



AGENDA

Hardee County Board of County Commissioners

REGULAR MEETING

June 4, 2026, at 8:30 AM

**COMMISSION CHAMBERS
412 WEST ORANGE STREET,
ROOM 102, WAUCHULA, FL 33873**

COMMISSIONERS

District I Timothy E. Wells
District II Noey A. Flores
District III E. Donald Chancey, Jr.
District IV Russell A. Melendy
District V Kenneth A. Miller

County Manager Terry Atchley
Clerk Victoria L. Rogers
County Attorney Sarah Allen
Assistant County Manager Doug Baber
Assistant County Manager Christopher Simpron
Administrative Services Manager Holly Smith
Executive Assistant Brandy Crawford
Deputy Clerk Laura Barker
Deputy Clerk Jessica Santibanez
Deputy Clerk Joley Pleger

1. INVOCATION, FOLLOWED BY THE PLEDGE OF ALLEGIANCE

Invocation provided by Scott Thomas, Fort Green Baptist Church

2. CALL TO ORDER

3. APPROVAL OF THE AGENDA: ADDITIONS, DELETIONS, AND AMENDMENTS

4. MINUTES FOR APPROVAL

5. HARDEE COUNTY FIRE RESCUE PINNING CEREMONY

Welcome to Team Hardee:

- Ismael Mejia
- Lawson Walton
- Adam McQuaig
- Ruben Figeroa
- Tulio Monagas
- William Robinson

A. Firefighter Oath of Office

6. PUBLIC COMMENT FOR NON-AGENDA ITEMS

7. PROCLAMATIONS

8. CONSENT AGENDA

Motion to approve the Consent Agenda Items A-G as presented.

- A. Motion to approve the operating budget amendments as presented.
- B. Motion to approve the capital budget amendments as presented.
- C. Motion to approve the fixed asset transfer and disposals as presented.
- D. Motion to approve the Florida Department of Environmental Protection Grant Agreement WG096 Amendment #2; and authorizing the County Manager or Chair to sign any necessary documents in furtherance thereof.
- E. Motion to approve the Florida Department of Environmental Protection Grant LPA0300 Amendment #3; and authorizing the County Manager or Chair to sign any necessary documents in furtherance thereof.
- F. Motion to approve the settlement agreement between the County and Wauchula Sun bearing case number 2022-CA-000180 in the amount of \$699,000; and authorizing the Chair to sign any necessary documents in furtherance thereof.
- G. Motion to approve the operating budget amendment as presented.

9. PRESENTATIONS

- A. **Jeremy Stucker & Walter Breuggeman, FDOT** - State Road 64 & State Road 663 Project Update
- B. **Regina Ussery, Hardee County Library** - Teen Mural Contest Winner

10. BUSINESS AGENDA - Quasi-Judicial Items:

11. BUSINESS AGENDA - Ordinances:

- A. **Lacey Webb, Parks, Recreation & Marketing Manager** - First Reading of Ordinance 2026-08 - Tourist Development Tax Referendum

- Motion to approve the first reading of Ordinance 2026-08, An Ordinance of Hardee County, Florida levying and imposing a one percent (1%) increase of the tourist development tax on the taxable privilege as described in section 125.0104(3) Florida statutes, including but not limited to certain persons who rent, lease or let any living quarters or accommodations in any hotel, apartment hotel, motel, resort, lease or apartment motel, rooming house, mobile home park, recreational vehicle park, or condominium for a term of six (6) months or less, within both the incorporated and unincorporated areas of Hardee County, Florida, pursuant to the "Local Option Tourist Development Act" section 125.0104, Florida statute; providing for collection of a total of three percent tourist development tax' providing for referendum election to approve or disapprove the tax increase; providing for severability; providing for repeal; providing an effective date.

12. BUSINESS AGENDA - Action Items:

- A. **Sonja Bennett, School District of Hardee County** - Resolution 2026-38 - Referendum for a

Levy of One Mill of Ad Valorem Property Tax by the School Board on the Ballot

- Motion to approve Resolution 2026-38, A Resolution of the Board of County Commissioners of Hardee County, Florida, regarding elections; placing a proposed referendum for a levy of one mill of ad valorem property tax by the school board on the ballot in the upcoming general election; providing for severability; and providing for an effective date.

13. APPOINTMENTS

14. COUNTY MANAGER NON-CONSENT

- Special called meeting dates for path forward.
- Financial Advisor/Line of Credit

15. COUNTY ATTORNEY

- A. Data Center Discussion
- B. Procurement Policy Update

16. COMMENTS FROM COMMISSIONERS OR OTHER ELECTED OFFICIALS

17. REMINDERS

- June 4, 2026 - Resthaven Workshop at 5:30 pm (Agri-Civic Center)
- June 11, 2026 - IDA Meeting at 8:30 am
- June 16, 2026 - EDA Meeting at 8:30 am
- June 17, 2026 - Legislative Breakfast at 8:00 am (Wauchula Train Depot)
- June 18, 2026 - BOCC Meeting at 8:30 am

18. ADJOURNMENT



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HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, Public Safety/Fire/Rescue

ITEM TYPE: Business Agenda

AGENDA SECTION: **HARDEE COUNTY FIRE RESCUE PINNING CEREMONY**

SUBJECT: Firefighter Oath of Office

SUGGESTED ACTION:

ATTACHMENTS:

[FIREFIGHTER OATH OF OFFICE.pdf](#)

I, _____, do solemnly swear that I will support, protect, and defend the Constitution of the United States and the Constitution of the State of Florida.

I will faithfully discharge the duties of a Firefighter for Hardee County Fire Rescue to the best of my ability, with honor, courage, fortitude, and respect.

I will professionally serve Hardee County with compassion and respect, placing the safety and well-being of others above my own interests.

I will uphold the laws, policies, and standards of my profession, maintain public trust, and conduct myself in a manner that reflects positively upon Hardee County Fire Rescue.

I will continuously strive to improve my knowledge, skills, and abilities so that I may provide the highest level of service to those who depend upon me.

With this oath, I accept the responsibilities and obligations of this profession and dedicate myself to the service of the citizens and visitors of Hardee County.

So help me God.



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HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, Budget and Finance

ITEM TYPE: Consent Agenda

AGENDA SECTION: **CONSENT AGENDA**

SUBJECT: Motion to approve the operating budget amendments as presented.

SUGGESTED ACTION:

ATTACHMENTS:
[aaMemo amend oper 06.04.26.pdf](#)
[operating amend 06.04.26.pdf](#)

**BOARD OF
COUNTY
COMMISSIONERS****NOEY FLORES**
CHAIR, DISTRICT 2**TIM WELLS**
VICE-CHAIR, DISTRICT 1**DONALD CHANCEY**
DISTRICT 3**RUSSELL MELENDY**
CHAIR, DISTRICT 4**KENNY MILLER**
DISTRICT 5**TERRY ATCHLEY**
COUNTY MANAGER**SARAH JOHNSTON**
COUNTY ATTORNEY**MAILING ADDRESS**
412 West Orange Street
Suite 201
Wauchula, FL 33873**PHONE**
863-773-3199**WEBSITE**
hardeecountyfl.gov

To: Terry Atchley, County Manager
Through: Douglas Baber, Assistant County Manager
From: Diane Moore, Budget Manager
Subject: Operating Amendments
Date: May 4, 2026

The first operating amendment is to increase the interest revenue and the expense line to return the interest earned to the state in the amount of \$6,383.75.

The second amendment is to increase the mosquito control grant revenue and the matching cash match from the general fund. There is a correlating increase in expenses with an increase for \$2,602.62 in contractual services and \$1,600.00 in other current charges.

Staff recommends approval of these amendments.

OPERATING BUDGET AMENDMENTS 2025-2026

June 4, 2026

Account Number	Classification	Adopted Budget	Amended Budget	Increase	Decrease	Revised Budget	Notes
135-361-100-36	SA HC Comm Tower Interest	\$ -	\$ 2,659.14	\$ 6,383.75		\$ 9,042.89	D1493 HC communication tower interest received to be returned to the state.
135-521-349-01	HC Comm Tower Interest Return to SA	\$ -	\$ 2,659.14	\$ 6,383.75		\$ 9,042.89	
135-334-620-00	Mosquito Control Grant	\$ 65,494.00	\$ 65,494.00	\$ 4,093.50		\$ 69,587.50	To increase grant revenue and expense received from mosquito control grant
135-381-000-00	Trasnfer from GF	\$ 82,281.00	\$ 14,477.00	\$ 109.12		\$ 14,586.12	
135-562-034-00	MCP-Health Dpt Contractual Svcs	\$ 72,631.00	\$ 72,631.00	\$ 2,602.62		\$ 75,233.62	
135-562-049-00	MCP-Health Dpt Other Current Charges	\$ 2,300.00	\$ 2,300.00	\$ 1,600.00		\$ 3,900.00	



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HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, Budget and Finance

ITEM TYPE: Consent Agenda

AGENDA SECTION: **CONSENT AGENDA**

SUBJECT: Motion to approve the capital budget amendments as presented.

SUGGESTED ACTION:

ATTACHMENTS:
[aaMemo amend cap 06.04.26.pdf](#)
[capital amend 06.04.26.pdf](#)

**BOARD OF
COUNTY
COMMISSIONERS****TIM WELLS**
VICE-CHAIR, DISTRICT 1**NOEY FLORES**
CHAIR, DISTRICT 2**DONALD CHANCEY**
DISTRICT 3**RUSSELL MELENDY**
DISTRICT 4**KENNY MILLER**
DISTRICT 5**TERRY ATCHLEY**
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hardeecountyfl.gov

To: Terry Atchley, County Manager
Through: Douglas G. Baber, Assistant County Manager
From: Diane Moore, Budget Manager
Subject: Capital Amendments
Date: May 4, 2026

The first capital amendment before you is regarding the FDLE grant for the new sheriff building. We are decreasing the grant amount by \$9,321.22. We are increasing the professional service line by \$813,105.00. We are reducing the building cost by \$813,105 that is being moved, and we are reducing the building cost by \$9,321.22 to reflect the reduction in grant funds available.

The second half of this amendment is increasing the grant and the professional services regarding the new sheriff building by \$786,335 to reflect the increase in the grant award.

Staff recommends approval of these amendments,

CAPITAL BUDGET AMENDMENTS 2025-2026
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June 4, 2026

Account Number	Classification	Adopted Budget	Amended Budget	Increase	Decrease	Revised Budget	Notes
135-334-200-06	FDLE Sheriff Office New Bldg	\$ 10,567,749.00	\$ 10,601,679.00		\$ 9,321.22	\$ 10,592,357.78	To reappropriate expense for PO#533314 and true up grants budget
135-521-331-00	SO New Bldg Professional Svcs	\$ 60,000.00	\$ 632,930.00	\$ 813,105.00		\$ 1,446,035.00	
135-521-362-00	SO New Bldg	\$ 12,968,749.00	\$ 12,968,749.00		\$ 822,426.22	\$ 13,791,175.22	
135-334-200-06	FDLE Sheriff Office New Bldg	\$ 10,567,749.00	\$ 10,592,357.78	\$ 786,335.00		\$ 11,378,692.78	Increase Revenue and Expense for PO#533314 Lunz Group CO#1
135-521-331-00	SO New Bldg Professional Svcs	\$ 60,000.00	\$ 1,446,035.00	\$ 786,335.00		\$ 2,232,370.00	



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HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Lindsey Barwick, Clerk of Courts

ITEM TYPE: Business Agenda - Action Items

AGENDA SECTION: **CONSENT AGENDA**

SUBJECT: Motion to approve the fixed asset transfer and disposals as presented.

SUGGESTED ACTION:

ATTACHMENTS:
[TRANSFER FORM.jpeg](#)
[51-02-03.jpeg](#)

FIXED ASSETS PROPERTY CONTROL TRANSFER/DISPOSITION OF EQUIPMENT

Send to: Amanda Roberts, Fixed Assets/Property Control c/o Clerk of Courts

Email: robertsa@hardexclerk.com, Phone: 863 773-4174 ext. 7245, Fax 863 773-4422 Attn: Amanda Roberts

Subject: Transfer/Disposition of Fixed Assets/Equipment

This is a request to change the property records to reflect the transfer and/or disposal of property as indicated:

PRC #	Description	Condition
1	51-02-03 Dell PE T320 1.8GHz Xeon 4gbRAM 2x146GB15k & 4x1TB7k	Poor
2	PERC710 RAID 1/5 iDRAC7	
3		
4	ALL HARDDRIVES HAVE BEEN CLEARED BY THE OFFICE OF THE	
5	PUBLIC DEFENDER, 10TH JUDICIAL CIRCUIT	
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

Transfer ☐ Surplus ☐ Parts ☐ Lost/Stolen ☐ Disposal to Landfill ☒ Auction ☐

Other _____

From: Public Defender, 10th Judicial Circuit - Blair Allen _____ Date 09 / 16 /2025
(Department) (Department Head)

To: _____ Date ____ / ____ /20____
(Department) (Department Head)

Custody Accepted: _____ Date ____ / ____ /20____

Board approval of transfer date: ____ / ____ /20____

Disposal of surplus property

State of Florida Statute

Hardee County

Page 1 of 1

FD-50 (9/14/93) (1.1.16)

Certification Number: 3025-F

Property Number / Description	Age / Condition	Make / Model	Serial No.	Purchase Price	Estimated Value	Depreciated Value	Disposition	Location
480196 Class OP Equipment, Sub-Class PC, Server Unit PC 1300 1.8GHz Atom Agilent 50-0000-00 5 507755 NCR710-000 10 000000	12 Poor	Len PC 7100	47080001	\$1007.00	\$0.00	\$0.00		Sevier - Sevi

*** DISCLOSE ON THE REVERSE SIDE ANY ADDITIONAL INFORMATION WHICH MAY BE PERTINENT ***

I hereby certify the property as accurate in accordance with chapter 273 of the Florida Statutes.

Megan Steffen 9.9.25 2025/0025
 Comptroller/President Date Approved for Date Date removed from inventory Disposition address Date
 Sec. Stat 6



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HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, Grants Management Department

ITEM TYPE: Consent Agenda

AGENDA SECTION: **CONSENT AGENDA**

SUBJECT: Motion to approve the Florida Department of Environmental Protection Grant Agreement WG096 Amendment #2; and authorizing the County Manager or Chair to sign any necessary documents in furtherance thereof.

SUGGESTED ACTION:

ATTACHMENTS:
[WG096 Memo - Amendment #2.pdf](#)
[Amendment 2 WG096 \(For Signature\).pdf](#)

**BOARD OF
COUNTY
COMMISSIONERS****NOEY FLORES**
CHAIR, DISTRICT 2**TIM WELLS**
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COUNTY MANAGER**SARAH JOHNSTON**
COUNTY ATTORNEY**MAILING ADDRESS**
412 West Orange Street
Suite 201
Wauchula, FL 33873**PHONE**
863-773-6349**WEBSITE**
hardeecountyfl.gov

To: Terry Atchley, County Manager
Through: Doug Baber, Assistant County Manager
From: Lorie Ayers, General Services Director
Subject: Wastewater & Potable Water Phase 8 WG096 Amendment #2
Date: 05/21/2026

The Hardee County Grants Management department has received an amendment to grant agreement #WG096 on behalf of the Hardee County BOCC and the Florida Department of Environmental Protection.

This amendment is removing the remaining funds from grant WG096, which amounts to \$294,655.75, and adding them to the remaining budget of LPA0300. This will close out grant WG096.

Staff requests approval to accept the grant amendment.

**AMENDMENT NO. 2
TO AGREEMENT NO. WG096
BETWEEN
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AND
HARDEE COUNTY**

This Amendment to Agreement No. WG096 (Agreement), as previously amended, is made by and between the Department of Environmental Protection (Department), an agency of the State of Florida, and the Hardee County (Grantee), on the date last signed below.

WHEREAS, the Department entered into the Agreement with the Grantee for Hardee County Regional Wastewater Service Improvements Phase 8 (Project), effective July 25, 2022; and,

WHEREAS, the Grantee has requested a decrease in funding and a reallocation of the budget for the Project; and,

WHEREAS, the funding provided under Section 273 of the 2024-2025 General Appropriations Act is decreased by \$294,655.75; and the total funding for this Agreement is now \$1,585,344.25; and,

WHEREAS, the Grantee has requested a revision in the scope of work for the Project; and,

WHEREAS, the Grantee has requested to remove a task from the Grant Work Plan; and,

WHEREAS, other changes to the Agreement are necessary; and,

WHEREAS, the parties have agreed to amend the Agreement as set forth herein.

NOW THEREFORE, the parties agree as follows:

1. Attachment 3-4, Revised Grant Work Plan, is hereby deleted in its entirety and replaced with Attachment 3-5, Revised Grant Work Plan, as attached to this Amendment and hereby incorporated into the Agreement. All references in the Agreement to Attachment 3 shall hereinafter refer to Attachment 3-5, Revised Grant Work Plan.
2. Attachment 5-2, Revised Special Audit Requirements, is hereby deleted in its entirety and replaced with Attachment 5-3, Revised Special Audit Requirements, as attached to this Amendment and hereby incorporated into the Agreement. All references in the Agreement to Attachment 5 shall hereinafter refer to Attachment 5-3, Revised Special Audit Requirements.
3. All other terms and conditions of the Agreement remain in effect. If and to the extent that any inconsistency may appear between the Agreement and this Amendment, the provisions of this Amendment shall control.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

The parties agree to the terms and conditions of this Amendment and have duly authorized their respective representatives to sign it on the dates indicated below.

HARDEE COUNTY

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

By: _____
Authorized Signature

By: _____
Secretary or Designee

Noey Flores, Chairman Hardee County
Print Name and Title

Angela Knecht, Division Director
Print Name and Title

Date: _____

Date: _____

Jake Seib, DEP Grant Manager

Kyleigh Revis, DEP QC Reviewer

List of attachments/exhibits included as part of this Amendment:

<u>Specify Type</u>	<u>Letter/ Number</u>	<u>Description</u>
Attachment	3-5	Revised Grant Work Plan
Attachment	5-3	Revised Special Audit Requirements

ATTACHMENT 3-5 REVISED GRANT WORK PLAN

PROJECT TITLE: Hardee County Regional Wastewater Service Improvements Phase 8

PROJECT LOCATION: Unincorporated Wauchula Hills Service Area, Hardee County; Lat/Long (27.5922, -81.8293)

PROJECT BACKGROUND: High nitrate levels were identified in the residential area of Wauchula Hills affecting approximately 400 to 600 homes. In response to this information, Wauchula Hills has begun extension of potable water lines and centralized wastewater infrastructure. Due to proximity of and potential contributing environmental impact upon the Peace River Basin/Charlotte Harbor Estuary, the need for expanding the regional wastewater and potable water system is necessary. The Peace River is becoming an increasingly important water supply, and the quality of that water will improve with the utilization of a centralized sewer service replacing septic systems in this region.

PROJECT DESCRIPTION: Wauchula Hills Phase 8 Improvements Project provides design, permitting, project management, and construction of plant support facilities, extending wastewater lines to approximately 45 single family residences from septic systems which are contributing to nitrates in the region and restoring project-impacted rights-of-way.

TASKS: All documentation should be submitted electronically unless otherwise indicated and should be submitted prior to the expiration of the grant agreement.

Task 1: Preconstruction Activities

Deliverables: The Grantee will complete the design of Hardee County Regional Wastewater Service Improvements Phase 8 and obtain all necessary permits for construction of the project. Activities necessary for design, such as surveys, geotechnical evaluations, pre-design studies, and environmental assessments are eligible under this task.

Documentation: The Grantee will submit a signed summary of activities completed for the period of work covered in the payment request, including the percentage of design complete and permitting status, using the format provided by the Department's Grant Manager. Upon request by the Department's Grant Manager, the Grantee will provide additional supporting documentation relating to this task.

For the final documentation, the Grantee will also submit a copy of the design completed with the funding provided for this task, a list of all required permits identifying issue dates and issuing authorities, and copies of any surveys, assessments, or other documents funded under this task.

Performance Standard: The Department's Grant Manager will review the documentation to verify that the deliverables have been completed as described above. Upon review and written acceptance by the Department's Grant Manager, a payment request may be processed.

Payment Request Schedule: The Grantee may submit a payment request for cost reimbursement no more frequently than monthly.

Task 2: Project Management

Deliverables: The Grantee will provide project management services related to Hardee County Regional Wastewater Service Improvements Phase 8, to include review of documents and forms, budget oversight, preparation and submittal of quarterly progress reports, processing of payment requests and related documentation, field engineering services, construction observation, site meetings with construction contractor(s) and design professionals, and overall project coordination and supervision.

Documentation: The Grantee will submit a signed summary of activities completed for the period of work covered in the payment request, using the format provided by the Department's Grant Manager. Upon request by the Department's Grant Manager, the Grantee will provide additional supporting documentation relating to this task.

Performance Standard: The Department's Grant Manager will review the documentation to verify that the deliverables have been completed as described above. Upon review and written acceptance by the Department's Grant Manager, a payment request may be processed.

Payment Request Schedule: The Grantee may submit a payment request for cost reimbursement no more frequently than monthly.

Task 3: Construction

Deliverables: The Grantee will construct Hardee County Regional Wastewater Service Improvements Phase 8 in accordance with the final design.

Documentation: The Grantee will submit a signed summary of activities completed for the period of work covered in the payment request, using the format provided by the Department's Grant Manager. Upon request by the Department's Grant Manager, the Grantee will provide additional supporting documentation relating to this task.

Performance Standard: The Department's Grant Manager will review the documentation to verify that the deliverables have been completed as described above. Upon review and written acceptance by the Department's Grant Manager, a payment request may be processed.

Payment Request Schedule: The Grantee may submit a payment request for cost reimbursement no more frequently than monthly.

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PROJECT TIMELINE & BUDGET DETAIL: The tasks must be completed by the corresponding task end date. Cost reimbursable grant funding must not exceed the budget amounts as indicated below.

For payment requests that include Contractual Services, the Grantee shall provide documentation of the procurement process, as consistent with Attachment 1, Section 9.c.

Task No.	Task Title	Budget Category	Grant Amount	Task Start Date	Task End Date
1	Preconstruction Activities	Contractual Services	\$162,772.50	07/01/2021	07/31/2026
2	Project Management	Contractual Services	\$86,653.75	07/01/2021	07/31/2026
3	Construction	Contractual Services	\$1,335,918.00	07/01/2021	07/31/2026
Total:			\$1,585,344.25		

Note that, per Section 8 of Attachment 1 in the Agreement, authorization for continuation and completion of work and any associated payments may be rescinded, with proper notice, at the discretion of the Department if the Legislature reduces or eliminates appropriations. Extending the contract end date carries the risk that funds for this project may become unavailable in the future. This should be a consideration for the Grantee with this and future requests for extension.

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Revised Special Audit Requirements
(State and Federal Financial Assistance)**

Attachment 5-3

The administration of resources awarded by the Department of Environmental Protection (*which may be referred to as the "Department", "DEP", "FDEP" or "Grantor", or other name in the agreement*) to the recipient (*which may be referred to as the "Recipient", "Grantee" or other name in the agreement*) may be subject to audits and/or monitoring by the Department of Environmental Protection, as described in this attachment.

MONITORING

In addition to reviews of audits conducted in accordance with 2 CFR Part 200, Subpart F-Audit Requirements, and Section 215.97, F.S., as revised (see "AUDITS" below), monitoring procedures may include, but not be limited to, on-site visits by DEP Department staff, limited scope audits as defined by 2 CFR 200.425, or other procedures. By entering into this Agreement, the recipient agrees to comply and cooperate with any monitoring procedures/processes deemed appropriate by the Department of Environmental Protection. In the event the Department of Environmental Protection determines that a limited scope audit of the recipient is appropriate, the recipient agrees to comply with any additional instructions provided by the Department to the recipient regarding such audit. The recipient further agrees to comply and cooperate with any inspections, reviews, investigations, or audits deemed necessary by the Chief Financial Officer (CFO) or Auditor General.

AUDITS

PART I: FEDERALLY FUNDED

This part is applicable if the recipient is a State or local government or a non-profit organization as defined in 2 CFR §200.330

1. A recipient that expends \$1,000,000 or more in Federal awards in its fiscal year, must have a single or program-specific audit conducted in accordance with the provisions of 2 CFR Part 200, Subpart F. EXHIBIT 1 to this Attachment indicates Federal funds awarded through the Department of Environmental Protection by this Agreement. In determining the federal awards expended in its fiscal year, the recipient shall consider all sources of federal awards, including federal resources received from the Department of Environmental Protection. The determination of amounts of federal awards expended should be in accordance with the guidelines established in 2 CFR 200.502-503. An audit of the recipient conducted by the Auditor General in accordance with the provisions of 2 CFR Part 200.514 will meet the requirements of this part.
2. For the audit requirements addressed in Part I, paragraph 1, the recipient shall fulfill the requirements relative to auditee responsibilities as provided in 2 CFR 200.508-512.
3. A recipient that expends less than \$1,000,000 in federal awards in its fiscal year is not required to have an audit conducted in accordance with the provisions of 2 CFR Part 200, Subpart F-Audit Requirements. If the recipient expends less than \$1,000,000 in federal awards in its fiscal year and elects to have an audit conducted in accordance with the provisions of 2 CFR 200, Subpart F-Audit Requirements, the cost of the audit must be paid from non-federal resources (i.e., the cost of such an audit must be paid from recipient resources obtained from non-federal entities).
4. The recipient may access information regarding the Catalog of Federal Domestic Assistance (CFDA) via the internet at <https://sam.gov/content/assistance-listings>.

Attachment 5-3

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PART II: STATE FUNDED

This part is applicable if the recipient is a nonstate entity as defined by Section 215.97(1)(n), Florida Statutes.

1. In the event that the recipient expends a total amount of state financial assistance equal to or in excess of \$750,000 in any fiscal year of such recipient (for fiscal years ending June 30, 2017, and thereafter), the recipient must have a State single or project-specific audit for such fiscal year in accordance with Section 215.97, F.S.; Rule Chapter 69I-5, F.A.C., State Financial Assistance; and the current Rules of the Auditor General. EXHIBIT 1 to this form lists the state financial assistance awarded through the Department of Environmental Protection by this agreement. In determining the state financial assistance expended in its fiscal year, the recipient shall consider all sources of state financial assistance, including state financial assistance received from the Department of Environmental Protection, other state agencies, and other nonstate entities. State financial assistance does not include federal direct or pass-through awards and resources received by a nonstate entity for Federal program matching requirements.
2. In connection with the audit requirements addressed in Part II, paragraph 1; the recipient shall ensure that the audit complies with the requirements of Section 215.97(8), Florida Statutes. This includes submission of a financial reporting package as defined by Section 215.97(2), Florida Statutes, and the current Rules of the Auditor General.
3. If the recipient expends less than \$750,000 in state financial assistance in its fiscal year (for fiscal year ending June 30, 2017, and thereafter), an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, is not required. In the event that the recipient expends less than \$750,000 in state financial assistance in its fiscal year, and elects to have an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, the cost of the audit must be paid from the non-state entity's resources (i.e., the cost of such an audit must be paid from the recipient's resources obtained from other than State entities).
4. For information regarding the Florida Catalog of State Financial Assistance (CSFA), a recipient should access the Florida Single Audit Act website located at <https://apps.fldfs.com/fsaa> for assistance. In addition to the above websites, the following websites may be accessed for information: Legislature's Website at <http://www.leg.state.fl.us/Welcome/index.cfm>, State of Florida's website at <http://www.myflorida.com/>, Department of Financial Services' Website at <https://www.myfloridacfo.com/> and the Auditor General's Website at <http://www.myflorida.com/audgen/>.

PART III: OTHER AUDIT REQUIREMENTS

(NOTE: This part would be used to specify any additional audit requirements imposed by the State awarding entity that are solely a matter of that State awarding entity's policy (i.e., the audit is not required by Federal or State laws and is not in conflict with other Federal or State audit requirements). Pursuant to Section 215.97(8), Florida Statutes, State agencies may conduct or arrange for audits of State financial assistance that are in addition to audits conducted in accordance with Section 215.97, Florida Statutes. In such an event, the State awarding agency must arrange for funding the full cost of such additional audits.)

PART IV: REPORT SUBMISSION

1. Copies of reporting packages for audits conducted in accordance with 2 CFR Part 200, Subpart F-Audit Requirements, and required by PART I of this form shall be submitted, when required by 2 CFR 200.512, by or on behalf of the recipient directly to the Federal Audit Clearinghouse (FAC) as provided in 2 CFR 200.36 and 200.512
 - A. The Federal Audit Clearinghouse designated in 2 CFR §200.501(a) (the number of copies required by 2 CFR §200.501(a) should be submitted to the Federal Audit Clearinghouse), at the following address:

By Mail:

Federal Audit Clearinghouse
Bureau of the Census
1201 East 10th Street
Jeffersonville, IN 47132

Submissions of the Single Audit reporting package for fiscal periods ending on or after January 1, 2008, must be submitted using the Federal Clearinghouse's Internet Data Entry System which can be found at <http://harvester.census.gov/facweb/>

2. Copies of financial reporting packages required by PART II of this Attachment shall be submitted by or on behalf of the recipient directly to each of the following:

- A. The Department of Environmental Protection at one of the following addresses:

By Mail:

Audit Director
Florida Department of Environmental Protection
Office of Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:

FDEPSingleAudit@dep.state.fl.us

- B. The Auditor General's Office at the following address:

Auditor General
Local Government Audits/342
Claude Pepper Building, Room 401
111 West Madison Street
Tallahassee, Florida 32399-1450

The Auditor General's website (<http://flauditor.gov/>) provides instructions for filing an electronic copy of a financial reporting package.

