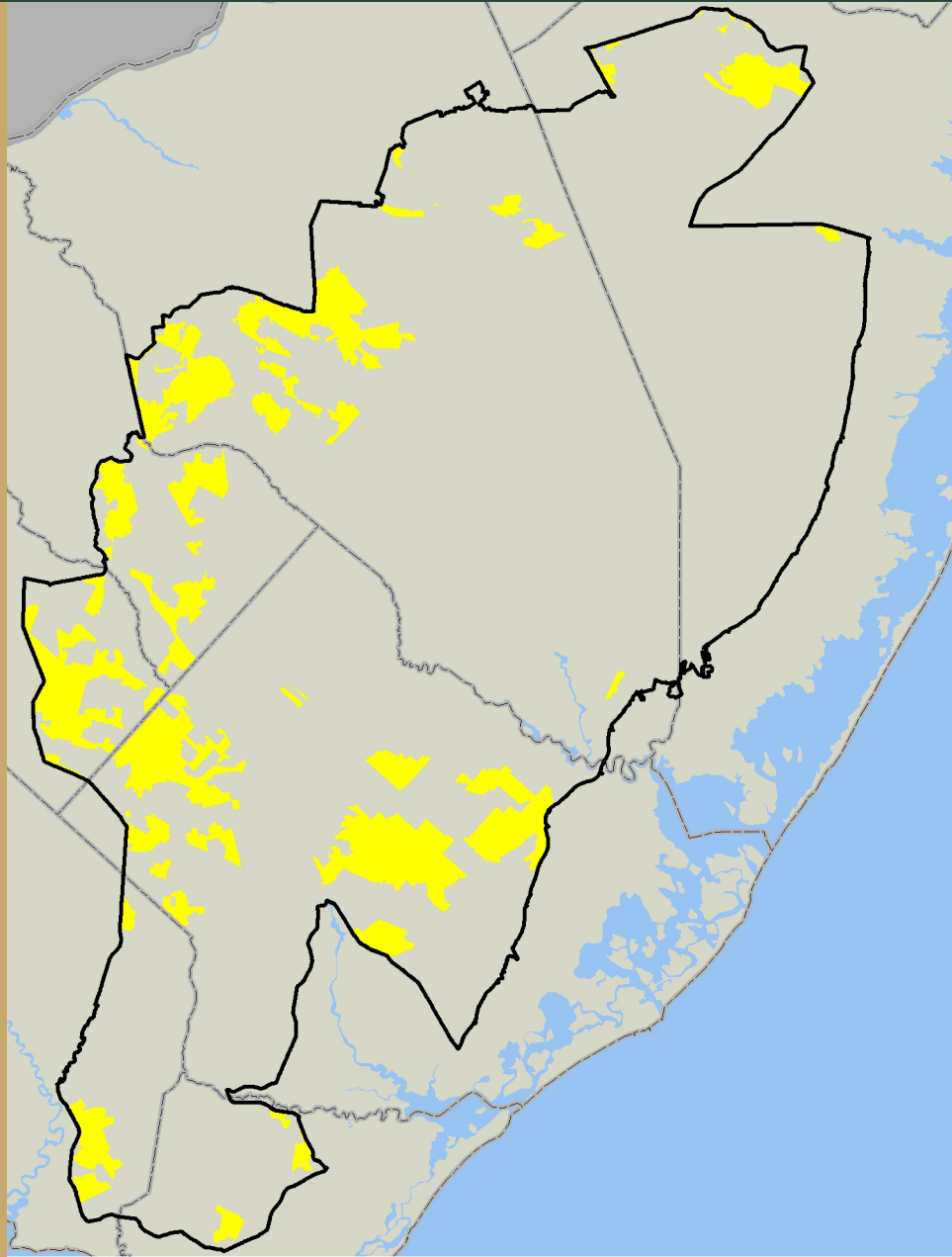
- Data Centers are not permitted

 **Forest Areas**

 **Agricultural Production Areas**

- While there are a few, very limited opportunities for light industrial uses, existing limitations in those areas would prevent the development of a data center.