3. Copies of reports or management letters required by PART III of this Attachment shall be submitted by or on behalf of the recipient directly to the Department of Environmental Protection at one of the following addresses:

By Mail:

Audit Director
Florida Department of Environmental Protection
Office of Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:

FDEPSingleAudit@dep.state.fl.us

4. Any reports, management letters, or other information required to be submitted to the Department of Environmental Protection pursuant to this Agreement shall be submitted timely in accordance with 2 CFR 200.512, section 215.97, F.S., and the current Rules of the Auditor General, as applicable.
5. Recipients, when submitting financial reporting packages to the Department of Environmental Protection for audits done in accordance with 2 CFR 200, Subpart F-Audit Requirements, or the current Rules of the Auditor

Attachment 5-3

3 of 6

General, should indicate the date and time the reporting package was delivered to the recipient and any correspondence accompanying the reporting package.

PART V: RECORD RETENTION

The recipient shall retain sufficient records demonstrating its compliance with the terms of the award and this Agreement for a period of **five (5)** years from the date the audit report is issued, and shall allow the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General access to such records upon request. The recipient shall ensure that audit working papers are made available to the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General upon request for a period of **three (3)** years from the date the audit report is issued, unless extended in writing by the Department of Environmental Protection.

EXHIBIT – 1

FUNDS AWARDED TO THE RECIPIENT PURSUANT TO THIS AGREEMENT CONSIST OF THE FOLLOWING:

Note: If the resources awarded to the recipient represent more than one federal program, provide the same information shown below for each federal program and show total federal resources awarded

Federal Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following:					
Federal Program A	Federal Agency	CFDA Number	CFDA Title	Funding Amount	State Appropriation Category
Original Agreement	Department of the Treasury	21.027	Coronavirus State and Local Fiscal Recovery Funds	\$1,880,000.00	145110
Change Order 2	Department of the Treasury	21.027	Coronavirus State and Local Fiscal Recovery Funds	-\$1,817,810.00	145110
Federal Program B	Federal Agency	CFDA Number	CFDA Title	Funding Amount	State Appropriation Category
				\$	

Note: If the resources awarded to the recipient represent more than one federal program, list applicable compliance requirements for each federal program in the same manner as shown below:

Federal Program A	First Compliance requirement: i.e.: (what services of purposes resources must be used for)	
	Second Compliance requirement: i.e.: (eligibility requirement for recipients of the resources)	
	Etc.	
	Etc.	
Federal Program B	First Compliance requirement: i.e.: (what services of purposes resources must be used for)	
	Second Compliance requirement: i.e.: (eligibility requirement for recipients of the resources)	
	Etc.	

Note: If the resources awarded to the recipient for matching represent more than one federal program, provide the same information shown below for each federal program and show total state resources awarded for matching.

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Matching Resources for Federal Programs:					
Federal Program A	Federal Agency	CFDA	CFDA Title	Funding Amount	State Appropriation Category
Federal Program B	Federal Agency	CFDA	CFDA Title	Funding Amount	State Appropriation Category

Note: If the resources awarded to the recipient represent more than one state project, provide the same information shown below for each state project and show total state financial assistance awarded that is subject to section 215.97, F.S.

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Resources Subject to Section 215.97, F.S.:						
State Program A	State Awarding Agency	State Fiscal Year ¹	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category
Change Order 2	Department of Environmental Protection	2023-2024	37.039	Statewide Water Quality Restoration Projects - Section 273, WPSPTF	\$1,817,810.00	149950
Amendment 1	Department of Environmental Protection	2023-2024	37.039	Statewide Water Quality Restoration Projects - Section 273, WPSPTF	-\$1,817,810.00	149950
Amendment 1	Department of Environmental Protection	2024-2025	37.039	Statewide Water Quality Restoration Projects - Section 273, WPSPTF	\$1,817,810.00	149950
Amendment 2	Department of Environmental Protection	2024-2025	37.039	Statewide Water Quality Restoration Projects - Section 273, WPSPTF	-\$294,655.75	149950
State Program B	State Awarding Agency	State Fiscal Year ²	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category

Total Award	\$1,585,344.25	
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Note: List applicable compliance requirement in the same manner as illustrated above for federal resources. For matching resources provided by the Department for DEP for federal programs, the requirements might be similar to the requirements for the applicable federal programs. Also, to the extent that different requirements pertain to different amount for the non-federal resources, there may be more than one grouping (i.e. 1, 2, 3, etc.) listed under this category.

For each program identified above, the recipient shall comply with the program requirements described in the Catalog of Federal Domestic Assistance (CFDA) [<https://sam.gov/content/assistance-listings>] and/or the Florida Catalog of State Financial Assistance (CSFA) [<https://apps.fldfs.com/fsaa/searchCatalog.aspx>], and State Projects Compliance Supplement (Part Four: State Projects Compliance Supplement [<https://apps.fldfs.com/fsaa/compliance.aspx>]). The services/purposes for which the funds are to be used are included in the Agreement's Grant Work Plan. Any match required by the Recipient is clearly indicated in the Agreement.

¹ Subject to change by Change Order.

² Subject to change by Change Order.



Item Cover Page

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, Grants Management Department

ITEM TYPE: Consent Agenda

AGENDA SECTION: **CONSENT AGENDA**

SUBJECT: Motion to approve the Florida Department of Environmental Protection Grant LPA0300 Amendment #3; and authorizing the County Manager or Chair to sign any necessary documents in furtherance thereof.

SUGGESTED ACTION:

ATTACHMENTS:

[LPA0300 Memo - Amendment #3.pdf](#)
[Amendment 3 LPA0300 \(For Signature\).pdf](#)

**BOARD OF
COUNTY
COMMISSIONERS****NOEY FLORES**
CHAIR, DISTRICT 2**TIM WELLS**
VICE CHAIR, DISTRICT 1**DONALD CHANCEY**
DISTRICT 3**RUSSELL MELENDY**
DISTRICT 4**KENNY MILLER**
DISTRICT 5**TERRY ATCHLEY**
COUNTY MANAGER**SARAH JOHNSTON**
COUNTY ATTORNEY**MAILING ADDRESS**
412 West Orange Street
Suite 201
Wauchula, FL 33873**PHONE**
863-773-6349**WEBSITE**
hardeecountyfl.gov

To: Terry Atchley, County Manager
Through: Doug Baber, Assistant County Manager
From: Lorie Ayers, General Services Director
Subject: Water/Wastewater Phase 8 LPA0300 Amendment #3
Date: 05/21/2026

The Hardee County Grants Management department has received an amendment to grant agreement #LPA0300 on behalf of the Hardee County BOCC and the Florida Department of Environmental Protection.

This amendment is adding the remaining funds from grant WG096, which amounts to \$294,655.75, to the remaining budget of LPA0300. This will bring the new budget for LPA0300 to \$2,214,270.06.

Staff requests approval to accept the grant amendment.

**AMENDMENT NO. 3
TO AGREEMENT NO. LPA0300
BETWEEN
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AND
HARDEE COUNTY**

This Amendment to Agreement No. LPA0300 (Agreement), as previously amended, is made by and between the Department of Environmental Protection (Department), an agency of the State of Florida, and the Hardee County (Grantee), on the date last signed below.

WHEREAS, the Department entered into the Agreement with the Grantee for the Hardee County Phase 8 Regional Wastewater & Potable Water Service Improvements (Project), effective October 17, 2022; and,

WHEREAS, \$294,655.75 in additional funding for this Project is provided under Section 273 of the 2024-2025 General Appropriations Act; and the total funding for this Agreement is now \$3,394,655.75; and,

WHEREAS, the reimbursement period for the additional funding provided under Section 273 of the 2024-2025 General Appropriations Act begins on July 1, 2024; and,

WHEREAS, the Grantee has requested a revision in the scope of work and a budget reallocation for the Project; and,

WHEREAS, the Grantee has requested to add a new task to the Grant Work Plan; and,

WHEREAS, the Grantee has requested an extension of the Agreement due to scope of work changes; and,

WHEREAS, the parties have agreed to add an exhibit to the Agreement; and,

WHEREAS, other changes to the Agreement are necessary; and,

WHEREAS, the parties have agreed to amend the Agreement as set forth herein.

NOW THEREFORE, the parties agree as follows:

1. Section 3. of the Standard Grant Agreement is hereby revised to change the Date of Expiration to December 31, 2028. The Department and the Grantee shall continue to perform their respective duties during this extension period pursuant to the same terms and conditions provided in the Agreement.
2. Section 5. of the Standard Grant Agreement is hereby revised to the following:

Total Amount of Funding:	Funding Source?	Award #s or Line Item Appropriations:	Amount per Source(s):
	☒ State ☐ Federal	LP, GAA LI 1665A, FY 22-23, GR	\$3,100,000.00
	☒ State ☐ Federal	WWG, Section 273, FY 24-25, WPSPTF	\$294,655.75
	☐ Grantee Match		
Total Amount of Funding + Grantee Match, if any:			\$3,394,655.75

3. Attachment 3-4, Revised Grant Work Plan, is hereby deleted in its entirety and replaced with Attachment 3-5, Revised Grant Work Plan, as attached to this Amendment and hereby incorporated into the Agreement. All references in the Agreement to Attachment 3 shall hereinafter refer to Attachment 3-5, Revised Grant Work Plan.

4. Attachment 5-1, Revised Special Audit Requirements, is hereby deleted in its entirety and replaced with Attachment 5-2, Revised Special Audit Requirements, attached hereto and made a part of the Agreement. All references in the Agreement to Attachment 5, shall hereinafter refer to Attachment 5-2, Revised Special Audit Requirements.
5. Exhibit J, OSTDS/EDH Grants Data Collection Tool is hereby added to the Agreement.
6. All other terms and conditions of the Agreement remain in effect. If and to the extent that any inconsistency may appear between the Agreement and this Amendment, the provisions of this Amendment shall control.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

The parties agree to the terms and conditions of this Amendment and have duly authorized their respective representatives to sign it on the dates indicated below.

HARDEE COUNTY

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

By: _____
Authorized Signature

By: _____
Secretary or Designee

Noey Flores, Chairman Hardee County
Print Name and Title

Angela Knecht, Division Director
Print Name and Title

Date: _____

Date: _____

Jake Seib, DEP Grant Manager

Kyleigh Revis, DEP QC Reviewer

List of attachments/exhibits included as part of this Amendment:

<u>Specify Type</u>	<u>Letter/ Number</u>	<u>Description</u>
Attachment	3-5	Revised Grant Work Plan
Attachment	5-2	Revised Special Audit Requirements
Exhibit	J	OSTDS/EHD Grants Data Collection Tool

ATTACHMENT 3-5 REVISED GRANT WORK PLAN

PROJECT TITLE: Hardee County Phase 8 Regional Wastewater & Potable Water Service Improvements

PROJECT LOCATION: The Project will be located in the City of Wauchula within Hardee County; Lat/Long (27.5922, -81.8293).

PROJECT BACKGROUND: High nitrate levels were identified in the residential area of Wauchula Hills located in Hardee County (Grantee) affecting approximately 400 to 600 homes. The next portion of Wauchula Hills construction is the expansion of centralized potable water and wastewater infrastructure for Phase 8 design, permitting and construction within the Wauchula Hills service area. The project further provides extension of centralized sewer services and decommissioning of failing septic systems contributing to ultimately contaminating source wells, as well the project extends potable water lines, appurtenances, and centralized services for safe drinking water. Due to the proximity to the Peace River and Charlotte Harbor Estuary, the need for expanding this regional wastewater and potable water system is necessary.

PROJECT DESCRIPTION: Wauchula Hills Phase 8 Improvements Project will provide design, project management, and construction of plant support facilities to extend approximately 13,188 linear feet of potable water and approximately 12,684 linear feet of wastewater lines and services to project residences, restoring project-impacted rights-of-way. The Grantee will connect 45 properties to central sewer and one potable water master meter that services multiple commercial temporary residences to the Wauchula Hills Wastewater treatment facility and Wauchula Hills Water Treatment Plant.

TASKS: All documentation should be submitted electronically unless otherwise indicated and should be submitted prior to the expiration of the grant agreement.

Task 1: Preconstruction Activities

Deliverables: The Grantee will complete the design of the Hardee County Phase 8 Regional Wastewater & Potable Water Service Improvements project and obtain all necessary permits for construction of the project. Activities necessary for design, such as surveys, geotechnical evaluations, pre-design studies, and environmental assessments are eligible under this task.

Documentation: The Grantee will submit a signed summary of activities completed for the period of work covered in the payment request, including the percentage of design complete and permitting status, using the format provided by the Department's Grant Manager. Upon request by the Department's Grant Manager, the Grantee will provide additional supporting documentation relating to this task.

For the final documentation, the Grantee will also submit a copy of the design completed with the funding provided for this task, a list of all required permits identifying issue dates and issuing authorities, and copies of any surveys, assessments, or other documents funded under this task.

Performance Standard: The Department's Grant Manager will review the documentation to verify that the deliverables have been completed as described above. Upon review and written acceptance by the Department's Grant Manager, a payment request may be processed.

Payment Request Schedule: The Grantee may submit a payment request for cost reimbursement no more frequently than monthly.

Task 2: Project Management

Deliverables: The Grantee will provide project management services related to the Hardee County Phase 8 Regional Wastewater & Potable Water Service Improvements, to include review of documents and forms, budget oversight, preparation and submittal of quarterly progress reports, processing of payment requests and related documentation, field engineering services, construction observation, site meetings with construction contractor(s) and design professionals, and overall project coordination and supervision.

Documentation: The Grantee will submit a signed summary of activities completed for the period of work covered in the payment request, using the format provided by the Department's Grant Manager. Upon request by the Department's Grant Manager, the Grantee will provide additional supporting documentation relating to this task.

Performance Standard: The Department's Grant Manager will review the documentation to verify that the deliverables have been completed as described above. Upon review and written acceptance by the Department's Grant Manager, a payment request may be processed.

Payment Request Schedule: The Grantee may submit a payment request for cost reimbursement no more frequently than monthly.

Task 3: Construction

Deliverables: The Grantee will construct the Hardee County Phase 8 Regional Wastewater & Potable Water Service Improvements in accordance with the final design. The Grantee will submit through the Department's GIS web-interface data collection tool, parcel-level data identifying collection system extensions; lift stations and other infrastructure associated with the grant; and both the parcels connected to sewer and the parcels where sewer has been made available for connection but not yet connected along with associated grant information.

Documentation: The Grantee will submit: 1) a signed summary of activities completed for the period of work covered in the payment request, using the format provided by the Department's Grant Manager. For the final documentation, the Grantee will also submit: 3) an email from the Department's GIS web-interface data collection tool, confirming that data for the project has been submitted. Upon request by the Department's Grant Manager, the Grantee will provide additional supporting documentation relating to this task.

Performance Standard: The Department's Grant Manager will review the documentation to verify that the deliverables have been completed as described above. Upon review and written acceptance by the Department's Grant Manager, a payment request may be processed.

Payment Request Schedule: The Grantee may submit a payment request for cost reimbursement no more frequently than monthly.

Task 4: Connection to Central Sewer

Deliverables: The Grantee will properly abandon the septic systems and connect approximately 40 single family residences to a central sanitary sewer system for wastewater treatment by the Wauchula Hills Wastewater treatment facility. Approximately 5 additional properties that do not have septic tanks will also connect to the central sanitary sewer system. The Grantee will submit through the Department's GIS web-interface data collection tool parcel-level data identifying parcels connected to sewer along with associated grant information.

Documentation: The Grantee will submit: 1) a signed summary of activities completed for the period of work covered in the payment request, using the format provided by the Department's Grant Manager; 2) a list of addresses and types of the properties connected; and 3) proof of septic abandonment and connection for each property, as evidenced by copies of invoices for the abandonments and connections by a licensed plumber, utility contractor, or building contractor. For the final documentation, the Grantee will also submit: 4) an email from the Department's GIS web-interface data collection tool, confirming that data for the project has been submitted.

Performance Standard: The Department's Grant Manager will review the documentation to verify that the deliverables have been completed as described above. Upon review and written acceptance by the Department's Grant Manager, a payment request may be processed.

Payment Request Schedule: The Grantee may submit a payment request for cost reimbursement no more frequently than monthly.

Budget Narrative: Impact fees (also called infrastructure or capital fees) are not eligible costs under this task.

Task 5: Connection to Central Water

Deliverables: The grantee will connect one master meter that services multiple commercial temporary residences to the Wauchula Hills Water Treatment Plant central potable water.

Documentation: The Grantee will submit: 1) a signed summary of activities completed for the period of work covered in the payment request, using the format provided by the Department's Grant Manager; and 2) a list of addresses and types of the properties connected.

Performance Standard: The Department's Grant Manager will review the documentation to verify that the deliverables have been completed as described above. Upon review and written acceptance by the Department's Grant Manager, a payment request may be processed.

Payment Request Schedule: The Grantee may submit a payment request for cost reimbursement no more frequently than monthly.

Budget Narrative: Impact fees (also called infrastructure or capital fees) are not eligible costs under this task.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

DIRECT PAYMENT: For those grant agreements for which advance or direct payment is approved, the reference to “payment” in the Payment Request Schedules shall mean submittal of invoice(s), and the Grantee shall submit invoice documentation with each payment request. Proof of payment must be submitted prior to each subsequent payment request and no later than sixty (60) calendar days following the final payment request.

PROJECT TIMELINE & BUDGET DETAIL: The tasks must be completed by the corresponding task end date. Cost reimbursable grant funding must not exceed the budget amounts as indicated below.

For payment requests that include Contractual Services, the Grantee shall provide documentation of the procurement process, as consistent with Attachment 1, Section 9.c.

Task No.	Task Title	Budget Category	Grant Amount	Task Start Date	Task End Date
1	Preconstruction Activities	Contractual Services	\$465,076.55	07/01/2022	06/30/2027
2	Project Management	Contractual Services	\$216,162.95	07/01/2022	06/30/2028
3	Construction	Contractual Services	\$2,082,957.25	07/01/2022	06/30/2028
		Miscellaneous/ Other Expenses	\$151,303.00		
4	Connection to Central Sewer	Contractual Services	\$200,000.00	07/01/2022	06/30/2028
5	Connection to Central Water	Contractual Services	\$279,156.00	07/01/2022	06/30/2028
Total:			\$3,394,655.75		

Note that, per Section 8 of Attachment 1 in the Agreement, authorization for continuation and completion of work and any associated payments may be rescinded, with proper notice, at the discretion of the Department if the Legislature reduces or eliminates appropriations. Extending the contract end date carries the risk that funds for this project may become unavailable in the future. This should be a consideration for the Grantee with this and future requests for extension.

Budget Narrative: The Wastewater Grant funding (\$294,655.75) may only be reimbursed under Tasks 3 and 4 for work related to wastewater infrastructure.

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Revised Special Audit Requirements
(State and Federal Financial Assistance)**

Attachment 5-2

The administration of resources awarded by the Department of Environmental Protection (*which may be referred to as the "Department", "DEP", "FDEP" or "Grantor", or other name in the agreement*) to the recipient (*which may be referred to as the "Recipient", "Grantee" or other name in the agreement*) may be subject to audits and/or monitoring by the Department of Environmental Protection, as described in this attachment.

MONITORING

In addition to reviews of audits conducted in accordance with 2 CFR Part 200, Subpart F-Audit Requirements, and Section 215.97, F.S., as revised (see "AUDITS" below), monitoring procedures may include, but not be limited to, on-site visits by DEP Department staff, limited scope audits as defined by 2 CFR 200.425, or other procedures. By entering into this Agreement, the recipient agrees to comply and cooperate with any monitoring procedures/processes deemed appropriate by the Department of Environmental Protection. In the event the Department of Environmental Protection determines that a limited scope audit of the recipient is appropriate, the recipient agrees to comply with any additional instructions provided by the Department to the recipient regarding such audit. The recipient further agrees to comply and cooperate with any inspections, reviews, investigations, or audits deemed necessary by the Chief Financial Officer (CFO) or Auditor General.

AUDITS

PART I: FEDERALLY FUNDED

This part is applicable if the recipient is a State or local government or a non-profit organization as defined in 2 CFR §200.330

1. A recipient that expends \$1,000,000 or more in Federal awards in its fiscal year, must have a single or program-specific audit conducted in accordance with the provisions of 2 CFR Part 200, Subpart F. EXHIBIT 1 to this Attachment indicates Federal funds awarded through the Department of Environmental Protection by this Agreement. In determining the federal awards expended in its fiscal year, the recipient shall consider all sources of federal awards, including federal resources received from the Department of Environmental Protection. The determination of amounts of federal awards expended should be in accordance with the guidelines established in 2 CFR 200.502-503. An audit of the recipient conducted by the Auditor General in accordance with the provisions of 2 CFR Part 200.514 will meet the requirements of this part.
2. For the audit requirements addressed in Part I, paragraph 1, the recipient shall fulfill the requirements relative to auditee responsibilities as provided in 2 CFR 200.508-512.
3. A recipient that expends less than \$1,000,000 in federal awards in its fiscal year is not required to have an audit conducted in accordance with the provisions of 2 CFR Part 200, Subpart F-Audit Requirements. If the recipient expends less than \$1,000,000 in federal awards in its fiscal year and elects to have an audit conducted in accordance with the provisions of 2 CFR 200, Subpart F-Audit Requirements, the cost of the audit must be paid from non-federal resources (i.e., the cost of such an audit must be paid from recipient resources obtained from non-federal entities).
4. The recipient may access information regarding the Catalog of Federal Domestic Assistance (CFDA) via the internet at <https://sam.gov/content/assistance-listings>.

Attachment 5-2

1 of 6

PART II: STATE FUNDED

This part is applicable if the recipient is a nonstate entity as defined by Section 215.97(1)(n), Florida Statutes.

1. In the event that the recipient expends a total amount of state financial assistance equal to or in excess of \$750,000 in any fiscal year of such recipient (for fiscal years ending June 30, 2017, and thereafter), the recipient must have a State single or project-specific audit for such fiscal year in accordance with Section 215.97, F.S.; Rule Chapter 69I-5, F.A.C., State Financial Assistance; and the current Rules of the Auditor General. EXHIBIT 1 to this form lists the state financial assistance awarded through the Department of Environmental Protection by this agreement. In determining the state financial assistance expended in its fiscal year, the recipient shall consider all sources of state financial assistance, including state financial assistance received from the Department of Environmental Protection, other state agencies, and other nonstate entities. State financial assistance does not include federal direct or pass-through awards and resources received by a nonstate entity for Federal program matching requirements.
2. In connection with the audit requirements addressed in Part II, paragraph 1; the recipient shall ensure that the audit complies with the requirements of Section 215.97(8), Florida Statutes. This includes submission of a financial reporting package as defined by Section 215.97(2), Florida Statutes, and the current Rules of the Auditor General.
3. If the recipient expends less than \$750,000 in state financial assistance in its fiscal year (for fiscal year ending June 30, 2017, and thereafter), an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, is not required. In the event that the recipient expends less than \$750,000 in state financial assistance in its fiscal year, and elects to have an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, the cost of the audit must be paid from the non-state entity's resources (i.e., the cost of such an audit must be paid from the recipient's resources obtained from other than State entities).
4. For information regarding the Florida Catalog of State Financial Assistance (CSFA), a recipient should access the Florida Single Audit Act website located at <https://apps.fldfs.com/fsaa> for assistance. In addition to the above websites, the following websites may be accessed for information: Legislature's Website at <http://www.leg.state.fl.us/Welcome/index.cfm>, State of Florida's website at <http://www.myflorida.com/>, Department of Financial Services' Website at <https://www.myfloridacfo.com/> and the Auditor General's Website at <http://www.myflorida.com/audgen/>.

PART III: OTHER AUDIT REQUIREMENTS

(NOTE: This part would be used to specify any additional audit requirements imposed by the State awarding entity that are solely a matter of that State awarding entity's policy (i.e., the audit is not required by Federal or State laws and is not in conflict with other Federal or State audit requirements). Pursuant to Section 215.97(8), Florida Statutes, State agencies may conduct or arrange for audits of State financial assistance that are in addition to audits conducted in accordance with Section 215.97, Florida Statutes. In such an event, the State awarding agency must arrange for funding the full cost of such additional audits.)

PART IV: REPORT SUBMISSION

1. Copies of reporting packages for audits conducted in accordance with 2 CFR Part 200, Subpart F-Audit Requirements, and required by PART I of this form shall be submitted, when required by 2 CFR 200.512, by or on behalf of the recipient directly to the Federal Audit Clearinghouse (FAC) as provided in 2 CFR 200.36 and 200.512
 - A. The Federal Audit Clearinghouse designated in 2 CFR §200.501(a) (the number of copies required by 2 CFR §200.501(a) should be submitted to the Federal Audit Clearinghouse), at the following address:

By Mail:

Federal Audit Clearinghouse
Bureau of the Census
1201 East 10th Street
Jeffersonville, IN 47132

Submissions of the Single Audit reporting package for fiscal periods ending on or after January 1, 2008, must be submitted using the Federal Clearinghouse's Internet Data Entry System which can be found at <http://harvester.census.gov/facweb/>

2. Copies of financial reporting packages required by PART II of this Attachment shall be submitted by or on behalf of the recipient directly to each of the following:

- A. The Department of Environmental Protection at one of the following addresses:

By Mail:

Audit Director
Florida Department of Environmental Protection
Office of Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:

FDEPSingleAudit@dep.state.fl.us

- B. The Auditor General's Office at the following address:

Auditor General
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Claude Pepper Building, Room 401
111 West Madison Street
Tallahassee, Florida 32399-1450

The Auditor General's website (<http://flauditor.gov/>) provides instructions for filing an electronic copy of a financial reporting package.

3. Copies of reports or management letters required by PART III of this Attachment shall be submitted by or on behalf of the recipient directly to the Department of Environmental Protection at one of the following addresses:

By Mail:

Audit Director
Florida Department of Environmental Protection
Office of Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:

FDEPSingleAudit@dep.state.fl.us

4. Any reports, management letters, or other information required to be submitted to the Department of Environmental Protection pursuant to this Agreement shall be submitted timely in accordance with 2 CFR 200.512, section 215.97, F.S., and the current Rules of the Auditor General, as applicable.
5. Recipients, when submitting financial reporting packages to the Department of Environmental Protection for audits done in accordance with 2 CFR 200, Subpart F-Audit Requirements, or the current Rules of the Auditor

General, should indicate the date and time the reporting package was delivered to the recipient and any correspondence accompanying the reporting package.

PART V: RECORD RETENTION

The recipient shall retain sufficient records demonstrating its compliance with the terms of the award and this Agreement for a period of **five (5)** years from the date the audit report is issued, and shall allow the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General access to such records upon request. The recipient shall ensure that audit working papers are made available to the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General upon request for a period of **three (3)** years from the date the audit report is issued, unless extended in writing by the Department of Environmental Protection.

EXHIBIT – 1

FUNDS AWARDED TO THE RECIPIENT PURSUANT TO THIS AGREEMENT CONSIST OF THE FOLLOWING:

Note: If the resources awarded to the recipient represent more than one federal program, provide the same information shown below for each federal program and show total federal resources awarded

Federal Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following:					
Federal Program A	Federal Agency	CFDA Number	CFDA Title	Funding Amount	State Appropriation Category
				\$	
Federal Program B	Federal Agency	CFDA Number	CFDA Title	Funding Amount	State Appropriation Category
				\$	

Note: If the resources awarded to the recipient represent more than one federal program, list applicable compliance requirements for each federal program in the same manner as shown below:

Federal Program A	First Compliance requirement: i.e.: (what services of purposes resources must be used for)	
	Second Compliance requirement: i.e.: (eligibility requirement for recipients of the resources)	
	Etc.	
	Etc.	
Federal Program B	First Compliance requirement: i.e.: (what services of purposes resources must be used for)	
	Second Compliance requirement: i.e.: (eligibility requirement for recipients of the resources)	
	Etc.	
	Etc.	

Note: If the resources awarded to the recipient for matching represent more than one federal program, provide the same information shown below for each federal program and show total state resources awarded for matching.

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Matching Resources for Federal Programs:					
Federal Program A	Federal Agency	CFDA	CFDA Title	Funding Amount	State Appropriation Category
Federal Program B	Federal Agency	CFDA	CFDA Title	Funding Amount	State Appropriation Category

Note: If the resources awarded to the recipient represent more than one state project, provide the same information shown below for each state project and show total state financial assistance awarded that is subject to section 215.97, F.S.

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Resources Subject to Section 215.97, F.S.:						
State Program A	State Awarding Agency	State Fiscal Year ¹	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category
Original Agreement	Department of Environmental Protection	2022-2023	37.039	Statewide Water Quality Restoration Projects – GAA LI 1665A, GR	\$3,100,000.00	140047
Amendment 3	Department of Environmental Protection	2024-2025	37.039	Statewide Water Quality Restoration Projects - Section 273, WPSPTF	\$294,655.75	149950
State Program B	State Awarding Agency	State Fiscal Year ²	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category

Total Award	\$3,394,655.75	
-------------	----------------	--

Note: List applicable compliance requirement in the same manner as illustrated above for federal resources. For matching resources provided by the Department for DEP for federal programs, the requirements might be similar to the requirements for the applicable federal programs. Also, to the extent that different requirements pertain to different amount for the non-federal resources, there may be more than one grouping (i.e. 1, 2, 3, etc.) listed under this category.

For each program identified above, the recipient shall comply with the program requirements described in the Catalog of Federal Domestic Assistance (CFDA) [<https://sam.gov/content/assistance-listings>] and/or the Florida Catalog of State Financial Assistance (CSFA) [<https://apps.fldfs.com/fsaa/searchCatalog.aspx>], and State Projects Compliance Supplement (Part Four: State Projects Compliance Supplement [<https://apps.fldfs.com/fsaa/compliance.aspx>]). The services/purposes for which the funds are to be used are included in the Agreement's Grant Work Plan. Any match required by the Recipient is clearly indicated in the Agreement.

¹ Subject to change by Change Order.

² Subject to change by Change Order.

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**Exhibit J
OSTDS/EHD Grants Data Collection Tool**

The current **OSTDS/EHD Grants Data Collection Tool** for this grant can be found on the Department's website at this link:

<https://experience.arcgis.com/experience/a68fffc3004f4c53b7de40ceda3842f8/>

This tool shall be used for grant agreements for construction of septic to sewer, septic upgrades, sewer extension, other sewer system improvements or for connection to central sewer to collect parcel-level data identifying collection system extensions; lift stations and other infrastructure associated. This requirement will be listed in the Deliverables section of the grant work plan if it is required.

The User Guide for this tool can be found here:

<https://experience.arcgis.com/experience/a68fffc3004f4c53b7de40ceda3842f8/page/User-Guide>



Item Cover Page

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, County Manager's Office

ITEM TYPE: Business Agenda - Action Items

AGENDA SECTION: **CONSENT AGENDA**

SUBJECT: Motion to approve the settlement agreement between the County and Wauchula Sun bearing case number 2022-CA-000180 in the amount of \$699,000; and authorizing the Chair to sign any necessary documents in furtherance thereof.

SUGGESTED ACTION:

ATTACHMENTS:

[2026_5_20-Ltr to Mr. Kelly re Atty Fees and Costs.pdf](#)

[2026.05.18 Mediation Settlement Agreement signed by Plaintiff.pdf](#)



Tampa
Stuart
Austin

819 SW Federal Hwy
Suite 300
Stuart, FL 34994

P: 772-252-3000
F: 813-228-6422
E: NICHOLASG@BLHTLAW.COM

May 20, 2026

Via Electronic Mail:

Carlos A. Kelly
Henderson Franklin
(Attorneys at Law)
1715 Monroe Street
(P.O. Box 280)
Fort Myers, FL 33902

RE: **Wauchula Sun, LLC v. Hardee County**
Case No.: 25 2022-CA-000180

Mr. Kelly,

Enclosed, please find a copy of the Settlement Agreement executed by Plaintiff. We have also listed below an accounting of our fees and costs incurred to date. Should you need anything further, please let me know.

Accounting Fees and Costs:

Fees: \$284,083.50

Court and Expert Costs: \$30,069.70

For the firm,

**BARTLETT LOEB HINDS
THOMPSON & ANGELOS**

By:/s/ Nicholas M. Gieseler

July 11, 2024
Page 2 of 2

Enclosure

MEDIATION SETTLEMENT AGREEMENT

This Settlement Agreement and Mutual Release (the “**Agreement**”) is made and entered into by and among WAUCHULA SUN, LLC, a Florida limited liability company (“**Wauchula Sun**”), on the one hand, and HARDEE COUNTY, a Political Subdivision of the State of Florida (“**Hardee County**”), on the other hand. Wauchula Sun and Hardee County may be referred to in this Agreement individually as a “Party” and together as the “Parties.” The **Effective Date** of this Agreement is the date the last Party affixes its signature hereto.

RECITALS

WHEREAS, Wauchula Sun filed a lawsuit against Hardee County in the Tenth Judicial Circuit in and for Hardee County, Florida, bearing case number 2022-CA-000180 (the “**Action**”); and

WHEREAS, on May 9, 2025, the Court entered an Order Granting Plaintiff’s Motion for Summary Judgment (As to Liability Only) for Counts II, III, IV, and V in favor of Wauchula Sun in the Action; and

WHEREAS, on October 20, 2025 the Court entered an Order dismissing Count IV with prejudice in the Action; and

WHEREAS, the Action is set for trial in August of 2026 for the compensation phase of the litigation; and

WHEREAS, neither Party admits any fault or liability to the other Party; and

WHEREAS, the Parties have agreed to fully, completely, and finally settle and resolve any and all disputes relating to and/or stemming from matters asserted or which could have been asserted in the Action, including, without limitation, all pending and potential claims and counterclaims, judgments, appeals, and awards involved therein, as well as any and all related claims or counterclaims, and any and all other matters between them up until the date of execution of this Agreement, whether now known or unknown, which could have been raised by or against the Parties in the Action, in accordance with the terms and conditions contained herein.

AGREEMENT

NOW, THEREFORE, for and in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. Adoption and Incorporation of Recitals. The above recitals are true and correct and are hereby incorporated herein by this reference.

2. Settlement The parties hereby agree and acknowledge that they have reached a settlement in the amount of **\$699,000.00** (six hundred ninety-nine thousand dollars), and that payment will

be made in full within 30 days of the effective date of this Agreement to Wauchula Sun. The settlement payment shall be made by check or multiple checks issued to Wauchula Sun's legal counsel made payable to the "Trust Account of Bartlett, Loeb, Hinds, Thompson & Angelos, PLLC" and sent care of Nicholas M. Gieseler, Esq., Barlett Loeb, et al., 819 S.W. Federal Hwy., Suite 300, Stuart, FL 34994.

3. Dismissal of Action. Within 7 days of receipt of the Settlement Payment, Wauchula Sun shall file a Voluntary Dismissal with Prejudice of its claims in the Action.

4. Special Release. The Parties, their predecessors, their successors, their assigns, their past, present and future agents, and their successors in interest, and all persons acting by, through, under, or in concert with them, and each of them, hereby release and discharge the other Party, together with their attorneys (including all past and present attorneys, and including any and all attorneys designated or retained as the Hardee County Attorney), their predecessors, their successors, their heirs, their beneficiaries, their affiliated and subsidiary entities, their assigns, their past, present, and future agents, their successors in interest, their insurers and/or risk management pools (including, but not limited to, Public Risk Management of Florida, Johns Eastern Company, Inc., Davies Claims North America, Inc., Davies Group, Ltd., and any and all parent, subsidiary, affiliated, and/or related entities of Public Risk Management of Florida, Johns Eastern Company, Inc., Davies Claims North America, Inc., and/or Davies Group, Ltd.), and all persons acting by, through, under, or in concert with them, and each of them, from all known and unknown charges, complaints, claims, grievances, liabilities, obligations, promises, agreements, controversies, damages, actions, causes of action, suits, rights, demands, costs, losses, debts, penalties fees, wages, expenses (including attorney's fees and costs actually or reasonably incurred) and punitive damages, of any nature whatsoever, known or unknown (collectively, the terms from "all known and unknown charges" through "of any nature whatsoever, known or unknown" above shall be the "Claims"), which either Party has, or may have had, against the other Party, whether or not apparent or yet discovered, for any acts or omissions pertaining to, arising from, or without limitation, concerning any dispute between them related to the Action. This Special Release includes any Claims that Hardee County has, or may have had, related to a claim of express, implied, statutory, or a common law right in interest of title to any portion of the Wauchula Sun real property that was the subject of the Action, which real property was described in Exhibit E to the Complaint that Wauchula Sun filed in the Action. This Special Release shall not include a release of Claims for either Party, or by either Party, that are wholly unrelated to the issues of the Action. Notwithstanding anything to the contrary set forth above, either Party may enforce the terms and conditions of this Agreement.

5. Attorney Fees. Each Party shall be responsible for paying its own attorney's fees and expenses for all legal services of any kind incurred throughout the Action except as specifically provided for herein. If any Party fails or refuses to comply with its obligations under this Agreement after initial written notice of default and defaulting Party's failure to cure within ten (10) business days, the non-defaulting Party shall be entitled to recover all attorney's fees and related costs associated with the enforcement of this Agreement, including subsequent notice of default/demand correspondence and which shall be awarded at all levels including arbitration, trial court or appellate levels as well as bankruptcy proceedings against defaulting Party. The prevailing Party in any legal action or proceeding against the other brought to enforce this

Agreements shall be entitled to recover reasonable attorney fees, litigation costs, and expenses from the non-prevailing Party, including fees, costs, and expenses associated with the enforcement action.

6. Headings; Construction. The titles and headings of the various sections of this Agreement are intended solely for convenience of reference and shall not be construed as an explanation, modification or intended construction of any terms or provisions of this Agreement. No Party shall be deemed to be in breach of any covenant contained in this Agreement if such Party's deemed breach is the result of any action or inaction on the part of any other Party.

7. Comprehension of Terms. The Parties hereby acknowledge that they have entered into this Agreement freely and voluntarily and without coercion or undue influence. The Parties have each retained their own counsel, who have reviewed this Agreement. Accordingly, any uncertainty or ambiguity shall not be construed for or against any Party as an attribution of drafting by any Party.

8. Counterparts; Signatures. This Agreement and any amendments hereto may be executed and delivered in counterparts, each of which shall be deemed an original, and all of which taken together shall constitute one and the same instrument. The facsimile or electronic signatures of the Parties shall be deemed to constitute original signatures.

9. Binding Nature of Agreement. This Agreement, including without limitation the representations and warranties set forth in it, shall be binding on and inure to the benefit of each of the Parties and each of their respective members, representatives, heirs, beneficiaries, agents, employees, successors, parents, affiliated and subsidiary entities and divisions, commonly controlled entities, attorneys, representatives, and assigns. Each Party represents and warrants that it has the full right, power, and authority to enter into this Agreement and to perform its obligations hereunder. The individuals executing this Agreement on behalf of their respective Parties represent and warrant that they are duly authorized to do so and that no further corporate, partnership, or other organizational action is necessary.

10. Severability. In the event that any of the provisions contained in this Agreement are held to be unenforceable or invalid, in whole or in part, the validity and enforceability of the remaining provisions shall not be affected thereby, and shall remain in full force and effect.

11. Jurisdiction, Venue, and Governing Law. This Agreement shall be governed by, construed, and enforced in accordance with the laws of Florida, without regard to its choice of law provisions. The Parties consent to the exclusive jurisdiction of the Tenth Judicial Circuit Court in and for Hardee County, Florida to enforce the terms of this Agreement.

12. Merger; Entire Agreement. Except if expressly stated herein, this Agreement constitutes the final agreement between the Parties relative to the subject matters hereof. This Agreement supersedes all prior or contemporaneous promises, agreements, representations, and understandings, whether written or oral, of or between the Parties with respect to the subject matters hereof, and is the complete and exclusive expression of the Parties' agreement on the matters contained in this Agreement.

13. Cooperation. Prior to and at all times following the effective date, the Parties hereto agree to execute and deliver, or to cause to be executed and delivered, such documents and to do, or cause to be done, such other acts and things and may reasonably be requested by one another to assure that the parties realize the benefits of this Agreement consistent with its terms and conditions. This paragraph expressly includes agreement by the Parties that the Parties will reasonably coordinate to agree upon the appropriate mechanism for Hardee County to formally abandon it's Certification of Statutory Dedication, recorded on February 11, 2021, eliminating any cloud on title to Wauchula Sun's property.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of the date set forth below.

AS TO WAUCHULA SUN, LLC

WAUCHULA SUN, LLC

By: [Signature]

Name: Brian Schaper

Title: Member

STATE OF Indiana
COUNTY OF Allen

BEFORE ME, personally appeared Brian Schaper who, upon being first duly sworn according to law, depose(s) and say(s) that he executed the foregoing Answers to the First Set of Interrogatories are true and correct to the best of his knowledge and belief.

SWORN AND SUBSCRIBED before me on May 19, 2026.

[Signature]
Notary Public Theresa L. Keplinger
My Commission Expires: 6-7-2032

AS TO HARDEE COUNTY

Attest: Chair of Hardee County Florida County Commissioner

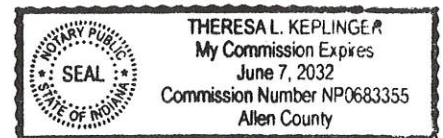
By: _____

Name: _____

Date: _____

Approved as to form and Legality

Brian Haas, Esq.
County Attorney





Item Cover Page

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, Budget and Finance

ITEM TYPE: Consent Agenda

AGENDA SECTION: **CONSENT AGENDA**

SUBJECT: Motion to approve the operating budget amendment as presented.

SUGGESTED ACTION:

ATTACHMENTS:
[xmemo litigation.pdf](#)
[xOper amend litigation 06.04.26.pdf](#)

**BOARD OF
COUNTY
COMMISSIONERS****NOEY FLORES**
CHAIR, DISTRICT 2**TIM WELLS**
VICE-CHAIR, DISTRICT 1**DONALD CHANCEY**
DISTRICT 3**RUSSELL MELENDY**
CHAIR, DISTRICT 4**KENNY MILLER**
DISTRICT 5**TERRY ATCHLEY**
COUNTY MANAGER**SARAH JOHNSTON**
COUNTY ATTORNEY**MAILING ADDRESS**
412 West Orange Street
Suite 201
Wauchula, FL 33873**PHONE**
863-773-3199**WEBSITE**
hardeecountyfl.gov

To: Terry Atchley, County Manager
Through: Douglas Baber, Assistant County Manager
From: Diane Moore, Budget Manager
Subject: Operating Amendments- Litigation Payout
Date: May 14, 2026

Attached is an amendment to increase the extraordinary expense line for a litigation settlement by \$612,134.00. This amendment decreases the general fund reserves by \$612,134.00. After this reduction in General Fund Reserves, the remaining balance is \$2,180,729.00. This amendment is to cover a payout as a result of a litigation settlement.

Staff recommends approval of this amendment.

OPERATING BUDGET AMENDMENTS 2025-2026

June 4, 2026

Account Number	Classification	Adopted Budget	Amended Budget	Increase	Decrease	Revised Budget	Notes
001-592-000-0	GF Litigation Settlement	\$ -	\$ -	\$ 612,134.00		\$ 612,134.00	To move funds from general fund reserves to payout litigation settlement
001-599-100-0	GF Reserves	\$ 2,792,863.00	\$ 2,792,863.00		\$ 612,134.00	\$ 2,180,729.00	



Item Cover Page

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, County Manager's Office

ITEM TYPE: Presentation

AGENDA SECTION: **PRESENTATIONS**

SUBJECT: **Jeremy Stucker & Walter Breuggeman, FDOT - State Road 64 & State Road 663 Project Update**

SUGGESTED ACTION:

ATTACHMENTS:

[FDOT Ona Presentation.pptx](#)

SR 64 at CR 663

Improvements

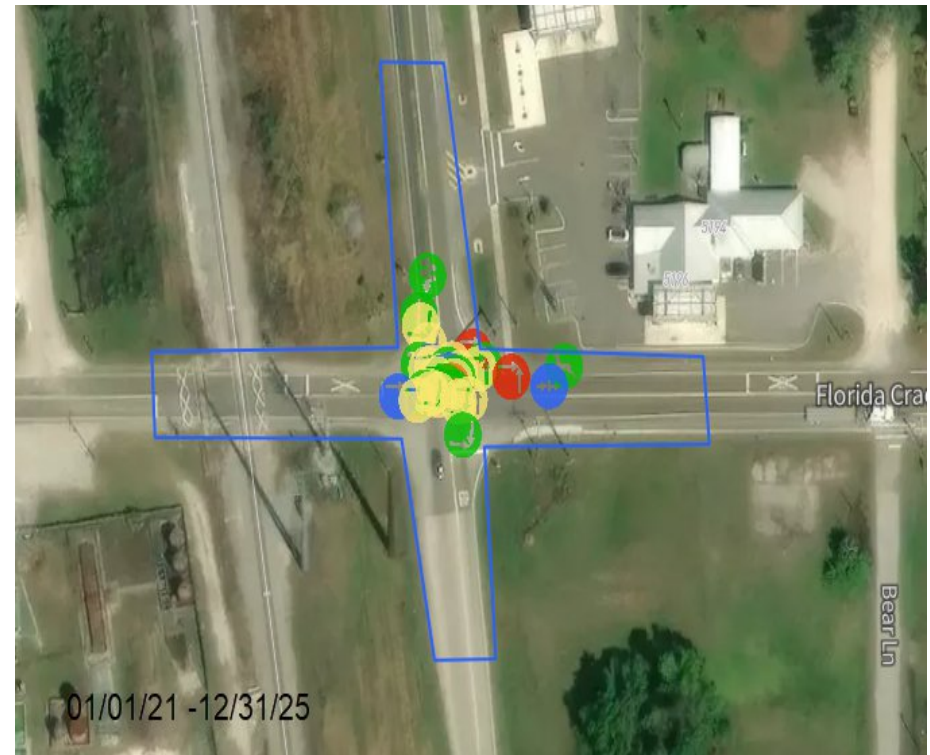
Walter Breuggeman, P.E.

Traffic Services Program Engineer

5-Year Crash History for SR 64 at CR 663

Crash Data from Signal 4 Analytics

- 1/01/21 to 12/31/25 - Total 41 Crashes
- 2 Fatal, 1 Serious Injury, 17 Injury, 5 Possible Injury, 16 Non-Injury
- 3 occurred at night
- 2 in Wet Weather
- 11 Related to vehicles failing to stop
- Northbound vehicles 18 of the 41
- Southbound vehicles 20 of the 41
- 3 Drivers believed the intersection was a 4-Way Stop



SR 64 at CR 663

Fatal and Serious Injury Crashes from 01/01/21 – 12/31/25

- Fatal-Occurred on 12/19/21, at 9:41 PM, a vehicle traveling south on CR 663 failed to stop at SR 64 and collided with a vehicle traveling east on SR 64.
- Fatal-Occurred on 01/08/24, at 6:02 AM, a vehicle traveling north on CR 663 stopped at SR 64 then proceeded north and collided with a semi traveling west on SR 64.
- Serious Injury-Occurred on 10/31/25, at 4:02 PM, a vehicle traveling north on CR 663 failed to stop at SR 64 and collided with a vehicle traveling east on SR 64.



SR 64 at CR 663 Improvements

In February of 2025, the following improvements were made at the intersection:

- Stop bars on CR 663 were moved up to improve sight line
- LED Stop Signs
- Oversized CROSS TRAFFIC DOES NOT STOP signs
- FDOT provided the county with rumble strips to replace the existing north and south bound sets on CR 663
- County installed solar powered streetlight



SR 64 at CR 663 Improvements

- Before the improvements (02/24–02/25): 11 crashes at the intersection.
- After the improvements (02/25–02/26): Crashes reduced to 8.



Crash History for 2026 to Date

Crash Data from Signal 4 Analytics

- 4 crashes
- 1 Fatal, 1 Serious Injury, 1 Injury, 1 Non-Injury
- All occurred during the day
- 2 were related to vehicles failing to stop
- Northbound vehicles accounted for 3 of the 4



SR 64 at CR 663

Fatal and Serious Injury Crashes from 01/01/26 – 05/24/26

- **Fatal** – Occurred on 01/21/26, at 11:40 AM, a vehicle traveling north on CR 663 failed to stop at SR 64 and collided with a semi traveling east on SR 64.
- **Serious Injury** - Occurred on 03/02/26, at 10:48 AM, a vehicle traveling south on CR 663 went around an RV that was stopped at SR 64 to make a right turn. The vehicle stopped and then proceeded into the intersection and collided with a vehicle traveling east on SR 64.



SR 64 at CR 663

Existing Posted Speed Limits



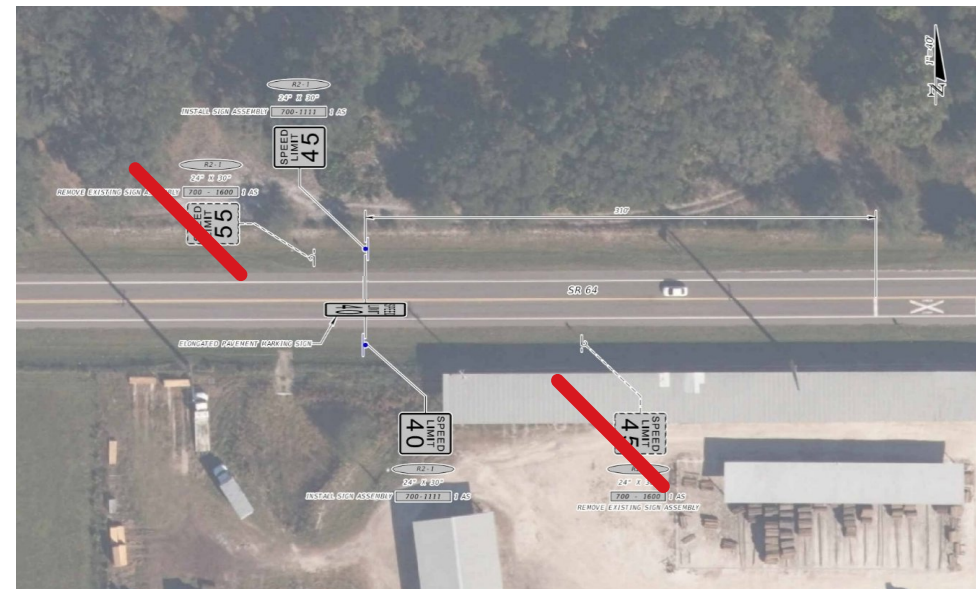
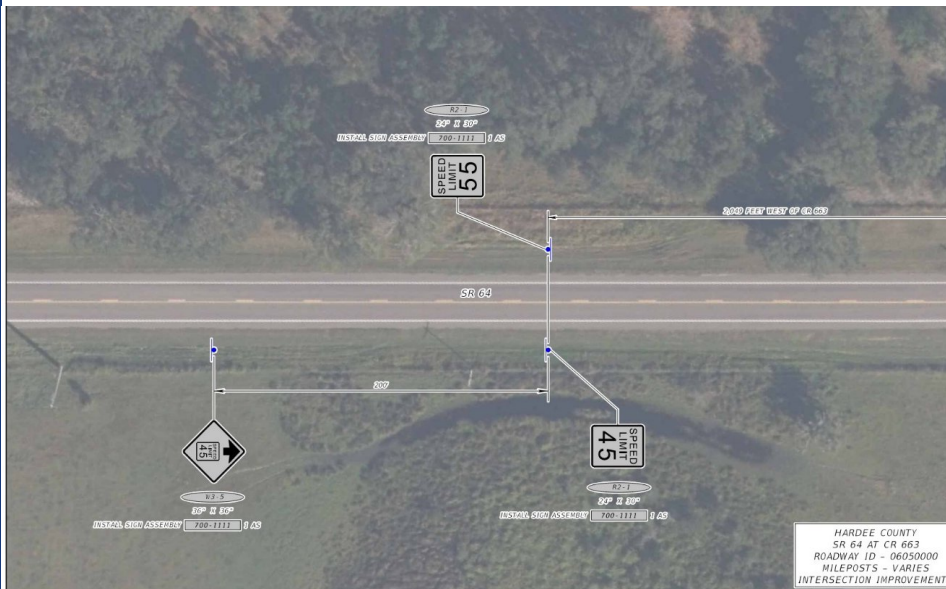
SR 64 at CR 663

Lower Speed Limit Proposed



SR 64 at CR 663 Improvements

- Lower the current 45 mph speed limit to 40 mph through Ona.
- Speed limit signage with 6' x 15' - 40 mph speed limit shield on the asphalt.

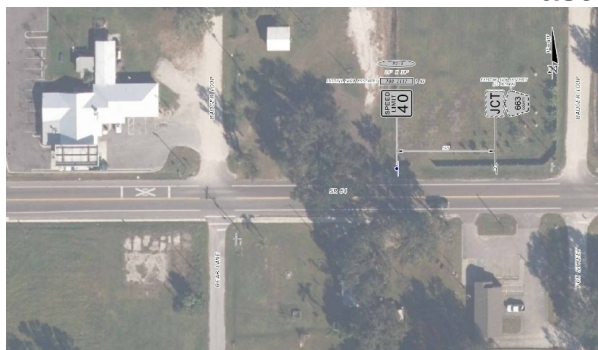


SR 64 at CR 663
Improvements (West of Intersection)
Speed Limit Shield



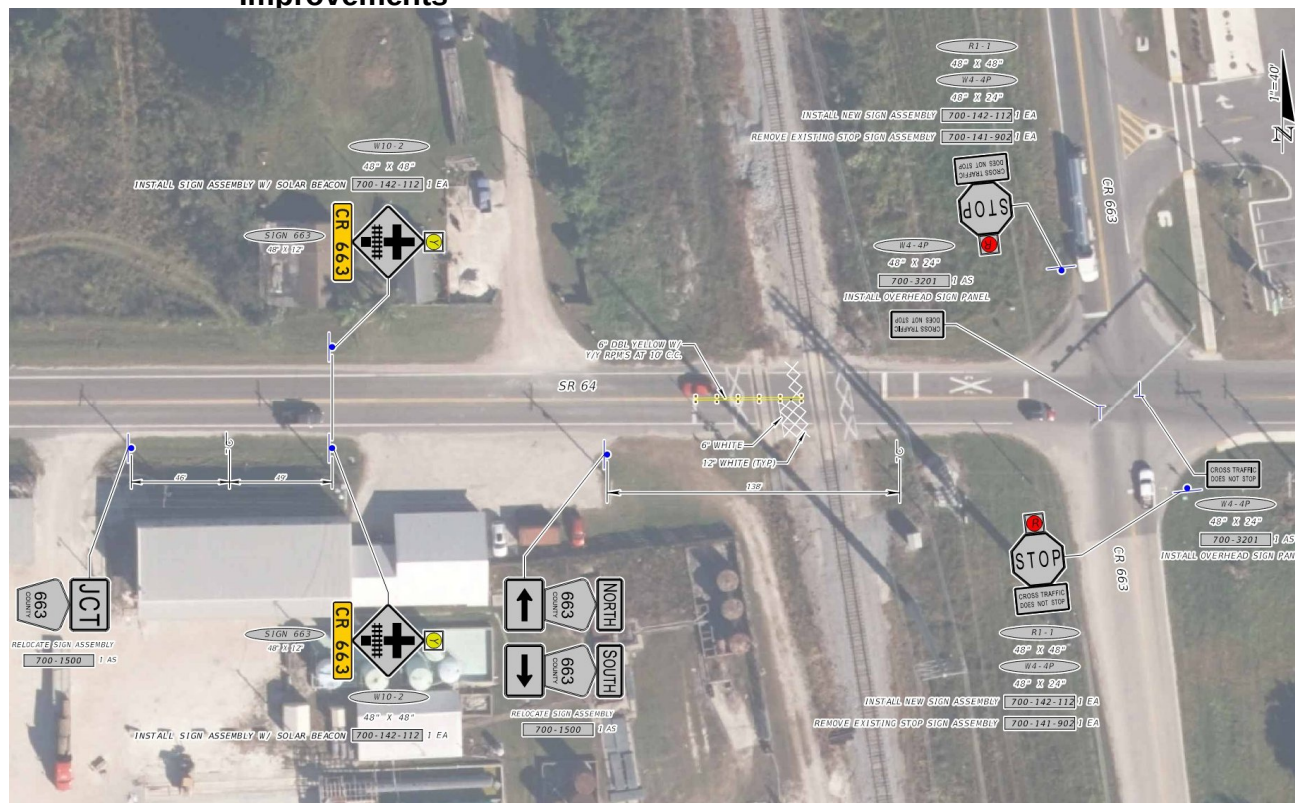
SR 64 at CR 663

Improvements East of Intersection



SR 64 at CR 663

- 2 Intersection Warning signs with Flashing Beacons
- Oversized Stop Signs with Flashing Beacons



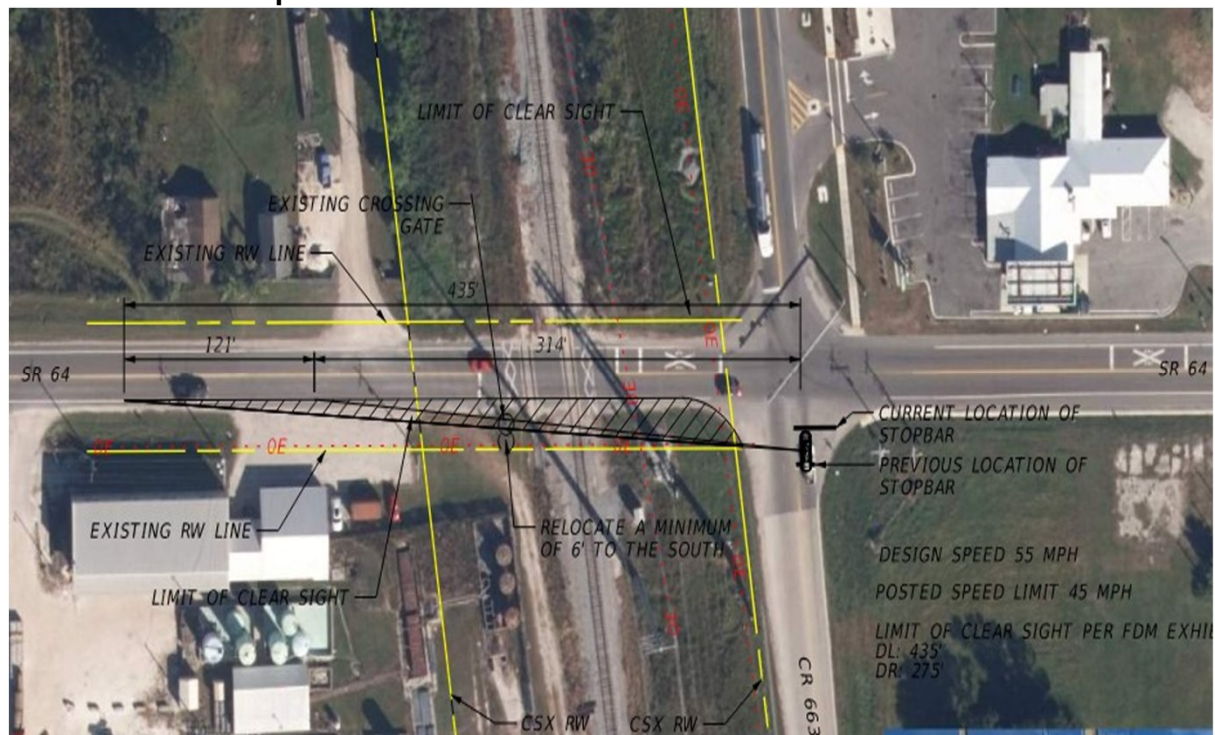
SR 64 at CR 663 Improvements

- Signs on southside of SR 64, west of the intersection, will be relocated to the west to improve sight line



SR 64 at CR 663 Improvements

- We are currently working with CSX Railroad to get the south crossing gate moved approximately 6' south to improve sight line
- This is tentative based on funding



SR 64 at CR 66 Improvements

- FDOT provided the county with new sets of rumble strips to be installed on CR 663 approaching SR 64





SR 64 at CR 663

QUESTIONS?