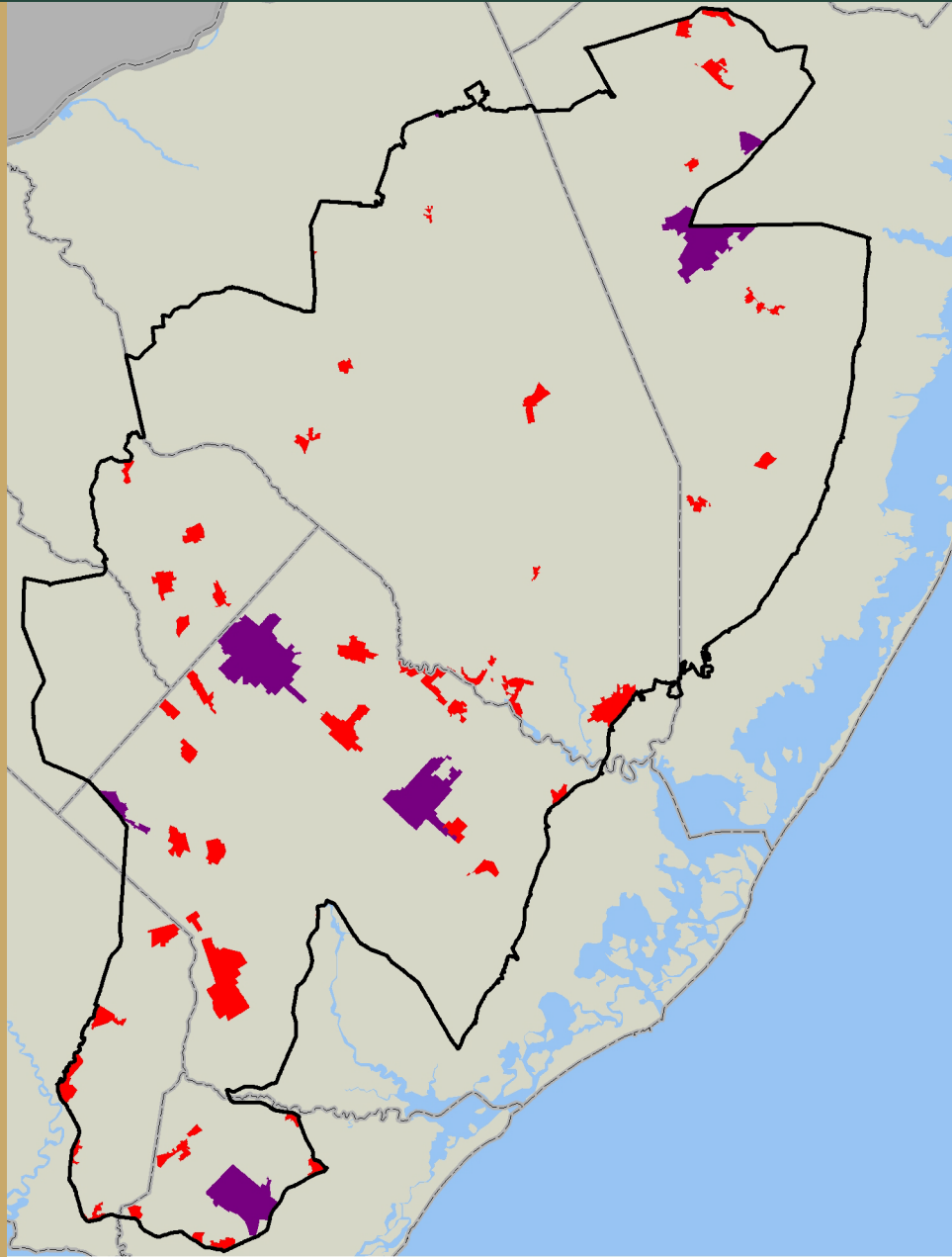
# Permitted Uses by Management Areas



## ■ Rural Development Areas

- A municipality may permit any use which is compatible with the essential character of the Pinelands environment **and is similar in character, intensity and impact to the following uses:**
  - ... “Agricultural processing facilities and other light industrial uses” ...
- Sanitary sewer is not permitted
- 35’ height limitation