Item Cover Page

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, Library

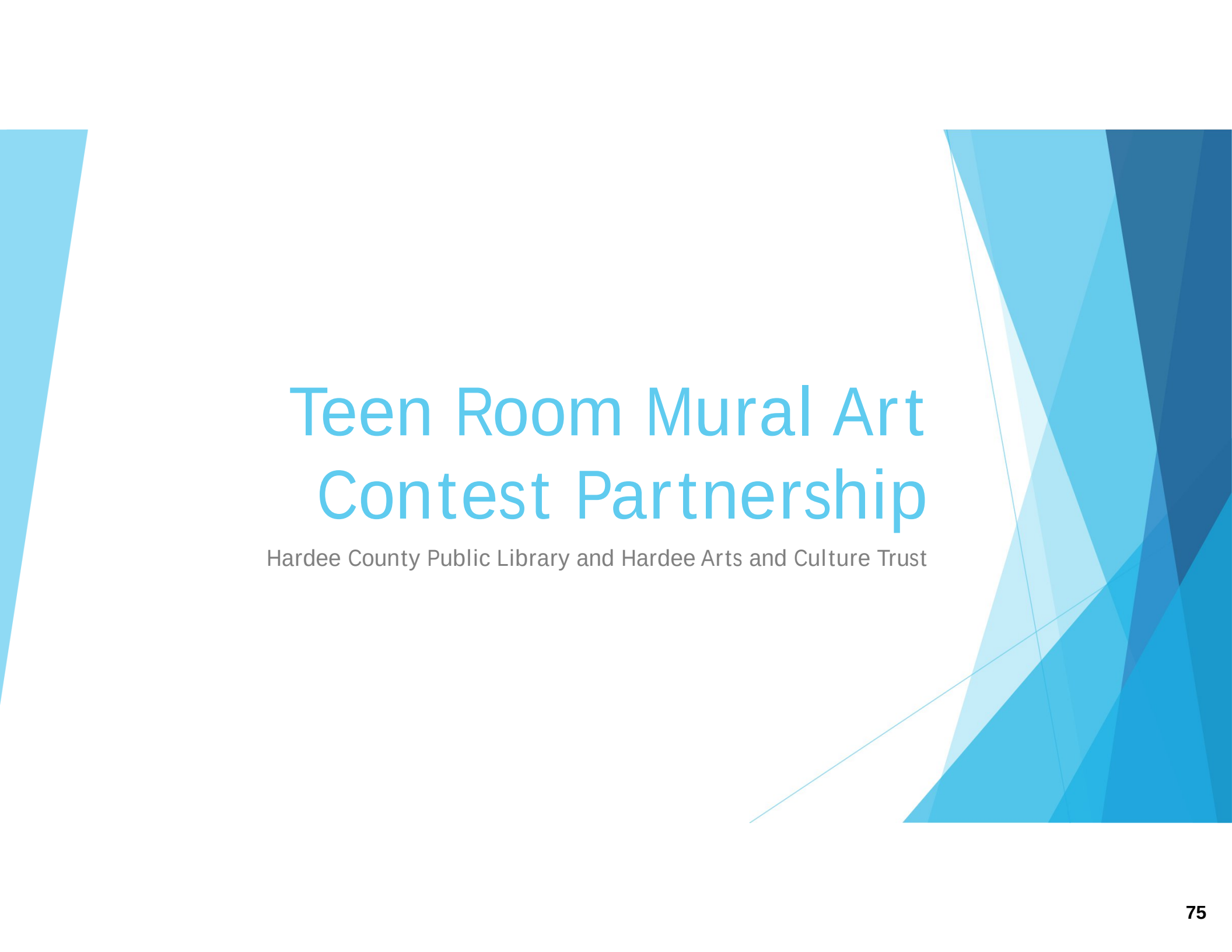
ITEM TYPE: Presentation

AGENDA SECTION: **PRESENTATIONS**

SUBJECT: **Regina Ussery, Hardee County Library - Teen Mural Contest Winner**

SUGGESTED ACTION:

ATTACHMENTS:
[Teen Room Mural Art Contest Partnership.pptx](#)



Teen Room Mural Art Contest Partnership

Hardee County Public Library and Hardee Arts and Culture Trust

Project Overview

Hardee County Public Library partnered with the Hardee Arts and Cultural Trust (HACT) to engage local youth in the creation of artwork for the new Teen Room.

- Contest theme: Retro Video Games
- Open to Junior High and High School students throughout Hardee County.
- Students submitted original artwork inspired by classic arcade games, pixel art, and retro gaming culture.
 - A panel of judges evaluated entries based on:
 - Creativity
 - Originality
 - Connection to theme
 - Overall presentation

Community Impact

- Partnering with the Hardee Arts and Culture Trust (HACT) to provide a community arts opportunity for local youth
- Received approximately 38 student submissions from junior high school students throughout Hardee County
- Selected one winning mural design and two additional pieces that will be enlarged, framed, and displayed in the Teen Room
- Participating artists will have their artwork displayed in the Teen Room, showcasing local talent and creativity
- Students who participated in the contest have been invited to help paint the mural, encouraging hands-on involvement and ownership of the space
- The project is transforming the Teen Room into a space inspired by and created with input from Hardee County youth

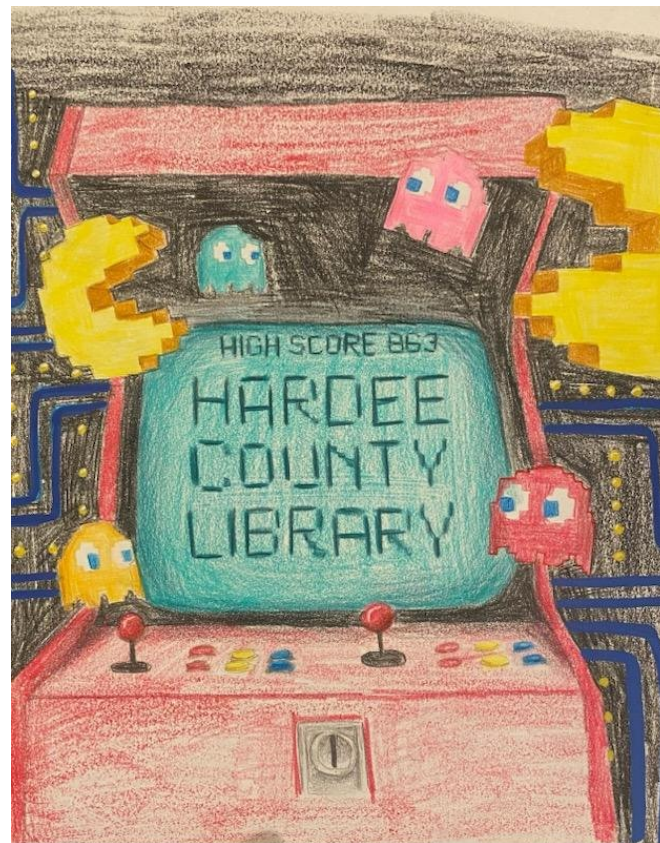
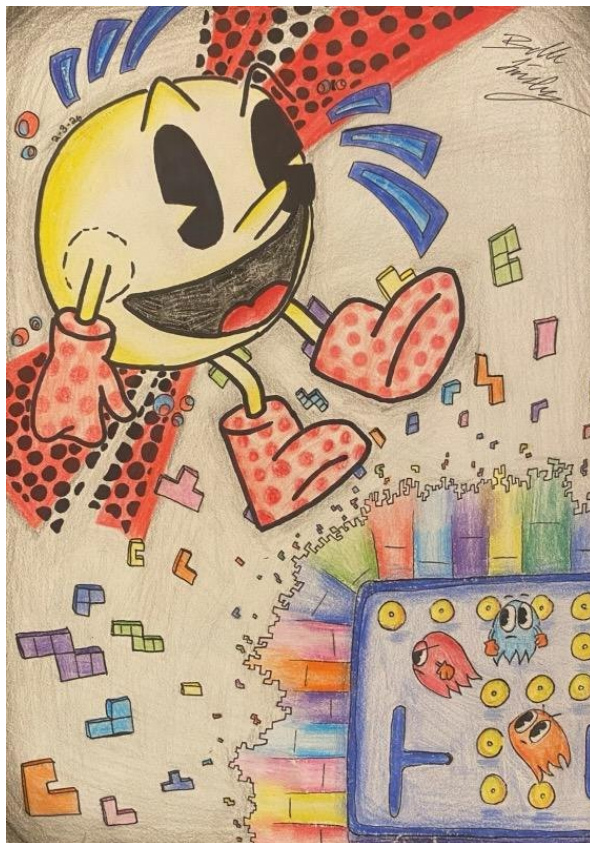
Mural Winners

- ▶ The winning mural was submitted by Sarah Perez-Aparicio



Mural Winners

- ▶ Belle Tinsley (9th grade) and Sara Navarro (12th grade) will also have their artwork blown up and framed for display in the teen game room

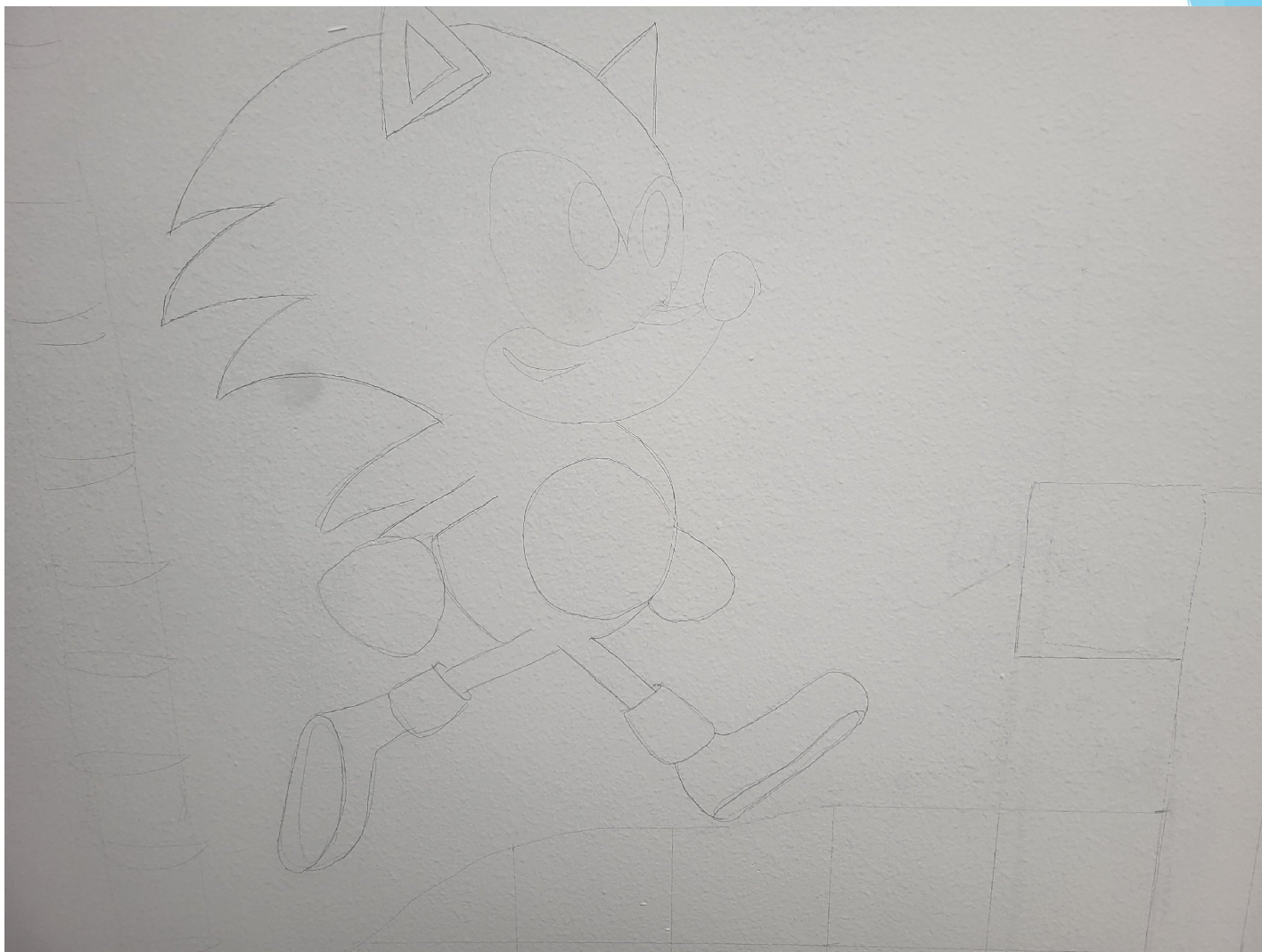


Acknowledgments

Special Thanks To:

- ▶ Hardee Arts and Cultural Trust (HACT) for partnering with the library on this project
- ▶ Hardee County schools and art teachers for encouraging student participation
- ▶ The student artists who submitted their creativity and talent to the contest
- ▶ The students and volunteers helping bring the winning design to life through the mural painting process







Item Cover Page

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, Parks, Recreation, & Marketing

ITEM TYPE: Business Agenda - Ordinances

AGENDA SECTION: **BUSINESS AGENDA - Ordinances:**

SUBJECT: **Lacey Webb, Parks, Recreation & Marketing Manager** - First Reading of Ordinance 2026-08 - Tourist Development Tax Referendum

SUGGESTED ACTION:

- Motion to approve the first reading of Ordinance 2026-08, An Ordinance of Hardee County, Florida levying and imposing a one percent (1%) increase of the tourist development tax on the taxable privilege as described in section 125.0104(3) Florida statutes, including but not limited to certain persons who rent, lease or let any living quarters or accommodations in any hotel, apartment hotel, motel, resort, lease or apartment motel, rooming house, mobile home park, recreational vehicle park, or condominium for a term of six (6) months or less, within both the incorporated and unincorporated areas of Hardee County, Florida, pursuant to the "Local Option Tourist Development Act" section 125.0104, Florida statute; providing for collection of a total of three percent tourist development tax' providing for referendum election to approve or disapprove the tax increase; providing for severability; providing for repeal; providing an effective date.

ATTACHMENTS:

[TDC Tax Referndum memo .pdf](#)

[Hardee_Ordinance_TDT Ordinance Amended_Revised Draft.docx](#)

[BIS Draft Edit - TM Mods - 5292026.docx](#)

**BOARD OF
COUNTY
COMMISSIONERS****TIM WELLS**
DISTRICT 1**NOEY FLORES**
VICE CHAIR, DISTRICT 2**DONALD CHANCEY**
DISTRICT 3**RUSSELL MELENDY**
CHAIR, DISTRICT 4**KENNY MILLER**
DISTRICT 5**TERRY ATCHLEY**
COUNTY MANAGER**SARAH JOHNSTON**
COUNTY ATTORNEY**MAILING ADDRESS**
412 West Orange Street
Suite 103
Wauchula, FL 33873**PHONE**
863-773-9430**WEBSITE**
hardeecountyfl.gov

To: Terry Atchley, County Manager
Through: Doug Baber, Assistant County Manager
From: Lacey Webb, Parks, Recreation & Marketing Manager
Subject: Tourism Development Council Tax Ordinance
Date:

The Hardee County Tourism Development Council (TDC) has conducted a review of the County's current Tourist Development Tax (TDT) rate and its ability to support ongoing and future tourism initiatives. The current TDT rate of 2% has remained unchanged since 2016 while tourism-related opportunities and assets within the county have continued to expand.

The TDT is applied to short-term lodging accommodations and is paid primarily by visitors. Revenues generated are restricted for use in tourism promotion, development, and related facilities that enhance the visitor experience.

Based on these findings, the TDC formally recommends consideration of a referendum to increase the Tourist Development Tax from 2% to 3%, to be placed on the 2026 ballot.

This proposed 1% increase is estimated to generate approximately \$40,000–\$45,000 in additional annual revenue, based on current collection trends.

As directed at the May 14, 2026, Hardee County Board of County Commissioners meeting, here is the 1st reading of the Tourism Tax Ordinance for the 2026 Ballot.

Motion to authorize staff to submit a Tourist Development Tax referendum on the 2026 ballot for a 1% increase.

ORDINANCE NO. 2026-08

AN ORDINANCE OF HARDEE COUNTY, FLORIDA LEVYING AND IMPOSING A ONE PERCENT (1%) INCREASE OF THE TOURIST DEVELOPMENT TAX ON THE TAXABLE PRIVILEGE AS DESCRIBED IN SECTION 125.0104(3), FLORIDA STATUTES, INCLUDING BUT NOT LIMITED TO, CERTAIN PERSONS WHO RENT, LEASE OR LET ANY LIVING QUARTERS OR ACCOMMODATIONS IN ANY HOTEL, APARTMENT HOTEL, MOTEL, RESORT, APARTMENT MOTEL, ROOMING HOUSE, MOBILE HOME PARK, RECREATIONAL VEHICLE PARK, OR CONDOMINIUM FOR A TERM OF SIX (6) MONTHS OR LESS, WITHIN BOTH THE INCORPORATED AND UNINCORPORATED AREAS OF HARDEE COUNTY, FLORIDA, PURSUANT TO THE "LOCAL OPTION TOURIST DEVELOPMENT ACT", SECTION 125.0104, FLORIDA STATUTE; PROVIDING FOR COLLECTION OF A TOTAL OF THREE-PERCENT TOURIST DEVELOPMENT TAX; PROVIDING FOR A REFERENDUM ELECTION TO APPROVE OR DISAPPROVE THE TAX INCREASE; PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL; PROVIDING AN EFFECTIVE DATE.

RECITALS

WHEREAS, Section 125.0104 of the Florida Statutes (F.S.), as amended ("the Local Option Tourist Development Act" or "Act"), authorizes the Hardee County Board of Commissioners ("the Board") to levy and impose a tourist development tax ("TDT") on the exercise, within the boundaries of Hardee County, Florida, of the privilege of renting, leasing or letting for consideration any living quarters or accommodations in any hotel, apartment hotel, motel, resort motel, apartment, apartment motel, rooming house, mobile home park, recreational vehicle park, vacation rental home (or any part thereof), condominium, or timeshare resort for a term of six (6) months or less; and

WHEREAS, the Act further authorizes the Board to establish and, from time to time, amend a tourist development plan that sets forth the specific uses and allocation of tourist development tax revenues; and

WHEREAS, pursuant to authority under the Act, a TDT of two (2%) percent was established by the Board in Hardee County Ordinance No. 16-05; and

WHEREAS, the Board thereafter appointed and confirmed the current members of the Hardee County Tourist Development Council and said members have held meetings in order to discuss the benefit to Hardee County tourism for a one percent (1%) increase of the TDT; and

WHEREAS, the Hardee County Tourist Development Council, voted unanimously on April 9, 2026, to recommend the Board adopt an ordinance amending the TDT and levy an additional one percent (1%); and

WHEREAS, the Board wishes to enact an ordinance levying a one percent (1%) increase to the existing TDT, subject to referendum approval, under the provisions of Section 125.0104, F.S.; and

WHEREAS, the Board has determined that amending the TDT as provided herein will further promote Hardee County as a tourist destination as well as advance tourism in Hardee County and serve the best interests of local citizens.

NOW, THEREFORE BE IT ORDAINED by the Board of County Commissioners of Hardee County, Florida as follows:

Section 1. Effect of Recitals.

The above Recitals are incorporated by reference into the body of this Ordinance, and such Recitals are adopted as findings of fact.

Section 2. Amendments and Changes to the Tourist Development Plan

In accordance with section 125.0104(4), F.S., the TDT may not be substantially amended except by ordinance enacted by an affirmative vote of a majority plus one (1) additional member of the Board. By such affirmative vote, Ordinance No. 16-05 shall be amended and changed by this Ordinance as follows (underline denotes new language, strike through denotes language removed):

SECTION 1. TAX LEVIED

- a. There is hereby levied, imposed, and set a tourist development tax throughout Hardee County at a rate of ~~two percent (2%)~~ three percent (3%) of each whole and major fraction of each dollar of the total rental charged every person who rents, leases, or lets for consideration any living quarters or accommodations in any hotel, apartment hotel, motel, resort motel, apartment, apartment motel, rooming house, mobile home park, recreational vehicle park, or condominium for a term of six (6) months or less, unless such person rents, leases or lets for consideration any living quarters or accommodations which are exempt according to the provisions of Chapter 212 of the Florida Statutes. When receipt of consideration is by way of property other than money, the tax shall be levied and imposed on the fair market value of such non-monetary consideration.
- b. The tourist development tax shall be in addition to any other tax imposed pursuant to Chapter 212, Florida Statutes, and in addition to all other taxes, fees, and the consideration for the rental or lease.
- c. The tourist development tax shall be charged by the person receiving the consideration for the lease or rental, and it shall be collected from the lessee, tenant, or customer at the time of payment of the consideration for such lease or rental.
- d. The person receiving the consideration for such rental or lease shall receive, account for, and remit the tax to the State of Florida Department of Revenue at the time and in the manner provided for persons who collect and remit taxes under Section 212.03, Florida Statutes. The same duties and privileges imposed by Chapter 212, Florida Statutes, upon

dealers in tangible property, respecting the collection and remission of tax, the making of returns, the keeping of books, records, and accounts, and compliance with the rules of the Florida Department of Revenue in the administration of this chapter shall apply to and be binding upon all persons who are subject to the provisions of this act; provided, however, the Department of Revenue may authorize a quarterly return and payment when the tax remitted by the person receiving the consideration for such rental or lease for the preceding quarter did not exceed Twenty-five Dollars (\$25.00).

- e. Collections received by the Department of Revenue from the tax, less cost of administration of this ordinance, shall be paid and returned on a monthly basis to Hardee County for use by the County in accordance with the provisions of this ordinance, and shall be placed in a special revenue fund.

Section 3. Election.

The Supervisor of Elections of Hardee County, Florida, is hereby directed to include the question of approval of this Ordinance on the ballot of the general election on or about November 03, 2026. The question that shall appear on the ballot in such election shall be as follows:

HARDEE COUNTY TOURIST DEVELOPMENT TAX INCREASE REFERENDUM

REFERENDUM TO APPROVE A ONE PERCENT (1%) INCREASE OF THE EXISTING TOURIST DEVELOPMENT TAX LEVIED ON MOTELS, HOTELS, AND OTHER CERTAIN TRANSIENT LODGING TO BE COLLECTED FROM THE LESSEE, TENANT, OR CUSTOMER. THE TOURIST DEVELOPMENT TAX WILL NOT BE ON FOOD, BEVERAGE, ENTERTAINMENT, OR OTHER ITEMS FOR SALE. THE TAX PROCEEDS ARE TO BE USED TO FURTHER ENHANCE, PROMOTE, AND ADVERTISE HARDEE COUNTY, AND DEVELOP TOURISM.

 YES, FOR THE TOURIST DEVELOPMENT TAX INCREASE

 NO, AGAINST THE TOURIST DEVELOPMENT TAX INCREASE

Section 4. Savings Clause.

Notwithstanding anything to the contrary, and for purposes of this Ordinances, all other provisions contained in prior ordinances or resolutions associated with Ordinance No. 16-05 are specifically preserved and remain in full force and effect.

Section 5. Repeal of Inconsistent Provisions.

All provisions contained in or associated with any prior ordinances or resolutions, which are deemed inconsistent or in conflict with the provisions set forth above, are hereby repealed to the extent of such inconsistency or conflict.

Section 6. Severability.

It is the intent of the Board, and it is hereby provided that, if any word, phrase, clause, section or portion of this Ordinance shall be held invalid or unconstitutional by a court of competent jurisdiction, such word, phrase, clause, section or portion shall be deemed a separate and independent provision and such holding shall not affect the validity of the remaining words, phrases, clauses, sections or portions thereof.

Section 7. Correction of Errors.

To the extent that there are scrivener, typographical or administrative errors and/or omissions that do not change the tone, tenor or context of this Ordinance and do not substantially amend the Plan, then this Ordinance may be revised without subsequent approval of the Board of County Commissioners.

Section 8. Captions.

The captions, sections, headings and section designation used in this Ordinance are for convenience only and shall have no effect on the interpretation of the provisions of this Ordinance.

Section 9. Effective Date.

This Ordinance shall become effective in accordance with the provisions of Florida Statutes Section 125.66. If approved by the referendum specified in Section 3 hereof, a three percent (3%) tourist development tax shall become effective on January 1, 2027, and the Clerk of the Board of County Commissioners shall provide a certified copy hereof to the State of Florida Department of Revenue along with a certified copy of the results of the referendum.

PASSED ON FIRST READING on the 4 day of June, 2026.

PASSED AND ADOPTED ON SECOND READING this 18 day of June, 2026.

HARDEE COUNTY, FLORIDA

Noey A. Flores, Chair

ATTEST:

Victoria L. Rogers
Ex-Officio Clerk to the Board of County Commissioners

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

Sarah Johnston
County Attorney

Hardee County **Business Impact Estimate**

This form should be included in the agenda packet for the item under which the proposed ordinance is to be considered and must be posted on the County's website with the notice.

Proposed ordinance's title/reference:

AN ORDINANCE OF HARDEE COUNTY, FLORIDA LEVYING AND IMPOSING A ONE PERCENT (1%) INCREASE OF THE TOURIST DEVELOPMENT TAX ON THE TAXABLE PRIVILEGE AS DESCRIBED IN SECTION 125.0104(3), FLORIDA STATUTES, INCLUDING BUT NOT LIMITED TO, CERTAIN PERSONS WHO RENT, LEASE OR LET ANY LIVING QUARTERS OR ACCOMMODATIONS IN ANY HOTEL, APARTMENT HOTEL, MOTEL, RESORT, MOTEL, APARTMENT MOTEL, ROOMING HOUSE, MOBILE HOME PARK, RECREATIONAL VEHICLE PARK, OR CONDOMINIUM FOR A TERM OF SIX (6) MONTHS OR LESS, WITHIN BOTH THE INCORPORATED AND UNINCORPORATED AREAS OF HARDEE COUNTY, FLORIDA, PURSUANT TO THE "LOCAL OPTION TOURIST DEVELOPMENT ACT", SECTION 125.0104, FLORIDA STATUTE; PROVIDING FOR COLLECTION OF A TOTAL OF THREE-PERCENT TOURIST DEVELOPMENT TAX; PROVIDING FOR A REFERENDUM ELECTION TO APPROVE OR DISAPPROVE THE TAX INCREASE; PROVIDING FOR PROVIDING FOR SEVERABILITY; PROVIDING FOR REPEAL; PROVIDING AN EFFECTIVE DATE.

This Business Impact Estimate is provided in accordance with section 125.66(3), Florida Statutes.

Question 1. Does the proposed ordinance meet one or more of the exceptions listed below? If so, then please check the applicable exception below and move to Question 2. If one or more boxes are checked below, this means the County is of the view that a business impact estimate is not required by section 125.66(3), Florida Statutes, for the proposed ordinance. If there is no applicable exception, proceed with completing the business impact estimate at Question 3.

- ☐ The proposed ordinance is required for compliance with Federal or State law or regulation;
- ☐ The proposed ordinance relates to the issuance or refinancing of debt;
- ☐ The proposed ordinance relates to the adoption of budgets or budget amendments, including revenue sources necessary to fund the budget;
- ☐ The proposed ordinance is required to implement a contract or an agreement, including, but not limited to, any Federal, State, local, or private grant or other financial assistance accepted by the municipal government;
- ☐ The proposed ordinance is an emergency ordinance;

- ☐ The ordinance relates to procurement; or
- ☐ The proposed ordinance is enacted to implement the following:
 - a. Part II of Chapter 163, Florida Statutes, relating to growth policy, county and municipal planning, and land development regulation, including zoning, development orders, development agreements and development permits;
 - b. Sections 190.005 and 190.046, Florida Statutes, regarding community development districts;
 - c. Section 553.73, Florida Statutes, relating to the Florida Building Code; or
 - d. Section 633.202, Florida Statutes, relating to the Florida Fire Prevention Code.

Question 2. Based on the exception you selected above and in accordance with the provisions of the controlling law, please provide an explanation below of why the ordinance meets the exception(s).

Question 3. If there is no applicable exception, then this business impact estimate must be posted on the County's website by no later than the date the notice of the proposed ordinance enactment is published. This Business Impact Estimate may be revised following its initial posting. Proceed with completing the below Business Impact Estimate. In accordance, the County hereby publishes the following information:

A. Summary of the proposed ordinance (must include a statement of the public purpose to be served by the proposed ordinance, such as serving the public health, safety, morals and welfare of the County):

Imposition of a 1% increase to the existing Tourist Development Tax for the purpose of enhancing economic development efforts throughout the County which will promote tourism within Hardee County.

B. An estimate of the direct economic impact of the proposed ordinance on private, for-profit businesses in the County, including the following, if any:

(1) An estimate of direct compliance costs that businesses may reasonably incur if the ordinance is enacted;

Compliance costs to private businesses are directly related to the amount of the proposed Tourist Development Tax increase.

(2) Identification of any new charge or fee on businesses subject to the proposed ordinance, or for which businesses will be financially responsible; and

Additional charges or fees are solely those of the proposed Tourist Development Tax increase.

(3) An estimate of the County's regulatory costs, including an estimate of revenues from any new charges or fees that will be imposed on businesses to cover such costs.

No new regulatory charges or cost recovery charges are anticipated.

(4) Any other direct economic impacts of the proposed ordinance on private, for-profit businesses in the County that are not covered by (1), (2), or (3):

No other direct economic impacts are anticipated.

C. Good faith estimate of the number of businesses likely to be impacted by the ordinance:

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D. Additional information the governing body deems useful, if any (ie: what steps did the County take to answer A, B, and C?):

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Item Cover Page

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, County Manager's Office

ITEM TYPE: Business Agenda - Action Items

AGENDA SECTION: **BUSINESS AGENDA - Action Items:**

SUBJECT: **Sonja Bennett, School District of Hardee County - Resolution 2026-38 - Referendum for a Levy of One Mill of Ad Valorem Property Tax by the School Board on the Ballot**

SUGGESTED ACTION:

- Motion to approve Resolution 2026-38, A Resolution of the Board of County Commissioners of Hardee County, Florida, regarding elections; placing a proposed referendum for a levy of one mill of ad valorem property tax by the school board on the ballot in the upcoming general election; providing for severability; and providing for an effective date.

ATTACHMENTS:

[Reso 2026-38.docx](#)

[Referendum to Commissioners.pdf](#)

RESOLUTION NO. 2026-38

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF HARDEE COUNTY, FLORIDA, REGARDING ELECTIONS; PLACING A PROPOSED REFERENDUM FOR A LEVY OF ONE MILL OF AD VALOREM PROPERTY TAX BY THE SCHOOL BOARD ON THE BALLOT IN THE UPCOMING GENERAL ELECTION; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, as authorized pursuant to Section 1011.73(2), Florida Statutes, the School Board of Hardee County, Florida (the “School Board”) has adopted a resolution directing the Board of County Commissioners of Hardee County, Florida (the “County”) to place a referendum on the ballot for the General Election on November 3, 2026, at which the electors within the School District may approve the levy of one mill of ad valorem property taxes for School District operating expenses; and

WHEREAS, the ballot question is contained in a copy of the School Board’s Resolution attached hereto as Exhibit “A” and is hereinafter referred to as the “Ballot Question”; and

WHEREAS, pursuant to Section 1011.73(2), Florida Statutes, the County shall place the Ballot Question on a ballot in the upcoming General Election.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Hardee County, Florida, as follows:

Section 1. Placement of Ballot Question on Ballot. The Ballot Question as set forth in Exhibit “A” attached hereto and incorporated herein by reference, shall be placed on the ballot for the General Election on November 3, 2026.

Section 2. Delivery of Copies. Certified copies of this Resolution shall be promptly delivered by the Hardee County Manager to the Hardee County Supervisor of Elections and the School Board.

Section 3. Revisions to Ballot Question. The Hardee County Manager, with the concurrence of the Chairman of the School Board and the Superintendent of Schools of Hardee County, Florida, may make such revisions to the Ballot Question as may be necessary or required

to accomplish the purposes of this Resolution, including revisions which may be mandated by the Supervisor of Elections, without further action by the County.

Section 4. Severability. If any section, sentence, clause, or other provision of this Resolution shall be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not be construed to render invalid or unconstitutional the remaining sections, sentences, clauses or provisions of this Resolution.

Section 5. Effective Date. This Resolution shall become effective upon its adoption.

PASSED AND DULY ADOPTED THIS ____ DAY OF _____, 2026.

**BOARD OF COUNTY COMMISSIONERS OF
HARDEE COUNTY, FLORIDA**

By: _____
Noey A. Flores, Chair

ATTEST:

By: _____
**Victoria L. Rogers,
Ex-officio Clerk of the
Board of County Commissioners**

**APPROVED AS TO FORM AND LEGAL
SUFFICIENCY:**

By: _____
Sarah Johnston, County Attorney



THE SCHOOL DISTRICT OF HARDEE COUNTY

Sonja Bennett, Superintendent

P. O. Box 1678 – 1009 North 6th Avenue • Wauchula, FL 33873
(863) 773-9058 • FAX (863) 773-0069

May 29 ,2026

Board of County Commissioners
Hardee County, Florida
412 W. Orange Street
Wauchula, Florida 33873

School Board

District 1
Dr. Stacy Sharp

District 2
Andrew Smith

District 3
Claire Cornell

District 4
Marie Dasher

District 5
Mark Gilliard

RE: Request to Place School District One-Mill Ad Valorem Referendum on the November 3, 2026 General Election Ballot

Honorable Commissioners:

Pursuant to Section 1011.73(2), Florida Statutes, the School Board of Hardee County approved Resolution No. 2026-001 requesting that the Hardee County Board of County Commissioners call a referendum election and place the attached question before the voters of Hardee County during the November 3, 2026 General Election.

The referendum seeks voter authorization to levy an additional one (1) mill of ad valorem taxes for a period of four years, beginning January 1, 2027, and ending December 31, 2030, for school operational purposes as outlined in the attached resolution.

On behalf of the School Board of Hardee County, I respectfully request that the Board of County Commissioners take the necessary action to place the referendum question on the November 3, 2026 General Election ballot in accordance with Florida law.

Thank you for your consideration and continued partnership in serving the citizens of Hardee County.

Sincerely,

Sonja M. Bennett
Superintendent

DISTRICT VISION STATEMENT

"Empower and inspire all students for success"

**SCHOOL BOARD OF HARDEE COUNTY
RESOLUTION 2026-001**

A RESOLUTION OF THE SCHOOL BOARD OF HARDEE COUNTY, DIRECTING THE BOARD OF COUNTY COMMISSIONERS OF HARDEE COUNTY TO CALL AN ELECTION AT WHICH THE ELECTORS WITHIN THE COUNTY WILL BE ASKED TO APPROVE AN ADDITIONAL ONE MILL OF AD VALOREM TAX MILLAGE FOR SCHOOL OPERATIONAL PURPOSES FOR FOUR YEARS; PROVIDING FOR FINDINGS OF FACT; PROVIDING FOR APPROVAL OF THE REFERENDUM QUESTION AND BALLOT TITLE.

WHEREAS, the School Board of Hardee County (the "Board") is charged with operating the public schools within Hardee County, Florida; and

WHEREAS, the Board has as its primary goal the continued improvement of the education provided to the students attending its public schools; and

WHEREAS, the Board has experienced increased costs in all areas of school operations including employee compensation; and

WHEREAS, in the absence of the operating revenue generated by additional voted millage, the District will face a revenue shortfall resulting in significant budget cuts threatening employee positions and academic programs; and

WHEREAS, the School Board believes additional revenue will enable it to reach its goal of providing high quality schools and additional student success; and

WHEREAS, Section 1011.73(2), Florida Statutes, authorizes the qualified electors of the Hardee School District to approve additional millage for operational purposes; and

WHEREAS, the Board is aware that voters in some Florida school districts have approved additional millage for school operations and have seen gains in student results; and

WHEREAS, some Florida school districts have used the additional revenue generated by the increased millage to raise salaries so they may recruit and hire additional

instructional personnel, including teachers, school support staff, and certified school mental health counselors, creating challenging competition for Hardee County's limited pool of qualified personnel; and

WHEREAS, the Board intends that revenues generated by the additional millage shall be used to attract and retain high-quality teachers and staff with competitive salaries and provide additional staff to support student needs; and

WHEREAS, the Board further intends to use additional millage funds to maintain and increase school safety measures, increase mental health services for students, provide additional programs to improve student achievement and to maintain and increase educational opportunities for students; and

WHEREAS, a Citizens Volunteer Millage Committee shall be appointed to review annual spending; and

WHEREAS, any charter schools in Hardee County shall receive a pro proportionate share from the additional funding source as required by law; and

WHEREAS, all of the funds collected from this 1 mill increase will stay in Hardee County, thus improving local economic conditions; and

WHEREAS, the Board finds that it is in the best interest of students to give qualified electors the opportunity to approve the additional millage for school operations.

NOW, THEREFORE, BE IT RESOLVED by the School Board of Hardee County, Florida, in a public meeting duly called and assembled:

1. That pursuant to Section 1011.73(2), Florida Statutes, the Board of County Commissioners of Hardee County is hereby directed to place a referendum question on the ballot in the general election on November 3, 2026, for the qualified electors of the Hardee County to vote on whether to increase ad valorem millage by one mill. Collections for the additional millage shall begin as of January 1, 2027, and shall terminate after four years from its enactment on December 31, 2030, as authorized by Section 1011.71(9), Florida Statutes, unless renewed by the voters by referendum.

2. The substance of the millage referendum question and the ballot title shall read:

HARDEE COUNTY SCHOOL DISTRICT
AD VALOREM MILLAGE REFERENDUM

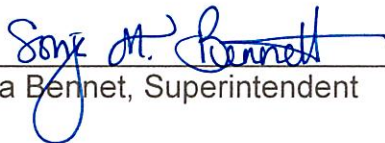
Shall the School Board of Hardee County levy ad- valorem operating millage of one mill annually to 1) attract and retain high-quality teachers and staff with competitive salaries, 2) maintain and increase school safety measures and increase mental health services for students, 3) provide additional programs to improve student achievement, 4) maintain and increase educational opportunities for all students, and 5) appoint a Citizens Millage Committee to review annual spending?

☐ YES, for millage
☐ NO, against millage

PASSED AND DULY ADOPTED this 28 day of May, 2026.

ATTEST:

THE SCHOOL BOARD OF
HARDEE COUNTY, FLORIDA


Sonja Bennet, Superintendent

By: 
Mark Gilliard, Chair

Approved as to Form and Legal Content
by Shumaker, Loop & Kendrick, LLP
Attorneys for The School Board
of Hardee County, Florida
Signed: MRM
Date: May 20, 2026



Item Cover Page

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, County Manager's Office

ITEM TYPE: County Attorney

AGENDA SECTION: **COUNTY ATTORNEY**

SUBJECT: Data Center Discussion

SUGGESTED ACTION:

ATTACHMENTS:

[Data Centers Memo draft June 2026.pdf](#)

[Data Center Articles May 2026.pdf](#)

[Fairfax County VA Ord and Backup May 2026.pdf](#)

MEMORANDUM

TO: Board of County Commissioners

CC: Terry Atchley, County Manager
Todd Miller, Community Development Director

FROM: Sarah Johnston, County Attorney 

DATE: June 1, 2026

RE: Data Center Information

The below and attached is being sent pursuant to an earlier discussion about data centers in neighboring jurisdictions and a concern about whether the County had considered this use and whether or not it was something that was compatible with the desired growth of the County.

Currently, the Hardee County Unified Land Development Code does not permit development of a data center. In order for a data center to be developed in Hardee County the Unified Land Development Code will have to be amended to allow data centers.

The applicable code provisions, state legislation and a summary of areas to be considered are included below for your review and consideration.

What is a Data Center?

A data center is a physical facility that houses and runs large computer systems. A data center typically contains multiple computer servers, data storage devices, and network equipment that can provide information technology (IT) infrastructure service for organizations to store, manage, process, and transmit large amounts of data. The

increasing demand for data storage and processing capacities, especially for intensive computational tasks such as AI development and deployment, has led to construction and operation of "hyperscale data centers" notable for their size. According to industry analysts, to be considered a hyperscale data center, a facility should contain at least 5,000 computer servers and a large scale of network equipment and occupy at least 10,000 square feet of physical space, with an electric power rating, sometimes referred to as *power draw*, exceeding 100 megawatts (MW; one megawatt is equal to 1 million watts). Roughly 100 MW of electric power is sufficient to support the electricity needs of 80,000 U.S. households.

Recent legislation was approved regulating data centers and is effective on July 1, 2026, Chapter 2026-65, Laws of Florida, a complete summary of the legislation is included in the attachments. The legislation defines data centers and addresses how they shall be regulated. Additional provisions address economic development incentives, tariff requirements, and electric and water permitting review requirements and considerations.

Data Center Concerns as Raised by Other Communities and Identified in Articles:

Energy & Water supply demands-data centers typically require large amounts of electrical power and existing electrical capacity is typically not sufficient to power the facilities. Cost of the infrastructure needed to create additional capacity is a concern as well as maintenance and what happens when no longer operating?

Air pollution/Climate impacts-primary air-quality issues are from diesel generators that may be in operation and issues from electric generation.

Noise/light-significant noise from onsite generators as well as lighting from exterior of facility/fencing/walls etc.

Demand for land-data centers typically take up large amount of land and resources with minimal employees.

Pressure on marginalized communities-distressed markets with a greater need for economic development may be more susceptible to permitting the facilities without adequate consideration/mitigation of the negative impacts.

Specific Zoning Considerations:

- *Managing economic development goals for areas with locations (i.e. along main corridors, industrial, road frontage, etc.)*

- **Mitigation:**
 - **Noise:**
 - Noise study
 - Setbacks
 - Buffering
 - **Architecture:**
 - Design element requirements
 - Landscape/fence/screening buffers
 - **Infrastructure:**
 - Utility capacity study/requirements
 - Phased/conditional approval
 - Conditions tied to permits
 - Protection for reuse/de commissioning

Summary of SB 484

→ Data Centers – SB 484 / Ch. 2026-65, Laws of Florida

Effective July 1, 2026

Section 163.326, Florida Statutes, is created to regulate data centers. Data centers are defined as “large load customers,” which means public electric utility customers with an anticipated monthly peak load of 50 megawatts or more, calculated as the highest average load over a 15-minute interval at a single location. The term does not include a load aggregated across multiple locations owned by the same customer. However, the term includes all customers or other entities that have entered into a colocation or similar agreement at a single location that otherwise meets the anticipated monthly peak load.

The statute provides that local governments shall maintain the authority to exercise the powers and responsibilities for comprehensive planning and land development regulation granted by law with respect to large load customers. It also provides that a large load customer may not be considered an electric substation.

Section 288.075, Florida Statutes, is amended to provide that data centers are not entitled to have certain economic incentive agreement-related documentation held confidential under public records law.

Section 366.043, Florida Statutes, is created to regulate data centers, as defined above. The statute provides for minimum tariff and service requirements for data centers:

- must reasonably ensure that each large load customer bears its own full cost of service and that such cost is not shifted to the general body of ratepayers. Such cost of service includes, but is not limited to, connection, incremental transmission, incremental generation, and other infrastructure costs; operations and maintenance expenses; and any other costs required to serve a large load customer. The risk of nonpayment of such costs may not be borne by the general body of ratepayers; and
- must include provisions reasonably designed to prevent a public utility from providing electric service to a customer that would otherwise qualify as a large load customer if that customer is a foreign entity.

Customers are prohibited from separating electrical load at one location into multiple smaller connections to avoid classification as a large load customer. Any tariff, contractual provision, service requirement, or other public utility policy relating to large load customers may not prevent or otherwise hinder the curtailment or interruption of electric service to a large load customer where such curtailment or interruption is intended to ensure grid stability, reduce the likelihood or breadth of wider service outages, or ensure public safety during an emergency or other exceptional circumstance. And a public utility may not knowingly provide electric service to a customer that would otherwise qualify as a load customer if that customer is a foreign entity.

By October 1, 2026, each public utility must file a tariff that complies with this statute with the state.

Section 372.203, Florida Statutes, is amended to define “data center” and “large-scale data center.” “Data center” is defined as a facility that primarily contains electronic equipment used to process, store, and transmit digital information, which may be: a free-standing structure; or a facility within a larger structure which uses environmental control equipment to maintain the proper conditions for the operation of electronic equipment. “Large-scale data center” is defined as a single location, with a data center on site, that has an anticipated monthly peak load of 50 megawatts or more, calculated as the highest average load over a 15-minute interval. The term does not include a load aggregated across multiple locations owned by the same customer. However, the term includes all customers or other entities that have entered into a colocation or similar agreement at a single location that otherwise meets the anticipated monthly peak load.

Section 372.262, Florida Statutes, is created to provide for large-scale data center permitting. Water management districts and the state are prohibited from issuing a permit to a large-scale data center applicant for an allocation of water if the proposed use of the water is harmful to the water resources of the area or is prohibited by the applicable

local government zoning regulations and comprehensive plan. A permit must be issued if the applicant establishes that the proposed use:

- is a reasonable-beneficial use;
- will not interfere with any presently existing legal use of water; and
- is consistent with the public interest.

The use of reclaimed water must be required when:

- a suitable reclaimed water supply source is available and permitted;
- reclaimed water distribution or supply lines are available at the property boundary in sufficient capacity and quality to serve the applicant's needs;
- the applicant is capable of accessing the reclaimed water source through distribution or supply lines;
- use of reclaimed water is environmentally, economically, and technically feasible; and
- use of reclaimed water would not conflict with the requirements contained in the applicant's surface water discharge permit, if applicable.

Permit applications requesting at least an average daily flow of 100,000 gallons of water per day must contain:

- all sources and amounts of water and losses of water used for cooling, industrial and treatment processes, personal or sanitary needs of employees, and landscape irrigation; and
- a water conservation plan that, at a minimum, incorporates recycling cooling water before discharge or disposal, implementation of a leak detection and repair program, use of water efficient fixtures, and implementation of an employee awareness and education program concerning water conservation.

Permits may not be approved without a hearing.

Hardee County Unified Land Development Code:

Article 3 – Zoning Districts and Uses; Section 3.01.00

Only allows those uses which are listed as a permitted, permitted with conditions, special exception or is a use which can be reasonably interpreted to fit into a use category where similar uses are described. The determination of materially similar use is based upon the characteristics, use patterns and land use and traffic impacts.

The Planning and Development Director has reviewed the table of uses, recently enacted legislation and has determined that based upon the characteristics and land use impacts, a data center is not materially similar to a use that is permitted, permitted with conditions, or a special exception.

Options to consider:

- Is the use appropriate for Hardee County?
- Where is the use appropriate?
- Regulations to mitigate impacts.
- Is a planned unit development appropriate?
- Is more specific conditions for this use appropriate?

Examples of items to consider:

- Small scale versus large scale
- Electrical use requirements, capacity/impact study-phased approval for other agency review, protections for costs, decommissioning
- Water use requirements, protections for costs, capacity/impact study-phased approval for SWFWMD review, decommissioning
- Noise, noise study, noise impact mitigation, use of expert to review applications or to assist in preparing guidelines (Desoto County)
- Considerations of other impacts, light, pollution, architecture/design, landscaping, buffering and screening

Enclosed:

Articles:

- 7 Ways Data Centers Affect US Communities
- Congress Data FAQ Summary Notes
- Smart Growth America Data Centers
- NACO 2026 Data Center Primer
- NLoC Article Data Centers

Examples from another jurisdiction:

- Fairfax County, VA
 - Data Center Report
 - Staff Report
 - Ordinance Text



From Energy Use to Air Quality, the Many Ways Data Centers Affect US Communities

Energy prices and water use aren't the only ways data centers affect U.S. communities. We break down the impacts — and how some states are dealing with them.

By: **Carla Walker** and **Ian Goldsmith**

February 17, 2026

Explore More:

Energy

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Air Quality

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Image by Gerville/iStock

AI tools like ChatGPT, navigation apps and streaming platforms feel effortless, drawing information seemingly from thin air. Yet the infrastructure behind them is anything but invisible.

Aerial view of a data center complex in a suburban area.

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real implications for communities' well-being.

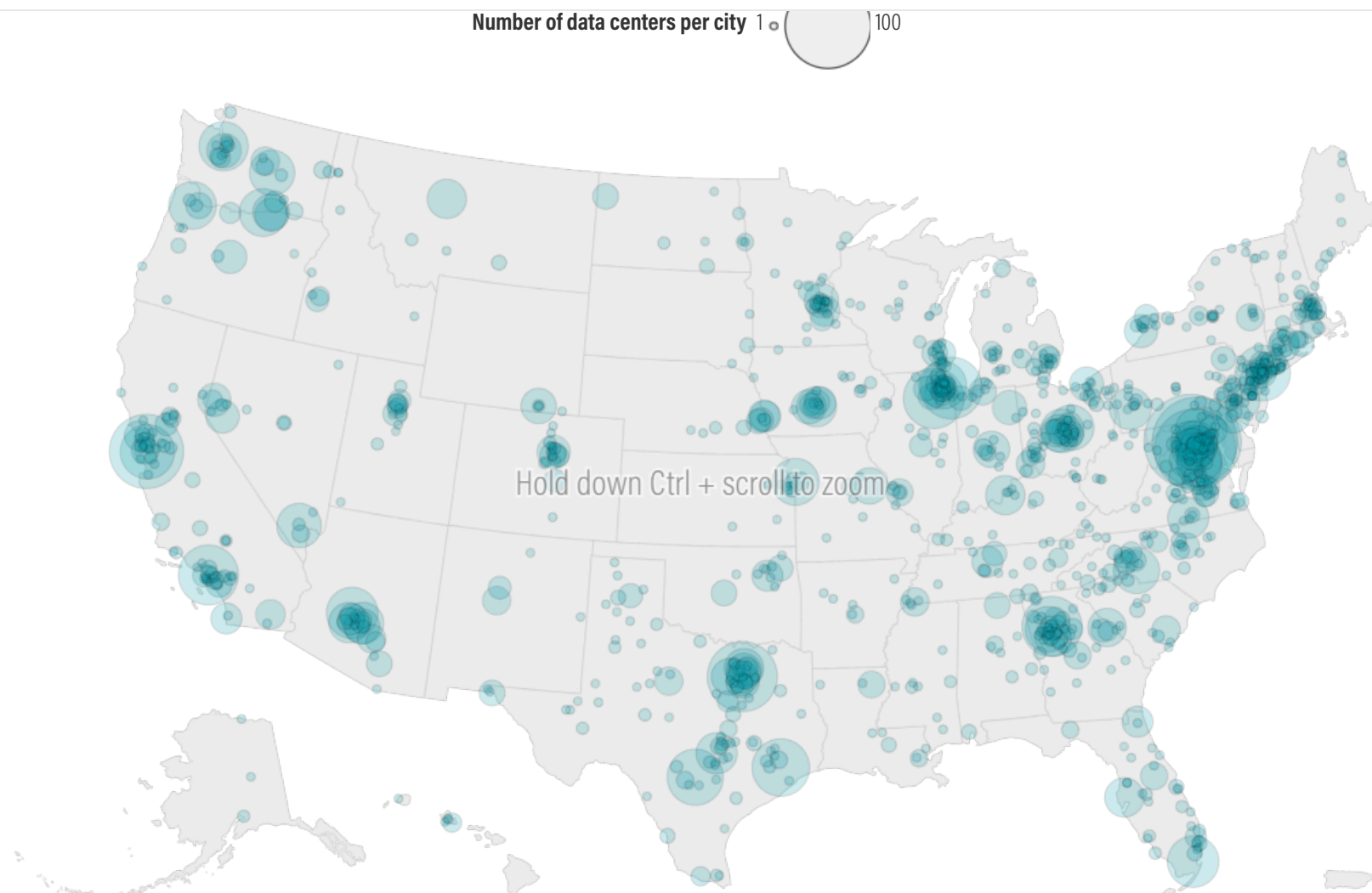
While the rise in data centers is all but inevitable, the *way* it happens is not. Data centers power modern life and can bring both investment and jobs. Clear rules on energy procurement, water use, land siting, community engagement and cost recovery will determine whether this growth strengthens local economies and infrastructure — or shifts risks to residents.

The US Data Center Boom

Data centers are the physical infrastructure of the internet. They house the servers, networking equipment and supporting systems — such as cooling, power backup, fire suppression and security — that keep digital services running reliably.

Data centers first emerged in the mid-20th century and proliferated during the 1990s alongside the rise of the internet. But today's expansion is unfolding at a much larger scale and faster pace than ever before. It's fueled by billions of dollars in *private investment, state tax incentives, and federal*

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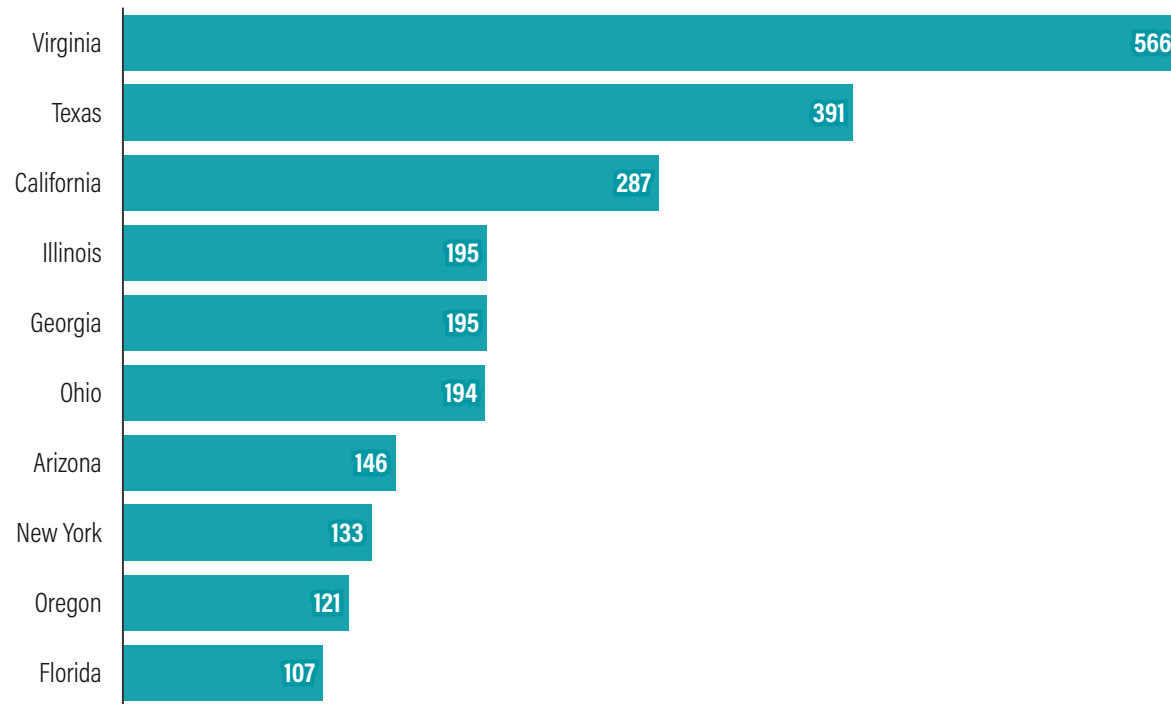


substantial impacts on local communities.

There were just over [3,900](#) data centers across the United States as of late January¹ — nearly 37% of the world's total. Yet market trends [suggest](#) that hyperscale development is highly concentrated in just a few regions. These areas function as national hubs for cloud and AI infrastructure, hosting a disproportionate share of large-scale facilities relative to their size.

Virginia, often described as "[the data center capital of the world](#)," hosts the largest number of facilities, followed by Texas and California. Together, the top 10 states account for roughly 60% of all data centers nationwide.

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Note: Data as of 1/22/2026.
Source: datacentermap.com.
26.01.21



How Data Centers Affect Communities – and How

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As technology advances and computing demand grows, data centers are becoming increasingly energy hungry. A single modern AI data center can use as much power as 100,000 homes; many of the larger ones now being built are expected to consume up to 20 times that amount.

Estimates of total future power demand from data centers vary significantly. One study from the Lawrence Berkeley National Laboratory found that data centers could represent up to 12% of all U.S. electricity consumption by 2028. Another analysis, by Grid Strategies, says that up to 90 gigawatts (GW) worth of data centers could come online by 2030. That's about 9 times New York City's peak summer demand joining the grid in less than five years.

This adds to concerns about rising power bills across the United States. 2025 saw over \$60 billion worth of rate increases countrywide, with Americans paying almost 10% more for electricity on average compared to 2024. The reasons for these rate hikes are complex and variable. However, there's evidence that the need to procure and build new energy infrastructure for

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

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required utilities to create new billing classes and rate structures for large energy users so that their costs aren't shared by households and businesses.

2) Protecting local water supplies

Data centers require huge amounts of water to keep servers cool enough to function. Mid-sized facilities can use up to 300,000 gallons of water a day, while large facilities can consume as much as 5 million gallons daily — comparable to what a small town uses. Recent estimates project that by 2028, AI-related data centers in the U.S. could require up to 32 *billion* gallons of water annually. This is enough to support roughly 360,000 households' indoor water use.

This massive demand is a pressing problem for communities already facing drought or depleting water supplies. Two-thirds of all data centers built or in development since 2022 are located in water-stressed areas like southern Arizona, the Colorado River Basin and Texas.

This has prompted public concern and governance action in some

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immersion. Others are leveraging reclaimed wastewater from utilities instead of drawing from local supplies.



The Mesa Data Center near Phoenix, Ariz. Two-thirds of U.S. data centers built or in development since 2022 are

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emergency backup. Both come with climate and health risks.