# Permitted Uses by Management Areas

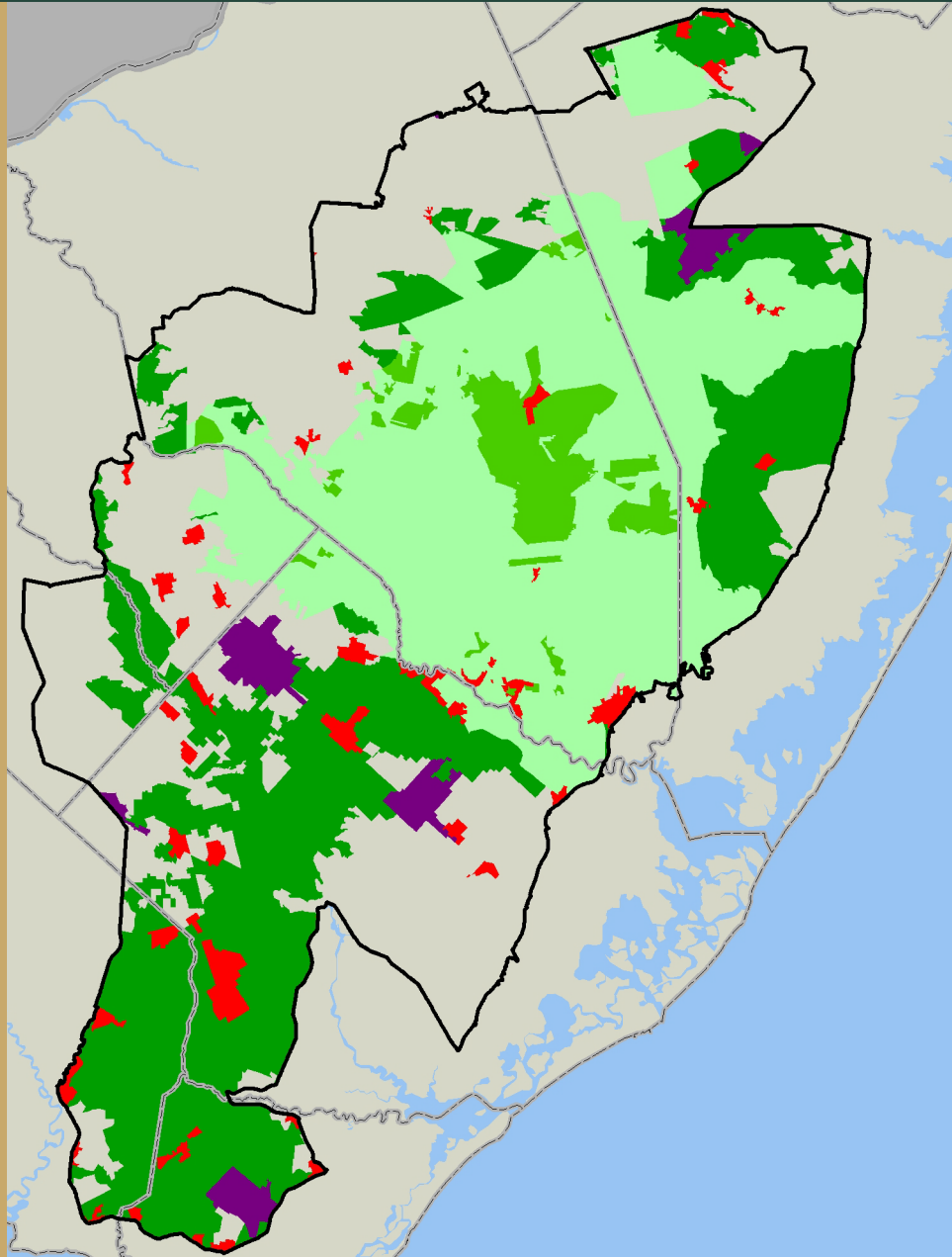


**Pinelands Villages**

**Pinelands Towns**

- A municipality may permit a wide variety of uses provided that:
  - Necessary public service infrastructure is available, or can be provided without any development in the PAD, SAPA, or FA
  - The character and magnitude of the use is compatible with the existing structures and uses in the (specific) Village or Town
- 35' height limitation in Villages