Some data centers house gas power on-site for day-to-day operations, creating continuous air pollution and greenhouse gas emissions. One of the most visible examples is unfolding in Memphis, Tennessee, where more than 30 natural gas turbines intended for daily use are being installed at xAI's new Colossus data center. Local residents and the NAACP filed a notice with [intent to sue](#) under the Clean Air Act, arguing that the project could [worsen already dangerous air quality](#) in a city that faces high asthma rates and longstanding environmental health disparities.

Diesel-fueled backup generators also release harmful air pollutants, including fine particulate matter (PM_{2.5}) and nitrogen oxides (NO_x), linked to respiratory disease, heart disease, asthma and other serious health risks. Although these generators are [only used during emergencies](#), they can have outsized health impacts, emitting [200 to 600 times](#) more nitrogen oxides than natural gas plants. One analysis in Virginia estimated that even limited backup generator use could already be associated with nearly [\\$300 million in](#)

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emissions. Local and state officials can help by integrating clean power and emissions considerations into permitting and comprehensive planning; requiring companies to disclose on-site power strategies; and evaluating cleaner alternatives during permitting review.

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levels that can harm hearing. Larger industrial units can approach 100 decibels — equivalent to a motorcycle or jackhammer.

This noise can last for hours or days at a time. Residents in Loudon County, Virginia, [reported](#) disruptions in sleep, headaches and even lower quality of life because of a nearby data center, experiences that were echoed during a recent [congressional roundtable](#).

To address this, some data center developers and local governments are beginning to use measures such as natural acoustic [barriers](#), greater setbacks from homes and improved insulation for backup generators. Emerging technologies, including liquid cooling and improved airflow design, can also lower fan and HVAC noise. In places where [zoning codes](#) include noise protections, local governments can use the permitting processes to require projected decibel levels, noise mitigation plans and ongoing monitoring commitments.

5) Addressing competition for land

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campuses exceeding 1,000 acres, or about 1.6 square miles, according to a recent report from the [Wisconsin Farm Bureau](#).

This often intersects with agricultural and rural land uses. In Wisconsin, where about 50 data centers are located, [residents have concerns](#) that rezoning for data center development could accelerate the loss of productive farmland, which is already declining due to development pressures, land consolidation and competition. Similar tensions have surfaced across rural communities in Ohio, [Indiana](#) and [Virginia](#). In Ohio, a proposal to rezone 300 acres of farmland to support data center development sparked such widespread opposition that the landowners ultimately [withdrew their application](#).

Some local governments are exploring policies to treat data centers as a distinct land use, steer development away from prime farmland and apply additional reviews to large-scale projects. These approaches can include strengthened agricultural zoning and implementing performance standards to address buffering, traffic, noise and long-term site management.

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such as air pollution, park access and water pollution, as measured by the Center for Disease Control's Environmental Justice Index. Many were located in areas with social vulnerability indicators, such as poverty and lower education levels.

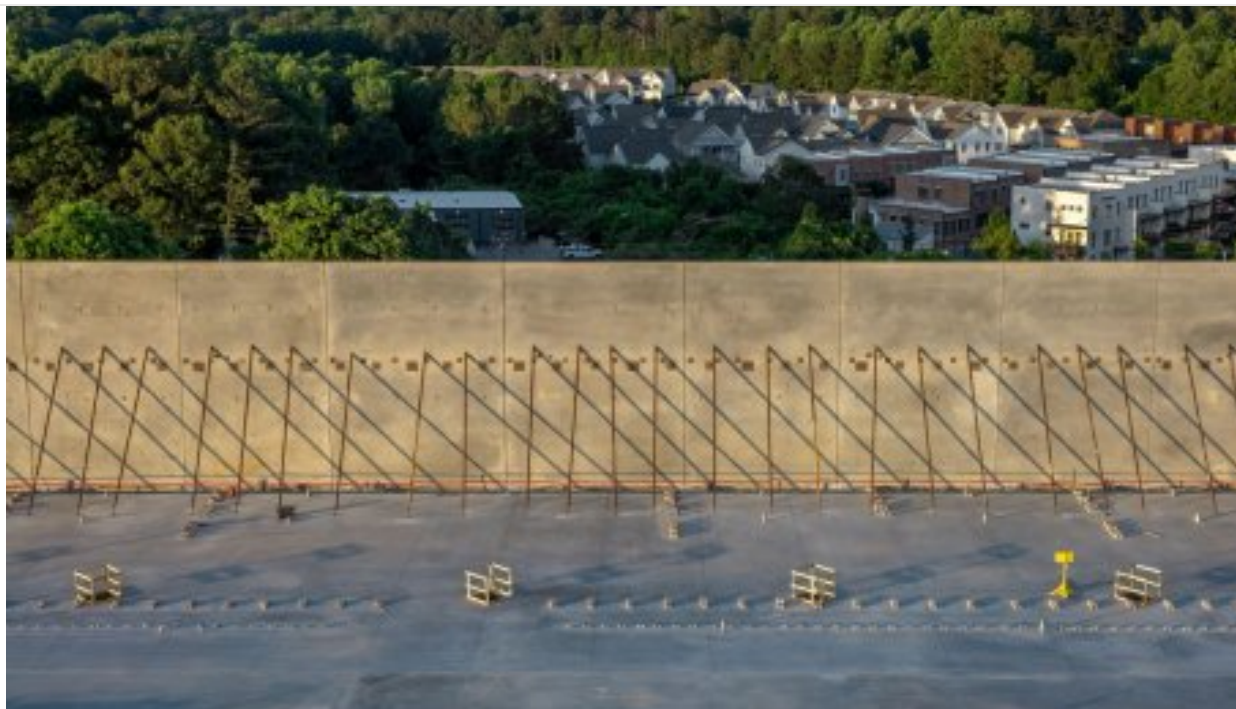
State level assessments show similar concerns. In [California](#), existing and planned data centers appear more frequently in areas of high air pollution. In [South Carolina](#), new facilities and the fossil-fuel generation built to power them are often sited near Black and low-income communities.

More research is needed to fully understand these trends. Yet preliminary findings underscore the importance of ensuring that new data center development does not reinforce existing inequities.

Several practices can help communities and local governments navigate the trade-offs of data center siting. The [NAACP's Frontline Framework Community Guiding Principles](#), offers practical strategies to ensure data centers are planned and built in ways that protect health and equity. In

[addition, NAACP's Community Data Set Assessment tool helps](#)

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Construction of a data center near homes in Atlanta, Ga. Developers and governments need to plan data centers with care to ensure they do not put pressure on communities, especially those already facing environmental and social disparities. Photo by Cavan Images/Alamy

7) Balancing economic trade-offs

Data center development can create real economic opportunities. Their

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than 150 permanent workers, and sometimes as few as 25.

Data centers also generate revenue for local or state governments through property, sales and use taxes. A recent [national](#) estimate found that total government revenues associated with the data center sector increased from \$66 billion in 2017 to more than \$162 billion in 2023. However, many states and cities offer sizable tax incentives to attract data centers, meaning the actual gain can be far smaller than projected.

These benefits must be weighed against long-term public costs, including investments in water systems, electrical substations, transmission lines, roads and emergency services. Water and electric infrastructure often remains in place for around 30 years. If a data center downsizes or relocates before these costs are recovered, communities may be left paying for infrastructure sized for a facility that no longer exists.

Summary of Governance Tools to Mitigate Data Center Impacts on Communities

Energy

- Dedicated rate classes for large energy users.
- Cost-recovery safeguards.

Water Protection

- Water-use monitoring and public disclosure.
- Drought contingency planning.
- Reclaimed wastewater use.

Air

- Replacing diesel with battery storage.

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What Governments Can Do to Lessen Data Centers' Impacts

As data centers proliferate, local concerns are mounting. More than \$64 billion in projects were delayed or canceled between May 2024 and March 2025 due to organized [opposition](#).

Threats to communities are not an inevitable outcome of data center development; they're the result of decisions made by developers, local governments and other stakeholders. Yet even as community involvement grows, major governance gaps persist.

Many developers enter non-disclosure agreements (NDAs) with local officials, which can limit public access to information about project scale, resource needs and potential impacts. A [review](#) of 31 Virginia municipalities with existing or proposed data centers found that 25 (80%) had NDAs in place. At the [federal level](#), new permitting policies have accelerated approvals for large data center projects, shortening environmental review timelines and

noise, traffic and buffering.

Equity and Community Voice

- Community benefits agreements.
- Transparent siting criteria.
- Limiting use of NDAs.
- Public disclosure of resource demands.

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and procedural protections. In Lancaster, Pa., city leaders approved a [community benefits agreement](#) which directs the developer to use clean energy to power the facility; mitigate noise; support local employment programs; and deliver \$10 million each for economic development and advancing Lancaster climate and community goals.

Together, these efforts reflect an emerging understanding: **How data centers are governed will determine whether communities benefit from the digital economy — or bear the brunt of its risks.** Ultimately, whether data centers deliver shared prosperity or reinforce existing inequities will hinge on policies and processes that fully include community priorities alongside government and developer decision-making.

Research support for this article was provided by Jada Turner, a Park Scholar and Honors student at North Carolina State University.

¹ Total U.S. data center count as of Jan. 21, 2026. This count includes operational, planned, land

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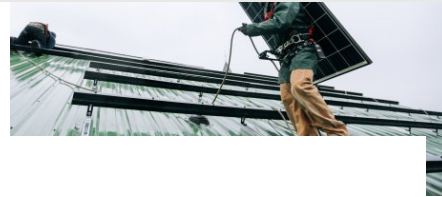
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Data Centers and Their Energy Consumption: Frequently Asked Questions

Congress FAQ

Summary

In its simplest form, a data center is a physical facility that houses and runs large computer systems. U.S. data center annual energy use in 2023 (not accounting for cryptocurrency) was approximately 176 terawatt-hours (TWh), approximately 4.4% of U.S. annual electricity consumption that year, according to a report by Lawrence Berkeley National Laboratory. A data center typically contains multiple computer servers, data storage devices, and network equipment that can provide information technology (IT) infrastructure service for organizations to store, manage, process, and transmit large amounts of data. Some projections show that data center energy consumption could double or triple by 2028.

Roughly one-half or greater of the electric power demand of data centers stems directly from the operation of electronic IT equipment. Much of the rest is for cooling. The operation of the IT equipment raises the temperature of the ambient room air, necessitating a cooling strategy. Centralized cooling resources are of two types: (1) those moving chilled air through large ductwork; or (2) those moving chilled water in a piped *cooling loop* that exchanges heat with the environment. An alternative to these centralized systems is room-scale air conditioners. One type, called computer room air conditioners (CRACs), is common in smaller data centers. Exchanging the heat with the environment can happen faster with methods that directly consume water. The source of the water can be the local water utility and can also be on-site reservoirs or other colocated water resources. A study by the International Energy Agency estimates, for illustration, that a 100 megawatt U.S. data center may consume roughly 2 million liters (roughly 530,000 gallons) per day, averaged across the various cooling strategies, with 725,000 liters (roughly 190,000 gallons) per day consumed on site, or a little less than 40%.

Currently, there are no legally binding energy standards that apply explicitly to operation of data centers in the private sector. For use within the federal government, the U.S. Department of Energy has published guidance on how to optimize energy use in federal data centers. Another nonbinding program, ENERGY STAR, certifies data centers with a focus on the building and infrastructure. Since 2012 the Department of Energy has regulated the energy efficiency of CRACs, one type of cooling strategy.

The federal government has made some efforts to gather data using information collection methods suitable for later scale-up. In general, before a federal agency can begin collecting information on data centers, the agency must go through a months-long approval process under the Paperwork Reduction Act of 1995. A 2021 report by the U.S. Energy Information Administration on a pilot study of energy use in data centers surveyed 50 facilities and received 9 responses.

Other options may include using data from private firms that maintain data sets that are able to provide direct or proxy information on data centers.

In 2023, a letter from five Senators and three Representatives urged the U.S. Environmental Protection Agency to use its authority under Section 114 of the Clean Air Act to implement a "mandatory disclosure regime" on cryptocurrency mining facilities. In the 119th Congress, [S. 1475](#), the Clean Cloud Act of 2025, introduced in the Senate and referred to the Committee on Public Works, would amend the Clean Air Act (42 U.S.C. §§7401 et seq.) to provide the U.S. Environmental Protection Agency and the U.S. Energy Information Administration with authority to collect data and information on annual electricity consumption of data centers and cryptocurrency mining facilities.

Introduction

According to estimates produced by Lawrence Berkeley National Laboratory (LBNL), U.S. data center annual energy use in 2023 (not accounting for cryptocurrency) was approximately 176 terawatt-hours (TWh), approximately 4.4% of U.S. annual electricity consumption that year.¹ Some projections show that data center energy consumption could double or triple by 2028.² Data centers provide information technology (IT) infrastructure services for processing large amounts of data, such as for the rapidly growing field of artificial intelligence (AI). Roughly one-half or greater of the electric power demand of data centers stems directly from the operation of IT equipment. Much of the rest is for cooling.

What is a data center?

In its simplest form, a data center is a physical facility that houses and runs large computer systems. A data center typically contains multiple computer servers, data storage devices, and network equipment that can provide IT infrastructure service for organizations to store, manage, process, and transmit large amounts of data. An increasing number of private and public entities have used data centers to support their expanding IT needs, particularly as data volumes continue to grow.

Types of data centers vary based on their ownership or intended purposes. For example, a large company may choose to build, own, and operate an on-premises data center (also known as an "enterprise data center") to house and manage its own IT infrastructure.³ Other organizations, especially those lacking the space, staff, or IT resources, often choose to rent a space, equipment, or services within a colocation data center (also known as a "managed data center") owned and operated by a third-party company.⁴ Some online service providers operate geographically distributed and interconnected data centers and allow multiple users to remotely access computing resources such as data processing chips, software, data storage, networks, and applications hosted by these data centers, which are called "cloud data centers."⁵ Cloud computing service providers may also operate and maintain smaller data centers physically located closer to end users (called "edge data centers") to reduce network latency and data communication delay, speed up content distribution, optimize real-time, data-intensive workloads, and improve application performance and user experience.⁶

The increasing demand for data storage and processing capacities, especially for intensive computational tasks such as AI development and deployment, has led to construction and operation of "hyperscale data centers" notable for their size.⁷ According to industry analysts, to be considered a hyperscale data center, a facility should contain at least 5,000 computer servers and a large scale of network equipment and occupy at least 10,000 square feet of physical space, with an electric power rating, sometimes referred to as *power draw*, exceeding 100 megawatts (MW; one megawatt is equal to 1 million watts).⁸ Roughly 100 MW of electric power is sufficient to support the electricity needs of 80,000 U.S. households.⁹

What do data centers look like?

Data centers have architectural configurations ranging from closets, to larger rooms within a single enterprise, to dedicated standalone structures serving the needs of multiple customers or tenants, known as *colocation*. *Colocation centers* are touted for their flexibility in allowing customers to specify exactly the amount of hardware and software resources they require. The largest, or "hyperscale," facilities occupy whole buildings or groups of buildings. When reporting on the number of data centers, some analysts only count whole-building data centers, which would include the hyperscale and colocation centers. The majority of computer servers are found in these latter two types of centers—74% in 2023, according to LBNL.¹⁰

How have data centers been defined in federal law and guidance?

The term *data center* has been defined in federal laws and guidance in the context of energy consumption and federal use of data centers. For instance, Section 453(a)(1) of the Energy Independence and Security Act of 2007 (P.L. 110-140) defines a data center as "any facility that primarily contains electronic equipment used to process, store, and transmit digital information, which may be (A) a free-standing structure; or (B) a facility within a larger structure, that uses environmental control equipment to maintain the proper conditions for the operation of electronic equipment."¹¹

In its guidance memorandum for federal agencies to implement the Federal Data Center Enhancement Act of 2023 (Division D, Title LIII, of P.L. 118-31), the Office of Management and Budget (OMB) specified that an agency data center covered in the memorandum (1) is composed of certain types of permanent structures and operates in a fixed location; (2) houses IT equipment, including servers and other high-performance computing devices, or data storage devices; and (3) hosts information and information systems accessed by other systems or by users on other devices.¹²

What are the energy requirements of data centers?

The Department of Energy (DOE) examined the nationwide energy consumption of data centers in response to direction by Congress in the Energy Act of 2020 (Section 1003 of Division Z, P.L. 116-260). The study, performed by LBNL, found that U.S. data center annual energy use in 2023 (not accounting for cryptocurrency) was approximately 176 terawatt-hours (TWh), approximately 4.4% of U.S. annual electricity consumption that year.¹³ An analysis by the Electric Power Research Institute (EPRI) similarly estimated that data centers consumed 4% of U.S. electricity in 2023.¹⁴ In a separate analysis, in 2024, EPRI estimated that AI consumed 10% to 20% of data center energy.¹⁵

Why are data centers energy-intensive?

Roughly one-half or greater of the electric power demand of data centers stems directly from the operation of electronic IT equipment.¹⁶ Much of the rest is for cooling. The core hardware components of a data center include computer servers, which contain computing chips (e.g., central processing unit [CPU] and graphics processing unit [GPU]), memory chips, data storage drives, and network routers and switches.¹⁷ Data from a major CPU chip manufacturer show that its data center-level CPU series in early 2025 had an average thermal design power (TDP) rating between 150 watts (W) and 350W.¹⁸ An advanced data center-level GPU can have a maximum TDP rating between 350W and 700W.¹⁹ The computing chips of CPU and GPU typically consume the most electrical power inside a server, as discussed further in "[What contributes to the need for cooling in data centers?](#)" According to an industry report published in November 2024, computing power and server systems account for roughly 40% of electricity consumption in a data center, while network and data storage equipment use about 10%.²⁰

Each piece of the electronic IT equipment generates heat as it operates. Many chipsets incorporate a safety mechanism called "thermal throttling" that reduces the chip performance to prevent overheating and protect the hardware.²¹ Data centers require cooling systems to help dissipate the heat and maintain optimal performance and overall system stability. The cooling systems could account for another 38% to 40% of electricity consumption in a data center.²² (See [Figure 1.](#))

While general-purpose workloads typically require only CPUs, GPUs are typically considered better than CPUs for handling computation-intensive processes such as AI training.²³ Under full workload conditions, a GPU performing AI training tasks may operate near its maximum capacity and draw power close to its maximum TDP over extended periods of time.

The development and deployment of state-of-the-art, large AI models may require multiple GPUs to work concurrently by distributing large volumes of data and computational tasks across the computing chips (known as "parallel computing").²⁴ A study released in December 2024 observed that, when training a large AI model using a computer system with eight advanced GPUs for eight hours, the GPUs were near full utilization most of the time (an average of 93%) and the median amount of electrical power consumed by the chips was 7.92 kilowatts (kW; one kilowatt is equal to 1,000 watts), with a total energy consumption of 62 kilowatt-hours (kWh).²⁵

Cutting-edge chip technologies support high-speed GPU-to-GPU data communication among hundreds of GPUs across multiple servers, enabling the creation of a massive data processing cluster to support large-scale AI training but also further increasing these data centers' energy consumption. A report released in April 2025 estimated that training a specific large AI model required a total power draw of 25.3 MW and that the power required to train these models could double annually.²⁶ The report stated that "[t]he rising power consumption of AI models reflects the trend of training on increasingly larger datasets."²⁷ Another study released in May 2025 estimated that training another large AI model consumed 50 gigawatt-hours (GWh; one gigawatt-hour is equal to 1 million kilowatt-hours) of energy, "enough to power San Francisco for three days."²⁸

Multiple industry reports indicate that data processing demands of AI and related remote computing services have spurred new construction and upgrades of data centers. The computing resources hosted by these centers would, in turn, lead to increased power demand. For example, one report estimated that the computing capacity (measured by the amount of electrical power consumed by IT equipment) of data centers under construction in North America at the end of 2024 reached a record-high 6,350 MW, more than double the figure from a year earlier.²⁹ Another report indicated that new hyperscale data centers have been built with capacities from 100 MW to 1,000 MW each, "roughly equivalent to the load from 80,000 to 800,000 homes."³⁰

What equipment uses energy in a data center?

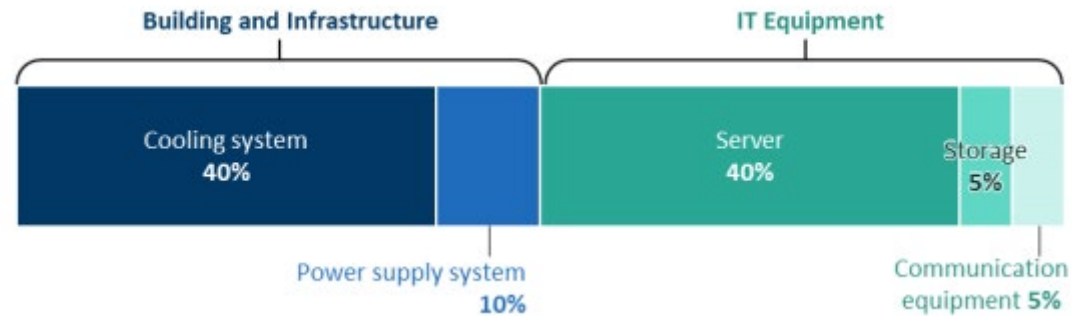
Data centers in whole building structures contain energy-consuming IT equipment, cooling and air handling equipment, and backup power supplies.³¹ The latter may include uninterruptible power supplies, backup diesel generators, and natural-gas-powered generators.³² Backup strategies involving batteries consume electricity while improving the quality of the electricity by evening out the highs and lows of the electric voltage.

For a small data center within an office or research building, the mix of energy consumption could be roughly 50% attributable to IT physical machines and 50% attributable to cooling and power supply, according to a large industrial and energy equipment maker.³³ (See **Figure 1**.) In addition, data centers include appliances and equipment for human occupants, not depicted in the figure. Overall, the energy use within data centers is not well described nationally, as elaborated further in "[Are there reports on the actual energy use of U.S. data centers?](#)" An expression or metric sometimes used to describe the energy performance of data centers is *power usage effectiveness* (PUE), which is the ratio of all the power used by the data center to the power used by just the IT equipment.³⁴ For the example just discussed, the PUE would be two (2).

Discussion of IT equipment rapidly invokes terms descriptive of nonphysical entities such as clouds, virtual machines, architectures, nodes, and protocols not directly associated with a real-world energy-consuming process. Understanding the energy consumption necessitates discussing hardware (i.e., physical machines) to which energy consumption can be assigned, described below in "[What contributes to the need for cooling in data centers?](#)"

Figure 1. Notional Power Draws of IT Equipment and Infrastructure

Illustrative case with PUE = 2, consistent with data centers of <150 square feet floor space



Source: CRS, adapted from ABB, *HVAC Motors: Motors in Data Centers*, <https://new.abb.com/motors-generators/nema-low-voltage-ac-motors/hvac-motors>.

Notes: PUE = power usage effectiveness, the ratio of all power used by a data center to that used by the information technology (IT) equipment (i.e., by servers, data storage, and communication). The depicted PUE of 2 is typical of a small data center (i.e., one having less than 150 square feet of floor space), as reported in A. Shehabi et al., 2024 *United States Data Center Energy Usage Report*, Lawrence Berkeley National Laboratory (LBNL), LBNL-2001637, December 2024, p. 47.

What contributes to the need for cooling in data centers?

From an electrical engineer's perspective, as computer chips of various types perform their function, the impedance of the electrical pathways generates heat, both on and between chips.³⁵ The majority of heat arises dynamically while the processors are performing useful functions. Heat-generating activities from computation take place related to, or in support of, CPU/GPU activity. Generally speaking, the energy consumption of a server scales according to the number of CPUs or GPUs.³⁶ On-chip (i.e., on the physical CPU/GPU) energy consumption includes dynamic losses associated with the basic concept of operation of a transistor, known as *switching*.³⁷ Further losses occur associated with computing chips when they access on-chip SRAM (static random access memory) and networking functions. Additional losses on-chip are due to control functions ("clock"), power, and leakage current.³⁸ Off-chip energy can be lost when electricity moves between the computing chip (CPU/GPU) and a separate memory chip. The time needed for very large transmission of data between separate chips, as in the last example, is known as the *memory wall* or *memory bottleneck*.

Unlike in a desktop computer, the activity rates of chips in a data center can be extremely high, and this activity rate increases the cooling needs as the hot equipment raises the temperature of the ambient air. The more common cooling strategies treat and condition this ambient air by lowering its temperature and humidity.

Historically the amount of computing power per watt has improved significantly. The move to multi-core processing at the turn of the millennium lowered the heat produced for the same amount of computing power.³⁹ According to Nvidia, as reported in October 2024, the prior 10 years had seen a 4,000-fold improvement in its GPU's computational performance per watt of power.⁴⁰ More conservatively, the International Energy Agency estimates the change in AI GPU performance per watt to have improved 100-fold or greater between 2008 and 2023.⁴¹

How are data centers typically cooled?

The operation of the IT equipment raises the temperature of the ambient room air, necessitating a cooling strategy. Generally speaking, the cooling strategies for IT equipment differ from cooling needed for personal comfort, with computer servers tolerant of higher temperatures but requiring lower humidity.⁴² Federal guidelines and research advise using large centralized cooling resources for data centers.⁴³ There are two types of centralized cooling resources: (1) those moving air through large ductwork to deliver chilled air and remove warm air; or (2) those moving water or other heat transfer fluid through a piped *cooling loop* that exchanges heat with the environment. The centralized cooling resources achieve higher efficiency at the larger scale. Those of the first type, which moves air, can improve their energy efficiency by utilizing variable speed fans.⁴⁴ Though less common, these methods can, if required, be used to heat the interior of the data center using air-ducted or looped strategies (i.e., strategies that use heat transfer fluids).

An alternative to these centralized systems is room-scale air conditioners. One type, called computer room air conditioners (CRACs), is common in smaller data centers.⁴⁵ With CRACs, the air is looped and filtered within the room but the heat is sent outside the building using refrigerant or other fluid.⁴⁶

The above methods rely on a sequence in which computing equipment first heats the room air, after which the cooling system accepts heat from the room air, either moving a heated fluid outside, where the heat is returned to the environment, or removing the air itself and replacing it with cooled return air. Exchanging the heat with the environment can happen faster with methods that involve water.

What are some additional data center cooling strategies?

High-performance computing (HPC)⁴⁷ equipment has necessitated cooling methods that are thermodynamically closer to the chips and intercept the energy before it has substantially raised the room air temperature. These *direct liquid cooling* technologies can address the higher power of HPC.

Another option that may be used during shoulder season (i.e., spring and fall in temperate climates) or winter, known as *free cooling*, imports water chilled passively by environmental conditions. Compared with methods involving conventional *mechanical cooling* that use powered compressors, free cooling is relatively inexpensive. Optimizing the cooling of the data center will generally involve some combination of methods.

Facilities with substantial cooling needs sometimes employ thermal storage. The National Institutes of Health, for example, has a large chilled water storage facility at its Bethesda, MD, campus.⁴⁸ The thermal storage system operates by drawing down the chilled water reservoir during periods of intense cooling requirements and replenishing the reservoir during off-peak hours.

What are some potential concerns about water consumption by data centers?

A study by the International Energy Agency estimates, for illustration, that a 100 MW U.S. data center may consume roughly 2 million liters (roughly 530,000 gallons) per day, averaged across the various cooling strategies, with 725,000 liters (roughly 190,000 gallons) per day consumed on site, or a little less than 40%.⁴⁹

Of the various cooling strategies to return heat to the environment, those that include cooling towers accelerate the rate of heat transfer by spraying water onto surfaces in the cooling tower. The water evaporates to provide cooling and must constantly be replenished. According to one vendor, water-cooled systems may use as little as one-half the electric power of air-cooled systems.⁵⁰ The source of the cooling water can be the local water utility. A city in Oregon reported that nearly 30% of the city's water consumption was attributable to Google data centers, which had tripled water consumption over a five-year period.⁵¹ The source of water can also be on-site reservoirs or other colocated water resources.⁵² Data centers of smaller size within an office building might only incrementally increase direct water use.

There are two principal sources of water demand from cooling towers. One of the sources of demand is the sprayed-on cooling water just noted. Another operation, known as *blowdown*, uses water to flush out hard scale that can build up on surfaces in the cooling tower when sprayed-on water evaporates and leaves behind solid material.⁵³ By one estimate, most of the wastewater produced at a data center is from blowdown.⁵⁴

Which, if any, federal regulations cover the energy consumption of data centers?

DOE has published guidance on how to optimize energy use in data centers used by the federal government.⁵⁵ Currently there are no legally binding energy standards that apply explicitly to operation of data centers in the private sector.⁵⁶ The ENERGY STAR program, a voluntary labeling program, certifies data centers with a focus on the energy efficiency of data centers' buildings and infrastructure.⁵⁷ ENERGY STAR uses a calculation method that effectively removes the consumption of the IT equipment, attributing energy use only to that of a *powered shell* (the building and its electricity).⁵⁸ ENERGY STAR gives a rating based on the performance of the powered shell of the building and rates this against that of similar buildings. The program has certified nearly 300 data centers, with all but one having greater than 10,000 square feet total floor area.⁵⁹

ENERGY STAR also certifies products found in data centers such as enterprise scale servers, uninterruptible power supplies, memory storage, and networking equipment.⁶⁰

Since 2012, DOE has regulated the energy efficiency of CRACs.⁶¹ The regulatory program is authorized by the Energy Policy and Conservation Act, as amended (EPCA; 42 U.S.C. §§6291 et seq.). The standards apply to units at the time they are shipped by manufacturers; the manufacturer is responsible for compliance.⁶²

How do data centers affect electricity prices?