# Permitted Uses by Management Areas

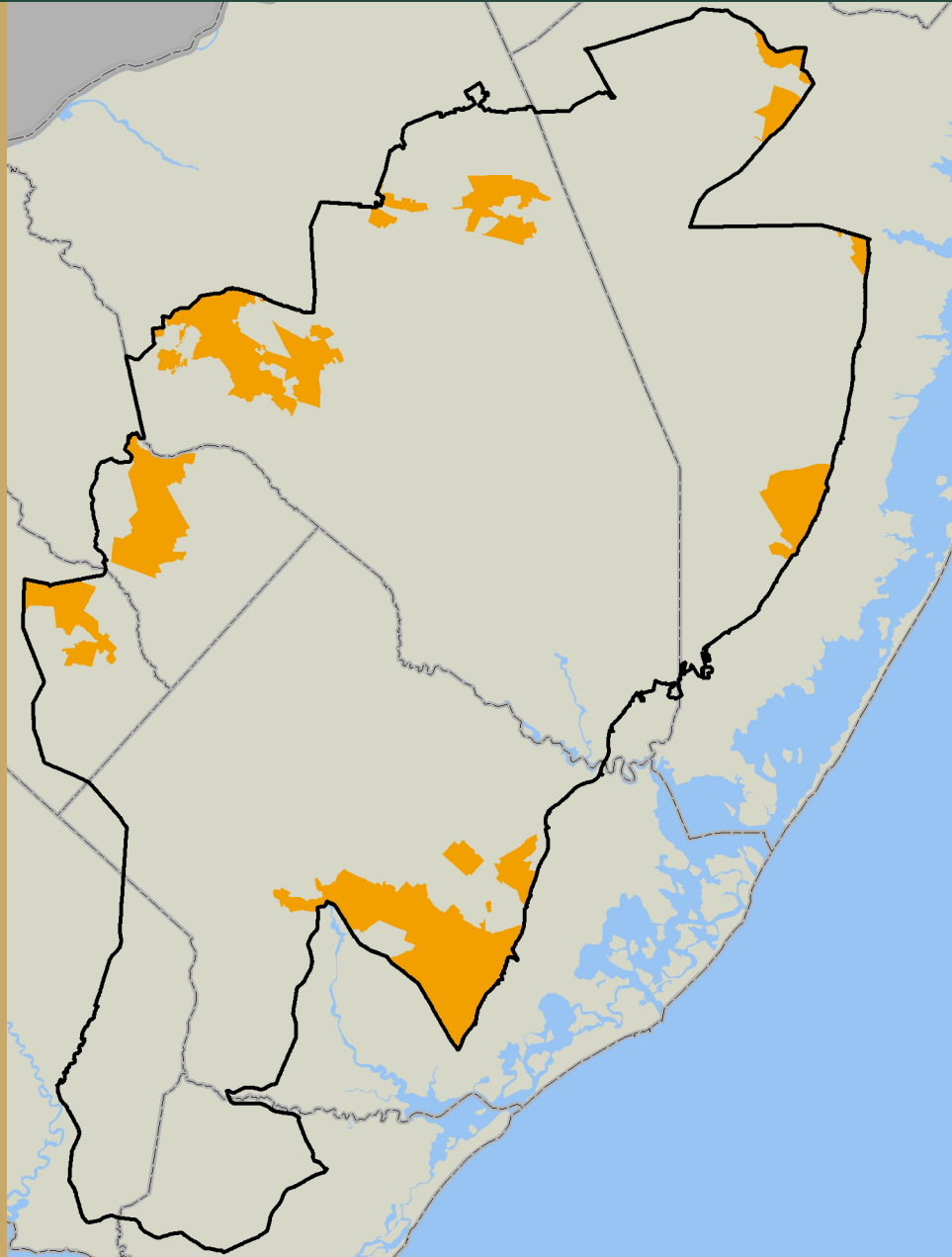


**Pinelands Villages**

**Pinelands Towns**

- Context
  - Many Villages are surrounded by PAD, SAPA, FA, which means strict limitations around new public service infrastructure
  - Very few Villages and Towns have existing industrial uses/zones, which would impact interpretations of compatibility