The price (rate) that customers pay for electricity is determined primarily by two factors: the cost of producing electricity (generation) and the cost of delivering electricity to customers through the grid (transmission and distribution).⁶³ Utility regulators at the state or local level approve rates that reflect a utility's cost for these components. Rates typically change every few years in response to shifts in utility costs over time. For example, if a utility invests in a new power plant or in upgrades to the grid, rates might need to change to reflect those capital investments. Utility sales also affect rates. When sales increase, a utility earns more revenue; conversely, when sales decrease, a utility earns less revenue. If a utility's revenue is less than its costs, rates might need to increase to compensate. Similarly, if a utility's revenue exceeds its costs, regulators might lower rates.

Data center electricity demand could potentially affect electricity rates if that demand led to a meaningful change in the local utility's costs or sales (or both). If a utility built new infrastructure to accommodate data center demand, the utility might raise rates to recover the cost. Alternatively, if a utility had sufficient existing infrastructure to accommodate data center demand, the increased sales might lead the utility to reduce rates.

Researchers at LBNL led an analysis providing insights on the extent to which data centers and other drivers have affected retail electricity prices.⁶⁴ Their analysis focused on the years 2019 through 2025. They found that the main driver behind increases in electricity prices during this period was utility investments in grid infrastructure, mostly in response to aging infrastructure and resilience needs. Other key drivers included natural gas prices, recovery from natural disasters (e.g., storms, wildfires), and state energy and environmental policies. In other words, this analysis did not identify data centers as major influencers of electricity prices in most areas of the country between 2019 and 2025.

The LBNL analysis further investigated the relationship between electricity demand growth (including demand growth due to data centers) and prices. The analysis found that states with the largest data center demand growth generally saw electricity price decreases between 2019 and 2025, though some states with relatively large data center growth saw price increases or little change.⁶⁵ One explanation for this finding may be that increased demand in some states allowed utility costs to be spread over a larger sales volume, putting downward pressure on rates. Whether that relationship holds in those states moving forward remains to be seen.

How can policymakers address electricity affordability concerns?

Electricity consumers typically notice their monthly bill, not their electricity rate. Customers' electricity bills are determined primarily as the product of electricity rates and electricity consumption. Some policy options primarily impact rates while other options primarily impact consumption.

State and local utility regulators can use policies to attempt to isolate the rate impact of utility capital investment to data centers, thereby reducing any potential rate impacts for other customers.⁶⁶ This approach typically involves establishing new electricity customer classes for data centers or other large electricity consumers with similar demand profiles. The number of utilities with data center-specific policies is increasing as utility regulators around the country address affordability concerns associated with data center development.⁶⁷

Another set of policy options primarily impacting rates relates to infrastructure development. As noted in the previous section, areas of the country with grid constraints due to insufficient infrastructure are more likely to experience rate increases from new data center demand. Electricity infrastructure is subject to a combination of federal, state, and local permitting processes. Numerous proposals have been introduced in the 119th Congress with the goal of speeding the pace of infrastructure development. For additional discussion, see CRS Report R48762, *Data Center Energy Infrastructure: Federal Permit Requirements*, by Paul W. Parfomak et al., and CRS Report R47627, *Electricity Transmission Permitting Reform: Issues and Legislative Proposals*, by Ashley J. Lawson. Additionally, federal tax policy has historically affected utility costs for new power plants, primarily by providing tax credits to developers of power plants with low greenhouse gas emissions. The 119th Congress modified this policy. For additional discussion, see CRS Insight IN12624, *IRA Tax Credit Repeal in the FY2025 Reconciliation Law: Part 1*, by Nicholas E. Buffie.

Policies aimed at increasing energy conservation and energy efficiency can reduce energy consumption, thereby lowering consumers' bills without necessarily affecting electricity rates. Federal policy has historically promoted energy efficiency improvements through grant programs and tax credits. States and utilities also frequently adopt policies promoting efficiency and conservation. For additional discussion of selected federal programs, see CRS Report R46418, *The Weatherization Assistance Program Formula*, by Corrie E. Clark and Lynn J. Cunningham, and CRS Insight IN12625, *IRA Tax Credit Repeal in the FY2025 Reconciliation Law: Part 2*, by Nicholas E. Buffie.⁶⁸

One consideration about these policies is the time period over which they can affect customers' bills. Energy efficiency and conservation tend to have immediate impacts—electricity consumption decreases as soon as an efficiency or conservation measure is in place. Policies focused on infrastructure, in contrast, could take several years to affect rates because of the time it takes to develop new electricity infrastructure.

Are there reports on the actual energy use of U.S. data centers?

Owing to recent interest in the energy use of data centers, the federal government has begun data collection to assess data centers' scope and scale and, ultimately, their impacts on energy demand and natural resources. Congress, through oversight and legislative activity, has shown interest in the results of data collection and in expanding the federal government's authority to collect the data.⁶⁹ As noted, the federal government has made some efforts to gather data using information collection methods suitable for later scale-up.⁷⁰ The Energy Information Administration (EIA) has conducted two data collection activities, but these were limited by sample size or were curtailed. A 2021 EIA pilot study of energy use in data centers surveyed 50 facilities and received 9 responses; other responses either were not received, were incomplete, or were not facilities matching the criteria for data centers. EIA noted significant obstacles to collecting the data.⁷¹ EIA focused on facilities of greater than 50,000 square feet as most likely to be whole-building data centers.⁷²

In 2024, EIA attempted to collect information focused on cryptocurrency mining data centers. EIA began its survey with emergency approval under a provision of the Paperwork Reduction Act of 1995 (PRA).⁷³ The collection was challenged in the U.S. District Court for the Western District of Texas by a trade association focused on blockchain and cryptocurrency technologies and a Bitcoin mining company. These plaintiffs made several allegations against the government, including that the PRA's emergency approval provision was improperly used by EIA, that OMB's conditions for approving the collection violated the PRA,⁷⁴ and that OMB violated the Administrative Procedure Act (5 U.S.C. §551 et seq.) by arbitrarily and capriciously approving an information collection that did not follow the PRA's procedures.⁷⁵ The court issued a temporary restraining order, noting the allegations of harm made by plaintiffs, including the legal penalties for not responding to the EIA survey,⁷⁶ the costs of complying with the survey, and the disclosure of proprietary information requested by EIA through the survey.⁷⁷ Following the temporary restraining order, EIA, OMB, and plaintiffs reached and filed an agreement with the district court, resulting in an end to EIA's data collection and EIA agreeing to destroy any data collected up to that point.⁷⁸

S. 1475, the Clean Cloud Act of 2025, introduced in the Senate and referred to the Committee on Environment and Public Works, would amend the Clean Air Act (42 U.S.C. §§7401 et seq.) to provide the U.S. Environmental Protection Agency (EPA) and EIA with authority to collect data and information on annual energy consumption of the data center or cryptocurrency mining facility, the provider of the electricity, any power purchase agreements, and related topics.

In 2023, a letter from five Senators and three Representatives urged EPA to use its authority under Section 114 of the Clean Air Act to implement a "mandatory disclosure regime" on cryptocurrency mining facilities.⁷⁹ The letter asserted that some such facilities would emit greater than the 25,000-ton threshold of carbon

dioxide equivalent of greenhouse gases per year necessary to invoke Section 114, an authority that allows EPA to request information from emission source categories for regulatory development or enforcement and for other purposes.⁸⁰

What statutory and administrative procedures apply to information collection in general?

When an executive branch agency collects information or data from the public, the agency typically must comply with the Paperwork Reduction Act of 1995.⁸¹ The PRA governs the *collection of information*.⁸² The purpose of the PRA is to balance the government's need for information with the burden imposed on the public to produce and supply that information.⁸³ Information collections include, but are not limited to, reporting or recordkeeping requirements, surveys, public disclosure requirements, and collections that use an electronic or paper form.⁸⁴

Before an agency can collect information from the public, the PRA requires approval by OMB.⁸⁵ OMB's approval is required regardless of whether the agency's information collection is mandatory (e.g., required by law) or voluntary.⁸⁶ Information collections conducted in association with a rule are also subject to OMB's approval.⁸⁷

The process for obtaining approval of an information collection—known in practice as the clearance process—includes two public notice-and-comment periods. The first period is 60 days,⁸⁸ during which time agencies are required to solicit the public's input on certain topics, including the *practical utility*, or usefulness, of the information to the agency,⁸⁹ and the accuracy of the agency's *burden* estimate, or the amount of time and resources that is expected to be expended by the public to generate, provide, or maintain the information for or to an agency.⁹⁰ A subsequent notice-and-comment period of at least 30 days occurs when the agency submits the information collection request to OMB for approval.⁹¹

After receiving the information collection request from the agency and after the 30-day public comment period has lapsed, OMB has up to another 30 days to make a decision on whether to approve the information collection.⁹² Thus, under the PRA, an agency is expected to spend at least 90 days and up to 120 days going through the clearance process. In practice, the total amount of time spent by an agency is often much longer because internal agency processes extend the timeline beyond what is specified in statute.

OMB can approve an information collection for no more than three years.⁹³ When approval of an information collection expires, an agency that wants to continue collecting the information must go through the clearance process again and obtain OMB's approval.⁹⁴

As mentioned above, EIA obtained approval from OMB to collect data on cryptocurrency mining data centers under the PRA's emergency authorization provision, which was challenged in U.S. district court.⁹⁵ This provision of the PRA permits an agency in certain specified circumstances to seek OMB's approval to conduct an information collection on a temporary basis (not to exceed 180 days) without complying with the processes usually required under the PRA.⁹⁶ In the district court case brought against EIA, the plaintiffs alleged that EIA's burden estimate was underestimated and that EIA failed to take steps to minimize burden by not consulting with the public as required by OMB in its regulations implementing the PRA.⁹⁷

When collecting information about energy, what are specific considerations?

There may be additional considerations beyond the PRA when it comes to the collection of information on data centers' energy use. For example, the Energy Supply and Environmental Coordination Act of 1974 (ESECA; P.L. 93-319) includes an enforcement provision that imposes civil monetary penalties on business entities that do not report *energy information* sought under the information collection authorities of the Federal Energy Administrator.⁹⁸ The possibility of these civil monetary policies were part of the case brought against EIA when it attempted to survey cryptomining facilities in 2024, as discussed above.⁹⁹ The administrator's information collection authority contained in ESECA is "in addition to, independent of, not limited by, and not in limitation of, any other authority of the Federal Energy Administrator." Thus, while providing information is anticipated to impose some cost under the PRA because of its conceptualization of paperwork burden, additional costs are also possible for those that might be subject to reporting energy information under ESECA. Other laws establishing an agency's information collection authority might also have an enforcement mechanism, which might be viewed as increasing the stakes around collecting information in these circumstances.

In developing legislation addressing the collection of information about energy usage, Congress may also give further consideration to which entities would be providing information. For example, private firms maintain data sets that can provide direct or proxy information on data centers. Cushman & Wakefield, a real estate firm with a specialty in data centers, and Baxtel, a real estate and marketing firm that provides specialized services for data center owners, issue reports on the population of data centers and their electric power requirements in the United States. Obtaining data from these private firms may be one option.

Another option may be to obtain data from primary sources. While EIA previously attempted to collect data directly from cryptomining facilities, the Clean Cloud Act of 2025 would require the collection of information from three different sources: data centers, cryptomining facilities, and the electric utilities that serve data centers and cryptomining facilities. Academic research has found differences in the accuracy and reliability of data centers' energy consumption estimates because of differences in the methods used by the different sources of the estimates.¹⁰⁰ The authors of the study find that these estimates are then used by others in subsequent research, and the authors argue that these data quality issues could undermine the research that subsequently uses these estimates.¹⁰¹

One possible policy implication that follows from the aforementioned study is that how information is collected could have consequences for the subsequent uses of that information, including the extent to which it can be used as an authoritative source to inform federal energy policy or regulation. In other words, how statute directs the collection of information on data centers' energy use, or how an agency designs its collection of information on such energy use, may influence the extent to which such collected data can then be used to reliably serve certain purposes. The data, for example, may be not be generalizable, may be incomplete (e.g., certain information is missing or underreported), inaccurate (e.g., certain information is underestimated or overestimated), or otherwise limited in its usefulness because of circumstances that occurred during data collection.

The use of data collected by federal agencies on energy use is not necessarily without consequence or significance. The Clean Cloud Act of 2025 would establish that the information collected under it shall be used for fee setting. Additionally, compliance with a certain provision of the Clean Cloud Act of 2025 is to be monitored by the EPA, in conjunction with EIA, using "the best available data," including the information collected under the bill.

The Clean Cloud Act of 2025 would also require certain data collected under it to be made publicly available. Some researchers argue that it is insufficient and possibly ineffective for policymakers to establish data policy regimes that are primarily concerned with information disclosure (e.g., making certain data from regulated entities publicly available in databases, repositories, or similar searchable publications and websites).¹⁰² Instead, it is argued that policymakers should focus on the broader goals of a "data stewardship" regime. Data stewardship would aim to maximize data quality and usability—alongside information disclosure and making data publicly available—by ensuring the reliability, accuracy, and fairness of data collected, so that the data can serve regulatory needs and the various ends and goals of stakeholders and data users.¹⁰³

Another potential consideration is that the Information Quality Act (IQA) required OMB to develop government-wide guidelines for information and data quality.¹⁰⁴ In implementing the IQA, OMB acknowledged that certain information developed or made publicly available by agencies should be held to a higher quality standard because it is more important and influential, and that increasing data quality has costs and benefits.¹⁰⁵

Mari Lee prepared the graphic.

Footnotes

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| 1. | A. Shehabi et al., <i>2024 United States Data Center Energy Usage Report</i> , Lawrence Berkeley National Laboratory (LBNL), LBNL-2001637, December 2024, p. 5. While cryptocurrency is one type of service supported by data centers, not all studies of energy consumption of data centers touch on energy usage related to cryptocurrency. The report noted that its calculations |
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| | assumed that data centers would operate consistently with how they were commissioned and designed but that results may differ. |
| 2. | Shehabi et al., <i>2024 United States Data Center Energy Usage Report</i> (LBNL report), p. 6. Does not include energy use related to cryptocurrency. |
| 3. | Equinix, "What Is a Data Center? What Are Different Types of Data Centers?," August 1, 2024, https://blog.equinix.com/blog/2022/10/13/what-is-a-data-center-what-are-different-types-of-data-centers/ . |
| 4. | Stephanie Susnjara and Ian Smalley, "What Is a Data Center?," IBM, September 4, 2024, https://www.ibm.com/think/topics/data-centers . |
| 5. | Cisco, "What Is a Data Center?," https://www.cisco.com/c/en/us/solutions/data-center-virtualization/what-is-a-data-center.html#~infrastructure-evolution . |
| 6. | Susnjara and Smalley, "What Is a Data Center?" |
| 7. | Phill Powell and Ian Smalley, "What Is a Hyperscale Data Center?," IBM, March 21, 2024, https://www.ibm.com/think/topics/hyperscale-data-center . |
| 8. | Powell and Smalley, "What Is a Hyperscale Data Center?" See also VIAVI Solutions, "What Is a Hyperscale Data Center?," https://www.viavisolutions.com/en-us/resources/learning-center/what-hyperscale-data-center . |
| 9. | This calculation assumes a continuous source of electric power generation equal to 100 megawatts (MW), operating year-round, and that the average U.S. household consumes 10,566 kilowatt-hours (kWh) of electricity per year. The latter figure is sourced from the U.S. Energy Information Administration (EIA), "EIA Releases Consumption and Expenditures Data from the Residential Energy Consumption Survey," press release, March 29, 2023, https://www.eia.gov/pressroom/releases/press530.php . |
| 10. | Shehabi et al., <i>2024 United States Data Center Energy Usage Report</i> (LBNL report), p. 37. |
| 11. | 42 U.S.C. §17112(a)(1). |
| 12. | Office of Management and Budget (OMB), <i>Implementation Guidance for the Federal Data Center Enhancement Act</i> , M-25-03, January 14, 2025, p. 2, https://bidenwhitehouse.archives.gov/wp-content/uploads/2025/01/M-25-03_Implementation-Guidance-for-the-Federal-Data-Center-Enhancement-Act.pdf . |
| 13. | Shehabi et al., <i>2024 United States Data Center Energy Usage Report</i> (LBNL report), p. 5. |
| 14. | See Figure ES-1 of Electric Power Research Institute (EPRI), <i>Powering Data Centers: U.S. Energy System and Emissions Impacts of Growing Loads</i> , October 2024, p. 3, https://www.epri.com/research/products/000000003002031198 . |
| 15. | EPRI, <i>Powering Data Centers</i> , p. 7. |

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| 16. | Shehabi et al., <i>2024 United States Data Center Energy Usage Report</i> (LBNL report), p. 47. |
| 17. | For more information on the use of CPUs and GPUs in data centers, see CRS In Focus IF12899, <i>Data Centers and Cloud Computing: Information Technology Infrastructure for Artificial Intelligence</i> , by Ling Zhu. |
| 18. | Intel, "Intel Xeon 6 Processors," https://www.intel.com/content/www/us/en/products/details/processors/xeon.html . Intel defines <i>thermal design power</i> (TDP) as "the average power, in watts, the processor dissipates when operating at Base Frequency with all cores active, under an Intel-defined, high-complexity workload." Intel, "11 th Gen Intel® Core™ Mobile Processor Technical Specifications," https://edc.intel.com/preview/content/www/us/en/products/performance/benchmarks/11th-gen-intel-core-mobile-processor-technical-specifications/ . |
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| 26. | Nestor Maslej et al., <i>The Artificial Intelligence Index Report 2025</i> , Institute for Human-Centered Artificial Intelligence, Stanford University, April 2025, p. 72, https://hai.stanford.edu/ai-index/2025-ai-index-report . |
| 27. | Maslej et al., <i>AI Index Report 2025</i> , p. 72. |
| 28. | James O'Donnell and Casey Crownhart, "We Did the Math on AI's Energy Footprint. Here's The Story You Haven't Heard," <i>MIT Technology Review</i> , May 20, 2025. |

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| 29. | CBRE, "North America Data Center Trends H2 2024: Surging Demand Drives Record New Data Center Development," February 26, 2025, https://www.cbre.com/insights/reports/north-america-data-center-trends-h2-2024 . |
| 30. | EPRI, <i>Powering Intelligence: Analyzing Artificial Intelligence and Data Center Energy Consumption</i> , May 28, 2024, p. 2. |
| 31. | These non-IT components may be termed "infrastructure" for purpose of energy tracking. A. Shehabi et al., "Data Center Growth in the United States: Decoupling the Demand for Services from Electricity Use," <i>Environmental Research Letters</i> , vol. 13 (2018), p. 124030. Whole-building data centers are described elsewhere in the present report. |
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| 35. | Servers, named after today's client-server architecture, may include chips for computing, memory, and networking. |
| 36. | Shehabi et al., <i>2024 United States Data Center Energy Usage Report</i> (LBNL report), p. 16. |
| 37. | Integrated circuits, also known as chips, contain billions of transistors. Heat is the movement of energy between two bodies of different temperatures that are in thermal contact. Colloquially, heat may be referred to as a "loss" if the heat does not provide a useful (valorized) service. |
| 38. | Leakage current is a static loss not associated with the chip's performance of computational functions. Not all the energy consumed by the IT equipment supports the useful computing functions of computer chips. Some energy heats the equipment without performing a function. |
| 39. | K. Bourzac, "Fixing AI's Energy Crisis," <i>Nature</i> , October 17, 2024. |
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| 74. | The role of OMB in approving an agency's information collection, including surveys, is discussed below in " What statutory and administrative procedures apply to information collection in general? " |
| 75. | Verified Complaint for Declaratory and Injunctive Relief, Tex. Blockchain Council v. Dep't of Energy, No. 6:24-cv-99 (W.D. Tex., February 22, 2024), ECF No. 1. |
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| 77. | Order Granting Plaintiffs' Motion for Temporary Restraining Order, Tex. Blockchain Council v. Dep't of Energy, No. 6:24-cv-99 (W.D. Tex., February 23, 2024), ECF No. 13. |
| 78. | Notice of Agreement, Tex. Blockchain Council v. Dep't of Energy, No. 6:24-cv-99 (W.D. Tex., March 1, 2024), ECF No. 24. |
| 79. | Letter from Sens. Warren, Whitehouse, Markey, Merkley, and Durbin and Reps. Huffman, Tlaib, and Porter to Michael Regan, Administrator, U.S. Environmental Protection Agency, and Jennifer Granholm, Secretary, Department of Energy, February 6, 2023. |

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| 80. | 42 U.S.C. §7414. |
| 81. | P.L. 104-13; codified at 44 U.S.C. §§3501-3521. |
| 82. | A <i>collection of information</i> "means the obtaining, causing to be obtained, soliciting, or requiring the disclosure to third parties or the public, of facts or opinions by or for an agency, regardless of form or format, calling for either (i) answers to identical questions posed to, or identical reporting or recordkeeping requirements imposed on, ten or more persons, other than agencies, instrumentalities, or employees of the United States; or (ii) answers to questions posed to agencies, instrumentalities, or employees of the United States which are to be used for general statistical purpose" (44 U.S.C. §3502(3)). For a more complete overview of the Paperwork Reduction Act's (PRA's) information collection requirements, see CRS In Focus IF11837, <i>The Paperwork Reduction Act and Federal Collections of Information: A Brief Overview</i> , by Maeve P. Carey and Natalie R. Ortiz. |
| 83. | 44 U.S.C. §3501. |
| 84. | 5 C.F.R. §1320.3(c)(1). |
| 85. | 44 U.S.C. §3507(a)(2). |
| 86. | 5 C.F.R. §1320.3(c). |
| 87. | 44 U.S.C. §3507(d). See also 5 C.F.R. §1320.11 and §1320.12. |
| 88. | 44 U.S.C. §3506(c)(2)(A). |
| 89. | 44 U.S.C. §3502(11). |
| 90. | 44 U.S.C. §3502(2). For a more complete discussion of burden under the PRA, see CRS In Focus IF12673, <i>Burden and the Paperwork Reduction Act: An Overview</i> , by Natalie R. Ortiz. |
| 91. | 44 U.S.C. §3507(b). |
| 92. | 44 U.S.C. §3507(c)(2). |
| 93. | 44 U.S.C. §3507(g). |
| 94. | Memorandum from Cass R. Sunstein, Administrator, Office of Information and Regulatory Affairs, to the heads of executive departments and agencies, and independent regulatory agencies, "Information Collection under the Paperwork Reduction Act," April 7, 2010, pp. 5-6, https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/inforeg/PRAPrimer_04072010.pdf . |
| 95. | See footnote 73 and accompanying text. |
| 96. | 44 U.S.C. §3507(j). While statute permits an agency to avoid the clearance process for emergency processing and authorization, OMB's regulations implementing the PRA state that an agency shall "set forth in the Federal Register" the notice typically required unless waived or modified (5 C.F.R. §1320.13(d)). While statute permits OMB to provide emergency |

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| | authorization of an information collection for a maximum of 180 days, OMB's regulations state that its approval is valid for a maximum of 90 days (5 C.F.R. §1320.13(f)). |
| 97. | See the requirements for consult at 5 C.F.R. §1320.13(c). |
| 98. | 15 U.S.C. §797 (P.L. 93-319, §12 (88 Stat. 264)). The functions of the Federal Energy Administrator were transferred to the U.S. Energy Information Administration when EIA was established in 1977. For additional information, see CRS Report R46524, <i>The U.S. Energy Information Administration</i> , coordinated by Ashley J. Lawson. |
| 99. | See footnote 73 and accompanying text. |
| 100. | David Mytton and Masaō Ashtine, "Sources of Data Center Energy Estimates: A Comprehensive Review," <i>Joule</i> , vol. 6, no. 9 (September 2022), pp. 2032-2056. |
| 101. | See also the discussion about data gaps and analytical errors in research on the environmental impacts of information technology (IT) in Jonathan Koomey and Eric Masanet, "Does Not Compute: Avoiding Pitfalls Assessing the Internet's Energy and Carbon Impacts," <i>Joule</i> , vol. 5 no. 7 (July 2021), p. 1626. These authors argue, "A recurrent theme is that well-intentioned research often overestimates IT's electricity use and climate impacts, sometimes by orders of magnitude. These results then become 'factoids' that spread quickly as people share them and the media report them" (p. 1625). |
| 102. | Nathan Cortez, "Regulation by Database," <i>University of Colorado Law Review</i> , vol. 89, no. 1 (2018), pp. 28-37. Hereinafter cited as "Cortez, "Regulation by Database." |
| 103. | Cortez, "Regulation by Database," pp. 69-91. |
| 104. | P.L. 106-554, Appendix C, §515 (114 Stat. 2763A-153). |
| 105. | OMB, "Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies; Republication," 67 <i>Federal Register</i> 8452-8453, February 22, 2002, https://www.federalregister.gov/documents/2002/02/22/R2-59/guidelines-for-ensuring-and-maximizing-the-quality-objectivity-utility-and-integrity-of-information . |

Data centers are here, and more are coming. Our zoning is not ready.

By Sam Gordon, April 20, 2026

Data center development is accelerating across the country as AI drives demand, but zoning and land-use rules haven't kept pace. We break down the tradeoffs, what communities are doing today, and how policies need to evolve to keep up.

For decades, data centers have quietly powered the information age, supporting everything from websites and cloud computing to streaming and online services. While they have long existed as critical infrastructure for the information age, their role is now rapidly expanding. Over the past three to four years, artificial intelligence (AI) has become deeply embedded in daily life, underpinning many of the platforms, services, and tools we rely on.

This surge in AI demand is accelerating the expansion of data centers, driving a corresponding increase in the infrastructure required to support it. These power-hungry facilities require massive amounts of energy to operate and, in many cases, are already contributing to rising electricity bills for nearby households, placing additional pressure on communities at a time when housing affordability is already severely strained.

Underpinning this newest era of the information age, data centers are emerging as one of the most pressing land use challenges of the decade. They are here to stay, and we are still in the early stages of a massive expansion in their scale and distribution. Communities across the country are already grappling with this in real time.

Where should data centers go? Where have they been built thus far? How should they be classified as a land use?

Most importantly, are our nation's zoning ordinances equipped to guide data center development in ways that most benefit the communities where they are being placed? Right now, the answer is no.



Data Center in Ashburn, VA.

Photo credit: Hugh Kenny, Piedmont Environmental Council

Where should data centers go?

Modern (Euclidean) zoning ordinances are structured around regulating distinct land use categories—typically residential, commercial, and industrial, with various subcategories of each. Most local

governments have classified data centers as a form of industrial use. On paper, this makes sense, since data centers typically are large, warehouse-like buildings, often located in industrial areas, with limited public-facing activity. But that is where the similarity largely ends.

In practice, data centers do not fit neatly within traditional industrial definitions, and this is where much of the regulatory friction begins. They operate continuously, twenty-four hours a day, often with minimal on-site staff beyond occasional maintenance. They require enormous amounts of electricity, and their cooling systems can consume significant quantities of water. And unlike traditional industrial uses, they generate very few jobs relative to their size. So while they may look like warehouses, they function more like major pieces of energy infrastructure.

This mismatch creates a fundamental land use challenge. Zoning frameworks designed around 20th-century assumptions (e.g., daytime operations, truck traffic, and employment density) are now being applied to a modern use that does not follow those rules. As a result, data center siting decisions are often reactive rather than intentional, leading to tension between local governments, developers, and community members. In many cases, data centers are being developed in locations that are not well aligned with infrastructure capacity or community priorities.

Polarization: the pros and cons of data centers

One of the biggest concerns about data centers is the massive amount of energy they require to operate. This demand is already placing significant strain on local electrical grids, particularly in places like Loudoun County in Northern Virginia, home to “Data Center Alley,” where regional utility companies are quickly needing to reinvest in new generation and transmission infrastructure. Without appropriate regulatory safeguards, the significant costs of these upgrades are passed on to ratepayers in the form of higher household electricity bills, raising concerns about affordability and equity at a time when overall housing costs are already high nationwide.

The environmental impacts of data centers are just as significant. Energy demands are immense, cooling systems can require substantial water use for cooling, and backup generators contribute to air pollution and localized heat emissions.

These impacts are not just systemic—they are felt on the ground. Data centers are typically large, windowless structures with little architectural or street-level appeal. They generate persistent noise (often described as a constant mechanical hum) from cooling systems and generators. For nearby residents, this is not abstract; it is a daily quality-of-life issue.

In response, some jurisdictions are beginning to require stronger mitigation measures, including noise testing, setbacks, and visual screening (such as tree buffers). Some are also exploring opportunities to reuse waste heat, such as through district energy systems that could benefit surrounding communities.

At the same time, the growing demand for data centers has created strong incentives for states to attract their development. As of April 2026, at least 38 states are offering tax breaks and other benefits to bring data center investment into their jurisdictions. For states, the appeal is clear: data centers can generate substantial property tax revenue, strengthen local tax bases, and signal competitiveness in the digital economy. They are also often framed as long-term infrastructure investments that can anchor broader economic growth.

This dynamic is driving increasing tension between state and local governments. States are competing to attract data centers as an economic development priority, while local governments are left to manage the land use impacts and on-the-ground regulatory complexities.

In 2025, lawmakers in West Virginia passed legislation to incentivize statewide data center development, including provisions that limit local regulatory authority, create Freedom of Information Act (FOIA) exemptions, and establish special tax valuations.

What communities are doing right now

At this point, there is no clear set of best practices for regulating data centers. Given the speed of their recent expansion, local governments are experimenting with new approaches in real time.