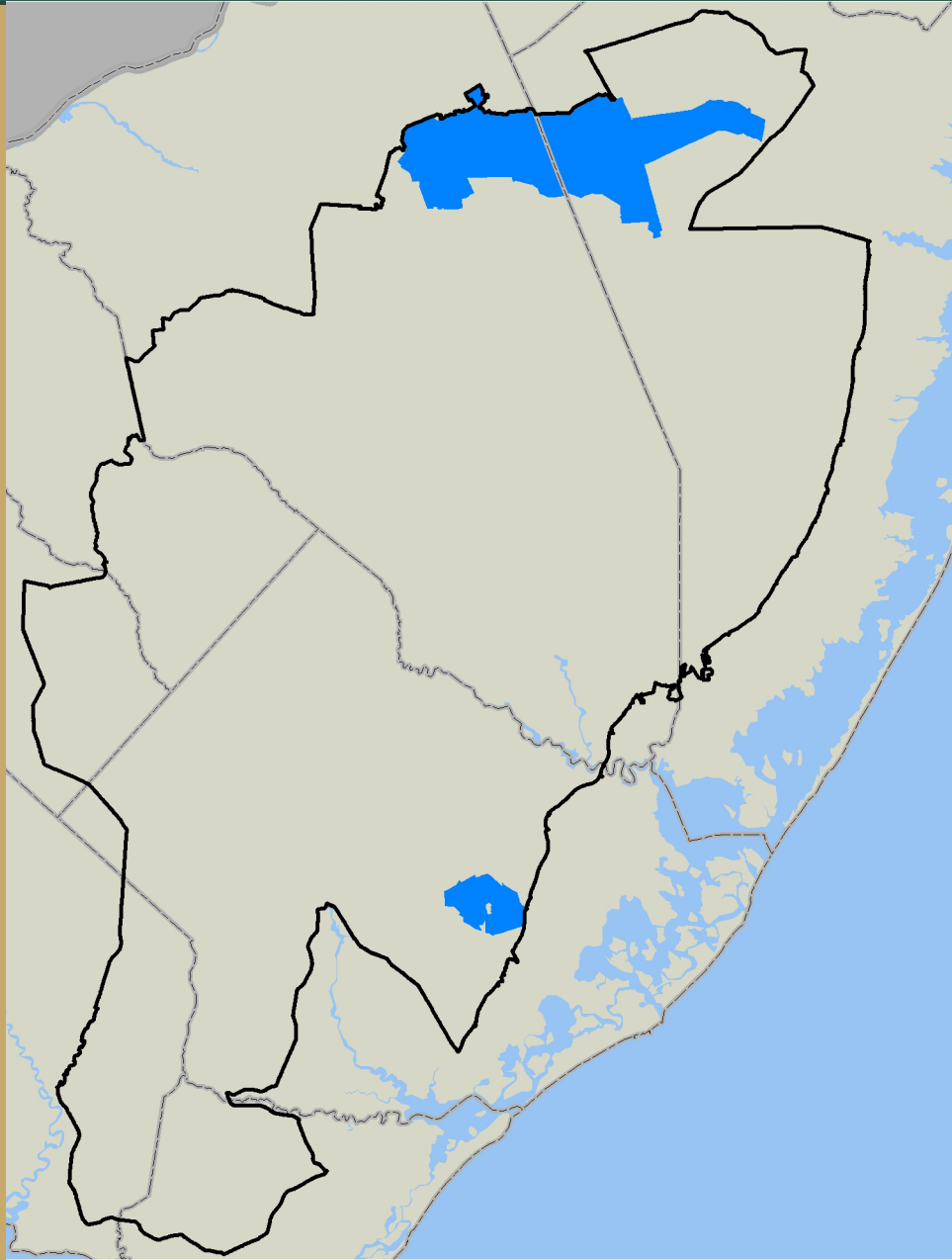
# Permitted Uses by Management Areas



## ■ Regional Growth Areas

- A municipality may permit a wide variety of uses provided that the RGA zoning plan:
  - Authorizes the number of dwelling units per acre of developable land as specified by the CMP
  - Provides for an increase in residential density by at least 50% through the use of PDCs
- Recent CMP amendments allow for RGA PDC obligations to be shifted to non-residential development

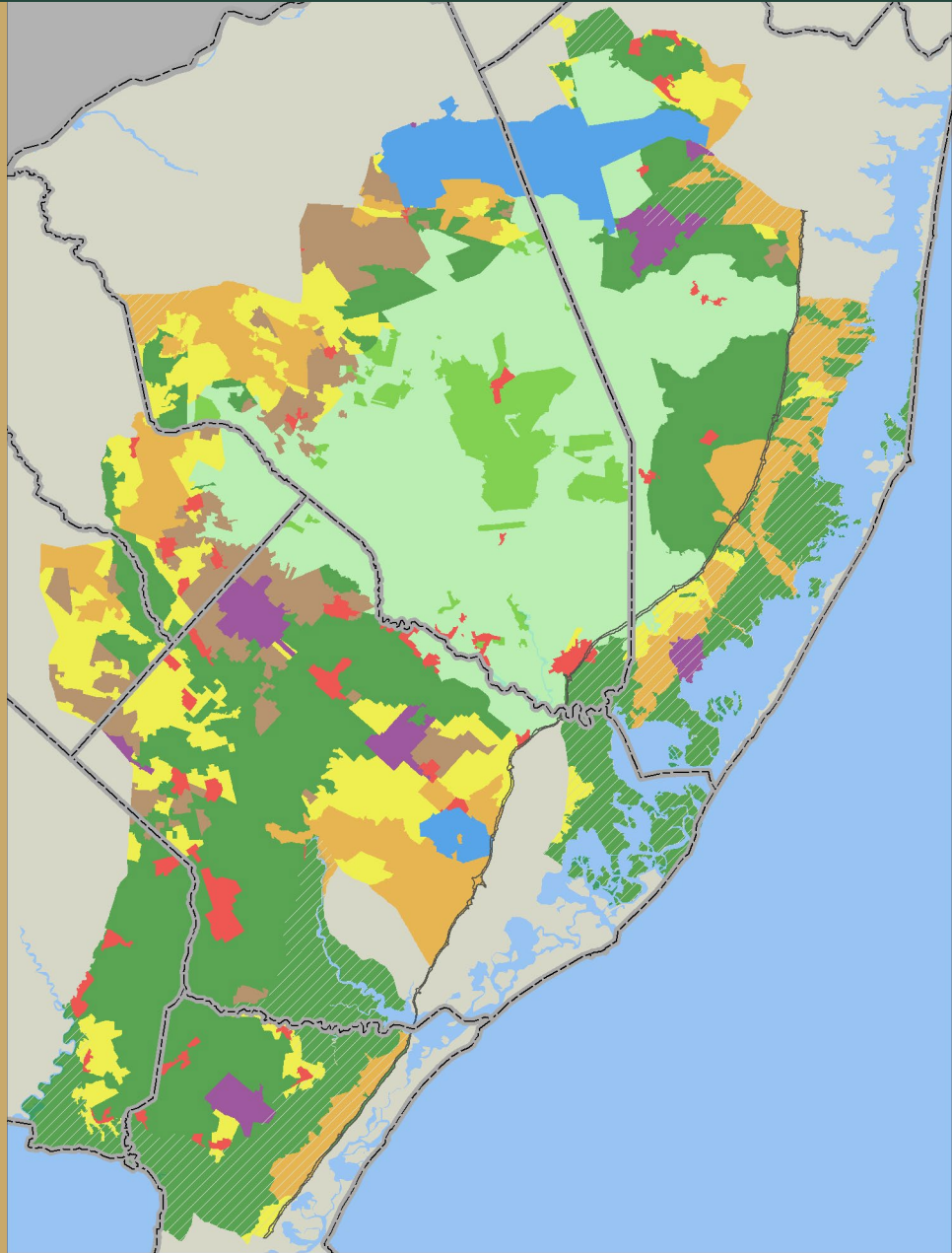
# Permitted Uses by Management Areas



## ■ Military/Federal Installation

- Any use associated with the function of the federal installation may be permitted, provided that:
  - Where feasible, located within the protection area
  - No development including, public service infrastructure, in the PAD or FA

# Permitted Uses by Management Areas



## Summary

- Areas where data centers could be permitted are very limited.
- Regional Growth Areas and Pinelands Towns are the only areas where substantial industrial development can occur.
- Nothing in the CMP requires a municipality to zone for industrial uses in areas where it can be permitted.

# Minimum Environmental Standards

- Wetlands and wetlands transition areas
- Threatened & endangered species habitat
- Cultural resources
- Fire hazard mitigation
- Air quality

# Minimum Environmental Standards

- **Stormwater**
  - Large impervious surfaces akin to warehouses. Significant stormwater facilities are required, but have successfully been achieved in warehouse projects.
- **Wastewater management**
  - Sewer
  - Septic – Land needed for septic dilution will be a limiting factor on wastewater flows (i.e., intensity)

# Minimum Environmental Standards

## Water Management

### Public water

- Municipalities should carefully evaluate impacts of providing water to data centers. No guarantee that additional allocation is available under DEP rules/Commission rules.
- Existing agreements with some RGA municipalities that impose caps on additional K-C allocations; Commission monitors water/wastewater flows.

### Well

- Kirkwood-Cohansey Rules: Any proposed diversion of 50,000 gallons of water per day or more
  - Demonstration that there is no alternative water supply source available or viable
  - Only permitted in RGA, PT, RDA, APA, M/F, and limited villages
  - Must demonstrate no adverse local and regional impact.

# CMP review processes

Ordinances and Development Applications

# Zoning Changes and Municipal Conformance

- Any zoning ordinance or redevelopment plan permitting data centers is required to be submitted to the Commission for review and approval before it can go into effect.
- Staff review ensures that the permitted uses align with CMP standards and that CMP minimum environmental standards are incorporated.

# Zoning Changes and Municipal Conformance

- **Data Center Related Ordinances**

- Monroe Township** - Hexa-Builders Redevelopment Area

- Data centers added as a permitted use in 2025
    - Township has introduced an ordinance to repeal data centers

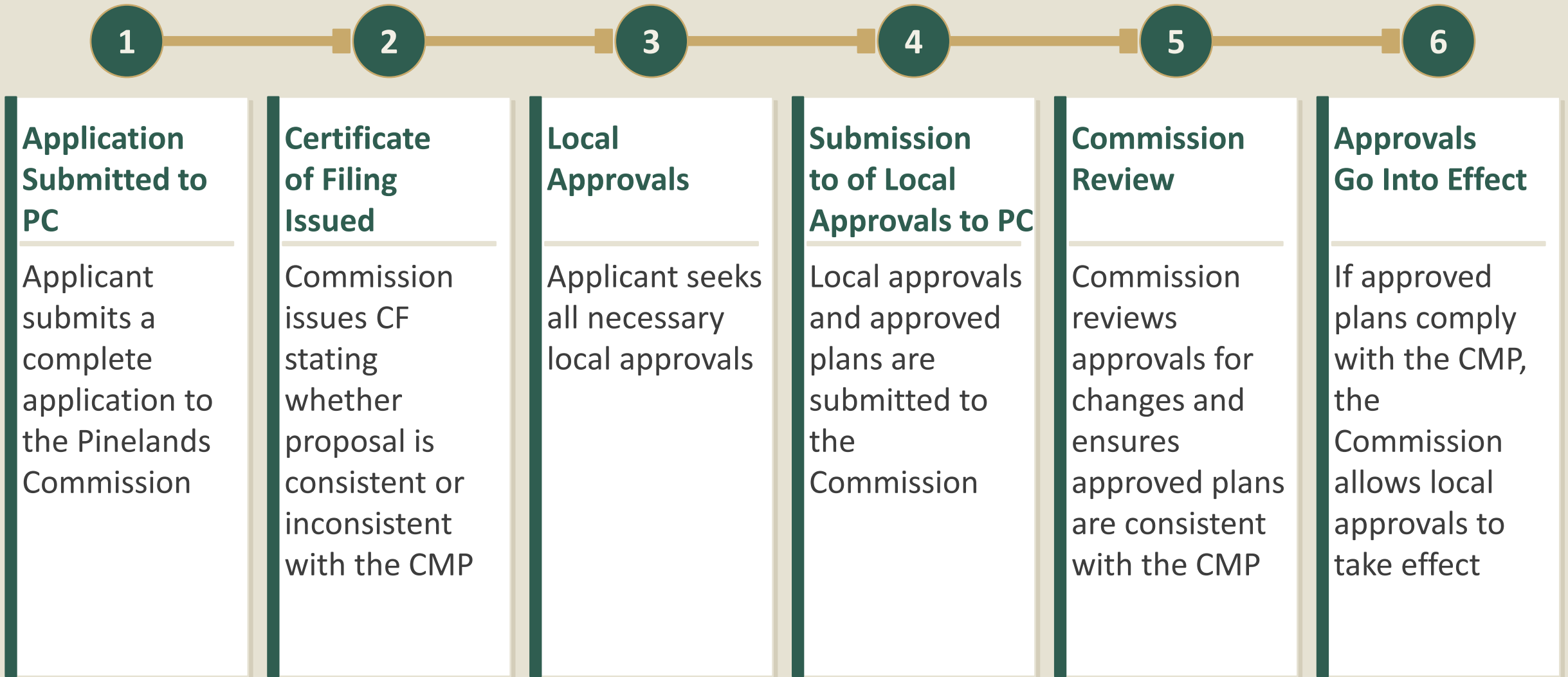
- Manchester Township** - Block 62, Lot 30 and 31.01 Redevelopment Area

- Data centers added as a permitted use in 2025

- Pemberton Township** - Industrial Zones

- Expressly prohibited data centers in 2026

# Development Application Review



*Note: If the approved plan differs significantly from the original submission, a new application to the Commission may be required.*

# Conclusions & Discussion

# Conclusions and Discussion

- Existing CMP regulations greatly limit where data centers can be sited and offer strong protections against environmental impacts of data centers.
- No immediate action is necessary or feasible.
  - No Commission authority for a moratorium
  - Lengthy rulemaking process
- Staff will continue to implement the framework of the CMP and monitor continuing trends in data center design and development.