Some communities have gone as far as to hit the pause button on data center development altogether; **temporary moratoria** are being used to create space and time for more thoughtful regulatory updates. In April 2026, lawmakers in **Maine passed legislation to ban new data center development through November 1, 2027** (pending approval by Governor Janet Mills). At the federal level, **a proposed pause from Bernie Sanders and Alexandria Ocasio-Cortez** signals growing concern over the pace of expansion and awareness of the need for broader oversight and regulatory clarity.

Beyond a full-on pause, three general patterns are emerging:

1. Case-by-case approval: the most reactive approach.

Many municipalities now require conditional or special-use permits, meaning each data center proposal is reviewed individually. Anchorage (Alaska), for example, **passed an ordinance in March 2026 requiring conditional use review for data centers**. While this allows flexibility, it can also lead to inconsistent outcomes and places significant pressure on local decision-makers to evaluate highly technical proposals without clear standards, often in loud, crowded and contentious public meetings.

2. Impact mitigation and regulation: a first step toward structure.

Communities are adopting requirements around noise, setbacks, buffering, and design. In Chandler (Arizona), for example, **a 2023 ordinance** requires baseline and ongoing noise studies, along with mitigation measures to ensure operational noise does not exceed pre-construction levels. It also mandates community notification, neighborhood meetings, and on-site liaisons.

Some jurisdictions are also exploring how to regulate energy and water use—for example, requiring developers to provide their own power sources rather than relying on the local energy grid. However, these solutions can introduce additional challenges, particularly when they rely on fossil fuel-based generation.

3. Zoning reform: where this is all heading.

Data centers are increasingly, and correctly, being treated as a distinct land use rather than a traditional industrial use. Some jurisdictions are creating new definitions, establishing overlay districts, or limiting where data centers can be located. Frederick County, Maryland, for example, has created a **Critical Digital Infrastructure Overlay zone** that limits data center development to a specific part of the county. Loudoun County (the aforementioned “Data Center Alley”) is developing **new use-specific zoning standards** for data centers that are more reflective of their scale and infrastructure demands.

What it means to be data center-ready

As things stand, data centers do not fit neatly into existing zoning categories, and their impacts are too significant to be managed through outdated frameworks. They are a new type of land use, and our zoning needs to catch up, fast.

The stakes are rising, as data centers are already reshaping local economies and energy systems in real time. Without clear regulatory guardrails, communities risk higher energy costs, growing infrastructure burdens, and increasing dependence on a single industry tax base—limiting long-term flexibility and economic resilience.

Being “data center-ready” means getting ahead of those risks. At a minimum, communities should:

- Define where data centers are appropriate
- Align siting decisions with infrastructure and energy capacity
- Establish clear expectations for environmental performance and community impact, including protections to ensure that nearby households are not saddled with the high cost of upgrading the infrastructure needed to support these facilities

A stronger approach may also include:

- Completely eliminating by-right data center development and requiring a dedicated discretionary review process that includes land use experts, environmental specialists, economists, and industry stakeholders
- Requiring developers to cover infrastructure costs
- Establishing clear, measurable community benefits tied to workforce development, sustainability, and resource use

Ultimately, being “data center-ready” means ensuring that the benefits of development—especially tax revenue—translate into real, tangible outcomes for communities, without raising costs or lowering quality of life.

Data centers are here to stay. The question is whether communities and their planners can shape their development in a way that works for residents—and remains workable for the companies driving the nation’s rapid expansion of digital infrastructure.



NACo Informational Primer and County Considerations:

Data Centers

Introduction

The rapid growth of artificial intelligence and high-capacity cloud computing is accelerating data center development nationwide. AI ready data center capacity is expected to grow about 33 percent annually from 2025 to 2030, driving a surge in local data center proposals.¹ In preparation, county officials are making urgent decisions about land use, energy and water needs and documenting if, where and how these facilities can be sited through local ordinances. Even without express zoning authority, county leaders play a central role in contextualizing proposals and ensuring development balances projected economic benefits with community priorities and long-term community well-being. Understanding local impacts is essential for evaluating new projects, managing existing facilities and planning for long-term infrastructure needs.

Data centers differ from traditional industrial developments in market pace, scale and economic structure. Recognizing these differences helps county leaders set realistic expectations and communicate clearly with departments, residents and private partners.

This resource provides county elected officials, administrators and planning leaders with a high-level framework to evaluate, permit and oversee data center development. Instead of focusing on technical details, it highlights key challenges across the project lifecycle and offers guidance for steering development toward long-term economic and environmental goals.

DATA CENTERS

Data centers are specialized facilities designed to store, process and transmit digital information. Data centers warehouse servers, storage systems, networking equipment and supporting infrastructure under relatively high security. While data centers have existed for decades, a new class of ‘hyperscale’ facilities designed for generative AI and cloud computing has grown significantly. Modern data centers differ from traditional enterprise data centers in size and resource intensity and require specialized power and cooling infrastructure that may impact local utility grids and water resources.

WHAT TO EXPECT FROM DATA CENTER DEVELOPMENT



High capital investment and tax revenue potential, significant construction and modest high quality permanent jobs



Ongoing tax-base growth from continuous equipment reinvestment



Significant power demand and potential need for infrastructure upgrades



Fast development timelines and demand, which counties can leverage to negotiate community benefits

Is your county prepared for data center development? Use the County Consideration Checklist at the end of this brief to assess readiness and assign responsibilities across departments.

County Considerations

Local Land Use and Zoning Authorities

County governments are often charged with considering the zoning and land use requests that permit the siting and construction of data centers, while ensuring that increased energy and water demands do not negatively impact the community.

Counties typically implement these considerations through zoning ordinances and land use designations, conditional or special use permits that establish site-specific requirements, and site plan review or development agreements that address infrastructure impacts and long-term operational commitments. Depending on the authority within a particular state, a county's land use and zoning authority related to the siting and construction of data centers may be limited or shared, shaping the county's role in local development decisions.

BEST PRACTICES FOR DATA CENTER DEVELOPMENT



Alignment with County Goals: Ensure data center development supports long-term economic and land use objectives



Infrastructure Readiness: Confirm availability and timing of power, water, wastewater and transportation capacity before approvals

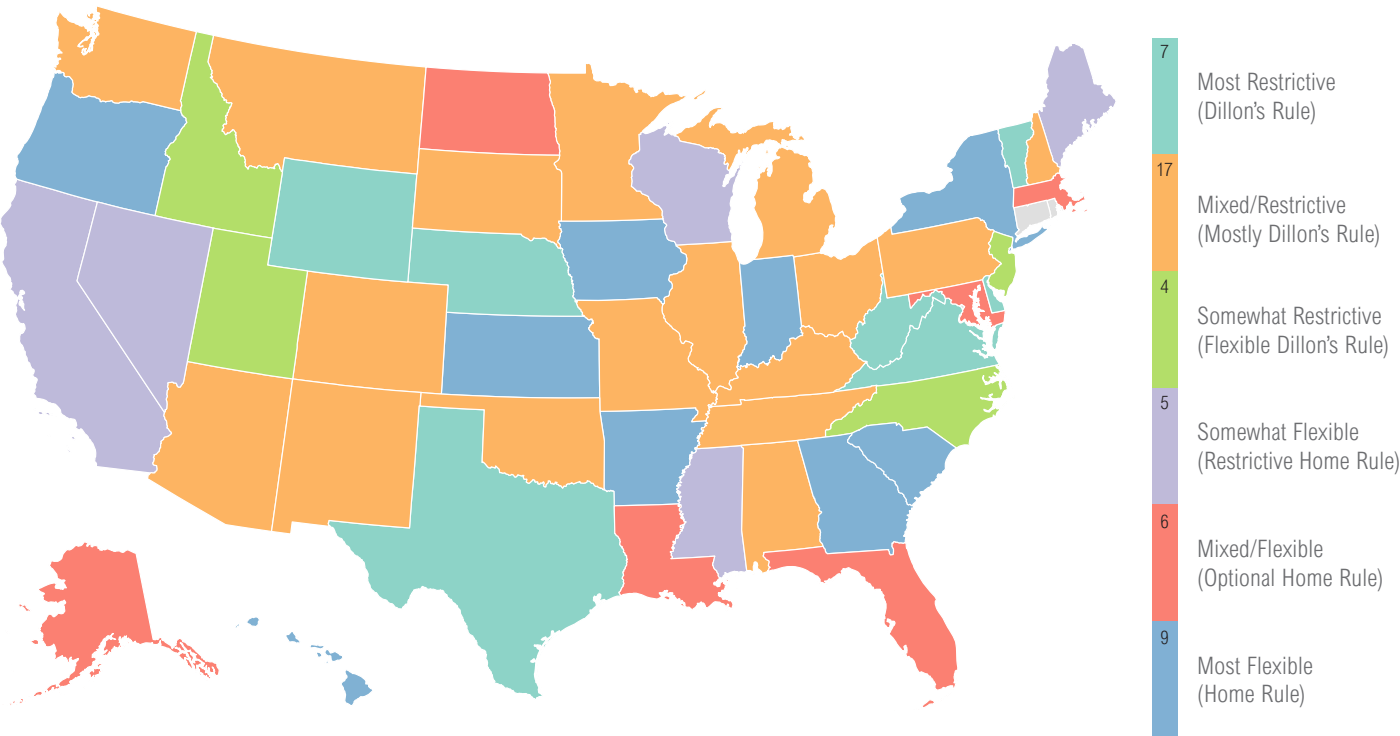


Clear Development Conditions: Establish enforceable requirements tied to permits, zoning ordinances or development agreements, such as water balance studies, setbacks, noise limits and architectural standards



Transparent Communication: Provide clear timelines, responsibilities and decision points to residents and stakeholders

COUNTY AUTHORITY PROFILES



Source: NACo research, 2022

Zoning

Setbacks

While data centers often look indistinguishable from office buildings, their operations and infrastructure requirements more closely match those of a factory. Because of this, jurisdictions have begun establishing considerably larger setback requirements for data centers than for standard buildings. Typical building setback requirements from property lines range from 200 feet to up to 500 feet from a residential property or zoning district. In areas where 'smart growth' is a priority, such as near transit stations, these setbacks can be extended much further to ensure prime land is reserved for high-density housing and retail. However, when data centers are grouped within a dedicated 'overlay district,' these requirements can be reduced between the centers themselves by more efficiently sharing power and fiber infrastructure.

Noise

Data centers require large cooling systems to function, and these systems emit a steady hum that can disturb nearby residents. To address this, local governments are setting noise limits, often 65 decibels at the property line and 55 decibels in quieter or residential areas. How these limits are met is up to the data center designer, but common approaches include sound-absorbing or sound-blocking structures, berms or increased setbacks. Ordinances are also beginning to require testing for both A-weighting, which captures high-pitched sounds like fans, and C-weighting, which measures low-pitched vibrations from heavy machinery. Because backup generators used during power outages are often louder than cooling fans, ordinances can establish permissible testing schedules that limit routine testing to daylight hours.

Architecture

Large data centers can require large buildings that, without clear design requirements, may clash with the community aesthetic. To address this, local governments have begun requiring developers to incorporate architectural features that resemble typical office buildings. These requirements often include variations in building height and depth to break up the building mass and reduce visual scale, along with the addition of real or faux windows and doors to create a more human-scale appearance. Additionally, modern ordinances may forbid the use of overly reflective or industrial-looking materials, helping the facility to fit its surroundings, especially when located near residential areas.

Power

Large data centers can span hundreds of acres and can have unique power and water infrastructure needs. Data centers can require large amounts of power similar to a medium-sized city, accounting for nearly 4.4 percent of U.S. annual electricity in 2023.¹ In response to transformations in technologies including AI, hyperscale development across the country and new domestic manufacturing, the total national energy demand is estimated to increase 20 percent by 2030.² This level of power demand can trigger the need for additional generation sources and new grid infrastructure. County leaders can best serve their communities by understanding these power needs, the potential impacts on rates and reliability, and the steps they can take to better insulate their communities from those effects.

Water

Data centers require significant levels of cooling for operation. This cooling, especially when utilizing evaporative cooling systems, can require large quantities of water. Water use associated with data center cooling can range from minimal to substantial depending on facility design and local conditions. In some cases, facilities may rely on reclaimed water and generate wastewater that affects the capacity of local wastewater treatment systems. County leaders can ensure these water needs are met without negatively impacting the host community by including the following requirements as part of the permitting process: water balance studies, discharge water quality standards and long-term monitoring programs with defined curtailment plan triggers.

DEVELOPMENT AGREEMENTS

Counties may use tools such as development agreements or community benefit agreements to help align data center development with local priorities, including infrastructure improvements, workforce development or other community needs. These agreements can be used to identify short-term costs associated with large scale facilities such as construction phase economic impacts, cost sharing and offsetting early costs. Long-term impacts to be considered in these agreements include infrastructure improvements that benefit residents and businesses and workforce development. When used alongside local permitting and land use processes, such tools can support coordination between counties and developers as projects move from planning to construction to operation, particularly in communities where local codes lack specific provisions for data centers. Considerations for community input can include construction traffic, road wear, traffic routing and duration of activity as well as provisions for repowering, reuse or decommissioning and emergency preparedness.



Data center being constructed in Sterling, Loudoun County, Va.

County Considerations Checklist

| Category | Key Actions |
|--|---|
| Infrastructure Capacity | <ul style="list-style-type: none"> ☐ Plan for power and substation upgrades ☐ Evaluate water and wastewater systems under peak demand ☐ Define responsibility for infrastructure upgrades and maintenance ☐ Explore water reuse and energy-shifting strategies |
| Governance & Economic Impacts | <ul style="list-style-type: none"> ☐ Clarify how data centers fit within county development goals ☐ Balance local impacts with community benefits ☐ Sequence approvals with confirmed utility capacity ☐ Establish enforceable conditions tied to permits or agreements |
| Land Use & Zoning | <ul style="list-style-type: none"> ☐ Update codes for building height, setbacks, buffers and screening ☐ Define noise and lighting standards ☐ Require traffic routing and construction management plans ☐ Include provisions for repowering, reuse or decommissioning |

Get Involved!



Join **Energy Counties Exchange** to see local zoning ordinances related to data centers and crowd source information from fellow county leaders



Visit **NACo's Energizing Counties Resource Hub** for more considerations on this and more energy related projects



Visit **NACo's Rural Energy Academy** program page for more ways to get involved

¹ A. Shehabi et al., 2024 United States Data Center Energy Usage Report, Lawrence Berkeley National Laboratory (LBNL), LBNL-2001637, December 2024, p. 5.

² United States Department of Energy. Clean Energy Resources to Meet Data Center Electricity Demand. Energy.gov Available at: <https://www.energy.gov/gdo/clean-energy-resources-meet-data-center-electricity-demand>. (Accessed: February 17, 2026.)





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Community Strategies to Address Data Center Development and Operation

Overview

This fact sheet explores how local governments can manage land use and the community impacts of data center development and operation. Building on insights about energy and environmental considerations, it highlights zoning ordinances, permitting strategies and policy tools that help cities, towns and villages guide data center siting while aligning with economic, sustainability and community development goals.

Zoning and Permitting

With the growth of artificial intelligence (AI) and the need for more data centers, a common challenge facing local governments is that older zoning codes do not explicitly address data centers. These facilities often fall between classifications. This ambiguity can result in case-by-case determinations and ad hoc review processes. Zoning code typically allows for specified development types through the following: by right, by conditional use, or by special exception.

TABLE 1: ZONING CATEGORIES

| ZONING APPROACH | FEATURES |
|----------------------|--|
| By Right | Projects that meet all zoning requirements are allowed to proceed without discretionary review or public hearings. Streamlined and predictable process. |
| By Condition Use | Projects may be allowed if they meet specific conditions set by the zoning ordinance. Typically requires a public hearing and approval from a zoning board or commission. |
| By Special Exception | Projects not normally permitted under current zoning may be approved if they meet certain criteria and do not adversely impact the surrounding area. Usually involves a public hearing and discretionary review. |

Some local governments are adopting zoning amendments to specifically address data centers. For example, in [Fairfax County, VA](#), officials have updated their zoning ordinance to define data centers and permit them by-right in select industrial and commercial zones, while introducing buffers, size thresholds, and location restrictions to guide development away from transit-oriented areas. [Harrisonburg, VA](#) took a different approach by removing by-right permissions and requiring special use permits for data centers in industrial zones, enabling more discretion in site selection and public engagement.

[Loudoun County, VA](#) is considering shifting from by-right permissions to a special exception model for new data centers. Proposed comprehensive plan changes would also limit future data center development in designated urban centers near transit.

Several local governments have used **overlays**, which provide additional rules on top of existing zoning regulations. Overlays can allow local governments to exercise greater control over where and how data centers are built. These mechanisms often include supplemental

requirements related to noise, aesthetics, setbacks and environmental impact. [Prince William County, VA](#) created multiple overlay zones between 2016 and 2023, including the “Digital Gateway” district. These zones impose specific criteria, including 24-hour noise limits and landscaping requirements, while also enabling large-scale rezoning for data center parks. [Limerick Township, PA](#) created a data center overlay that requires compliance with detailed standards for noise, woodland preservation, water use and emergency access.

In [Chandler, AZ](#), all new data centers must now go through a public hearing process and are restricted to specific districts. The city’s ordinance requires detailed noise mitigation studies and regulates generator testing schedules to reduce disruptions.

Policy Tools and Local Incentives

Beyond zoning, local governments are experimenting with policy tools to shape the environmental footprint and community contributions of large building projects.

Some cities have adopted or explored **energy and water benchmarking requirements**. In 2023, [Detroit, MI](#) enacted an ordinance requiring large commercial buildings to report annual energy and water use. Similar policies exist in [Chicago, IL](#) and [Atlanta, GA](#) forming part of a broader trend toward transparency in high-resource-use sectors.

Several jurisdictions have explored **renewable energy and water efficiency incentives** tailored to data centers. While some operators voluntarily [co-locate renewable energy](#), local governments have begun facilitating this through streamlined permitting and flexible zoning for on-site generation.

In [New Albany, OH](#), a large **tax abatement was paired with community benefits** in a development agreement for a data center. In return for a 15-year, 100 percent property tax abatement, the developer committed to stormwater mitigation, scholarships for local students and cultural programs.

Community Engagement and Placemaking

Community engagement should begin early, before zoning changes are proposed or negotiations with data center developers take place. Proactive outreach to residents and community-based organizations builds trust, surfaces local priorities and creates opportunities to align development with community goals.

[Creative placemaking](#) offers a useful framework for engaging the public in data center planning and ensuring these projects contribute positively to the built environment. For example:

- ◆ Transforming required buffer zones into **public green spaces** or **walking trails** that benefit nearby neighborhoods.
- ◆ Using **community-led design processes** to shape screening, signage or building facades so they reflect local identity or cultural themes.
- ◆ Developing **public benefit agreements** tied to local education, job training or public Wi-Fi access, co-designed with community stakeholders.

In addition to public engagement, **collaboration with utilities and regional partners is essential**.

- ◆ Work with energy and water utilities early in the planning process to assess infrastructure capacity and coordinate long-term investments.
- ◆ Coordinate regionally with other municipalities and public utility commissions (PUCs) to address cumulative grid impacts, resource availability and shared development pressures.

By embedding engagement and collaboration into the planning process, cities, towns and villages can ensure data center development is more responsive to local needs and contributes to long-term community well-being.



TABLE 2: HOW LOCAL GOVERNMENT'S ADDRESS DATA CENTERS

| JURISDICTION | ZONING APPROACH | KEY FEATURES |
|--|---|--|
| <u>Fairfax County, VA</u> | By-right in high-intensity zones with thresholds and restrictions | Triggers special review above 40,000 sq ft (commercial) or 80,000 sq ft (industrial); prohibited within 1 mile of Metro stations; performance standards for cooling and noise. |
| <u>Harrisonburg, VA</u> | Shifted from by-right to special use permitting | Requires public hearings and city council approval for data centers in industrial zones. |
| <u>Prince William County, VA</u> | Data center overlay zones | Includes Digital Gateway; applies 24-hour noise limits, architectural screening, and buffer standards. |
| <u>Loudoun County, VA</u> | Data center overlay zones | Would require discretionary review for all new facilities; restricts development in transit zones. |
| <u>Chandler, AZ</u> | Data center overlay zones | Requires public hearings, noise mitigation studies, and generator use restrictions. |
| <u>Mesa, AZ</u> | Data center overlay zones | Encourages clustering in advanced manufacturing zone; requires infrastructure capacity review and often includes design or noise provisions in development agreements. |

Additional Resources

- ◆ Urban Land Institute, [Local Guidelines for Data Centers](#)
- ◆ American Planning Association, [Data Center primer for planners](#)



County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

January 9, 2024

DATA CENTERS Report and Recommendations

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INTRODUCTION

On May 9, 2023, the Board of Supervisors (Board) approved a Board Matter that recognized data centers as an evolving industry that merits further research and analysis.¹ The Board Matter directed staff to provide a report with research, findings, and recommendations on topics including environmental issues and mitigation; locational guidelines for siting facilities; how data centers should be permitted; and where any new guidelines should be located, including the Comprehensive Plan and the Zoning Ordinance.

Research has included a review of written materials, site visits, and meetings with stakeholders and the community. In addition, staff engaged Clarion Associates for background research; Clarion’s report is provided as Attachment 3. Engagement with key stakeholders was critical for staff to understand the data center industry in Northern Virginia and to collect feedback from the

¹ Board’s Board Matter: “Guidelines for Data Centers” <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/documents/pdf/5-9-2023-board-matter.pdf>



variety of interests. In addition to hosting a general community input session, over 20 meetings were held with various stakeholders, including representatives of the following:

- Dominion Energy
- Fairfax Water
- Virginia Department of Environmental Quality
- Fairfax County Environmental Quality Advisory Committee (EQAC)
- Fairfax County Tree Commission
- Nature Forward
- Sierra Club
- Faith Alliance for Climate Solutions
- Various data center consultants
- Noise consultant
- Amazon
- CoreSite
- Stack Infrastructure
- Data Center Coalition
- Fairfax County's Land Use Attorneys Work Group
- Northern Virginia Building Industry Association (NVBIA)
- Northern Virginia Commercial Real Estate Development Association (NAIOP)

A project webpage and email address for public comment were created. Presentations were also provided to the Board's Land Use Policy Committee on October 17, 2023, and the Planning Commission's Land Use Process Review Committee on October 26, 2023.²

This report is intended, in part, to address questions and feedback that have been shared by the community and industry. It is based on the work of an interagency staff team consisting of staff from the Planning, Zoning Administration, and Zoning Evaluation Divisions within the Department of Planning and Development, the Office of Environmental and Energy Coordination, the Northern Virginia Soil and Water Conservation District, the Operations and Building Divisions in Land Development Services, and the Stormwater Management and Wastewater Management Divisions in the Department of Public Works and Environmental Services.

RESEARCH TOPICS

Information is presented below according to seven topic areas: land use and site design; energy demand; water demand; water quality; air quality; noise; and building design. Each topic area includes a summary of current regulations and guidelines followed by a discussion of research and recommendations. These sections are followed by a summary of recommendations for the Board's consideration.

A data center is a facility that houses computer servers and their network connections. This report focuses on data centers as a principal land use, not those cases where an accessory server

² Project webpage with information about the community input session, and Board and Planning Commission committee meetings: <https://www.fairfaxcounty.gov/planning-development/data-centers>

room is located within another business facility or office. Data centers can be developed as stand-alone buildings or as part of a complex that may include other uses. The growth of digital data has expanded exponentially in recent years, resulting in a rapid increase in data center facilities that is anticipated to continue. This growth is needed to support the increased online population as well as business applications in all sectors, including finance, entertainment, healthcare, and education. Major factors contributing to data center growth in Northern Virginia include the long history of a robust fiber optic network in the area and reliable electric power.

Some of the benefits that data centers bring are job creation with good wages, few impacts to transportation systems or schools, and positive tax revenues. Individual businesses can benefit from the scale of cloud computing services where they share in the use of data center resources. Data centers are designed with optimal cooling and other systems to support computer servers and for 99.999% reliability. Data centers can provide better computer processing, storage, data security, and energy efficiency than if each individual business were to manage its own servers. However, data centers are industrial uses that may affect surrounding uses (through noise and visual impacts), or affect energy demand and associated greenhouse gas emissions, air quality, and water supplies.

1. Land Use and Site Design

Current Regulations and Guidelines

The Zoning Ordinance³ currently⁴ allows data centers in the zoning districts shown in Table 1 below.⁵ These districts are currently located across the County, with industrial districts primarily in the western portion of the County along Route 50 and Route 28, in the Herndon and Reston areas along the Dulles Toll Road, in the Merrifield/Mosaic areas between I-66 and Route 50, near the intersection of I-495 and I-395, and along I-95 in the southern portion of the County. Zoning districts can be viewed by using the Zoning District Analyzer or JADE.⁶ Additionally, the locations of existing, approved, and proposed data centers with surrounding zoning districts are identified in Attachment 1. As shown on these maps, existing data centers are located in the I-3, I-4, I-5, and PTC Districts, and pending data center applications are in the I-5 and PDC Districts.⁷

³ Zoning Ordinance: <https://online.encodeplus.com/regs/fairfaxcounty-va/index.aspx>

⁴ Before the new Zoning Ordinance (re-adoption effective May 10, 2023), starting in 2000, data centers were considered by interpretation to be telecommunication facilities which were allowed by right in all C and I districts, in all P districts when shown on an approved development plan, and with SE approval in all R districts. Par. 5 of Sect. 9-101 and Sect. 9-102.

⁵ Abbreviations used in the table: SF – square feet; GFA – gross floor area; FAR – floor area ratio.

⁶ Zoning District Analyzer:

<https://fairfaxcountygis.maps.arcgis.com/apps/webappviewer/index.html?id=e64b68aa834d46b0ad0e6cd4d831f843>
or JADE:

<https://www.fairfaxcounty.gov/GeoApps/Jade/Index.html?configBase=https://www.fairfaxcounty.gov/GeoApps/Geocortex/Essentials/REST/sites/Jade/viewers/Jade/virtualdirectory/Resources/Config/Default>

⁷ Pending (in-progress) data centers include those with site plan and building permit approval for at least one building.

| Zoning District | By Right | Special Exception (SE) |
|---|--|--|
| C-3 (Office)
C-4 (High Intensity Office) | Up to 40,000 SF of GFA;
larger if repurposing a
building existing on
May 10, 2023 | Required for larger size; or
for increase in height or
FAR |
| I-2 (Low Intensity Industrial)
I-3 (Light Intensity Industrial) | Up to 80,000 SF of GFA;
larger if repurposing a
building existing on
May 10, 2023 | Required for larger size; or
for increase in height or
FAR |
| I-4 (Medium Intensity Industrial)
I-5 (General Industrial)
I-6 (Heavy Industrial) | Yes (limited by district
height of 75 feet and FAR
of 0.5) ⁸ | Required for increase in
height or FAR |
| PRC (Town Center,
Convention/Conference Center)
PDC (Planned Development
Commercial)
PTC (Planned Tysons Corner
Urban) | Yes, if shown on the
development plan | n/a |

Table 1: Current Zoning Permissions

Setbacks vary according to the zoning district. In the I-4, I-5, and I-6 Districts, the front setback must equal the building height (but be at least 40 feet) and there are no minimum side and rear setbacks. In addition to building setbacks, the Zoning Ordinance requires transitional screening and barriers on the lot of a more intense use when it is located next to a less intense use, as prescribed in Table 5108.2.⁹ Transitional screening yards are required to be 25, 35, or 50 feet wide and planted with trees and shrubs in accordance with Zoning Ordinance standards. Currently, a data center is required to provide a 35-foot transitional screening yard when located next to single-family detached or attached dwellings, or a 25-foot transitional screening yard when located next to certain other uses, such as multifamily dwellings, religious assemblies, and child care centers. Under the proposed Zoning Ordinance amendment for Landscaping and Screening, the transitional screening requirements would be the same for most industrial uses, including data centers, and would require 50 feet of screening (the maximum) next to all residential uses and 25 feet next to most public, institutional, and community uses and commercial uses.¹⁰

⁸ FAR is also subject to the provisions of the Route 28 Highway Transportation Improvement District, and the Dulles Phase I and Phase II Transportation Improvement Districts.

⁹ Transitional screening and barriers: <https://online.encodeplus.com/regs/fairfaxcounty-va/doc-viewer.aspx#secid-3017>

¹⁰ Webpage for the proposed Landscaping and Screening Zoning Ordinance amendment: <https://www.fairfaxcounty.gov/planning-development/zoning-ordinance/landscaping-screening>

Appendix 12 of the Land Use Element of the Comprehensive Plan's Policy Plan includes guidelines for certain uses, including data centers, that propose higher intensities than what is shown on the Comprehensive Land Use Plan Map.¹¹ The guidance in this Appendix applies during the review of a rezoning or SE and provides an option for higher-intensity development in designated industrial areas, while ensuring proposals are compatible with surrounding uses and can be supported by existing infrastructure. The criteria used to review such proposals are organized into five topic areas: transportation, mitigation of noise and other impacts, building design, lot size and parcel consolidation, and site design. The use of this option for additional intensity is not meant to supersede any site-specific Plan guidance for intensity and applies only to areas with a baseline Plan recommendation for industrial use.

Research and Recommendations

As outlined above, data centers are currently allowed by right in certain zoning districts. However, as further discussed under the topic areas below, data centers have the potential for impacts to surrounding uses, environmental resources, and infrastructure, and the SE process may provide for a more site- and application-specific review of impacts and mitigations. As indicated in subsection 4102.1.F(1) of the Zoning Ordinance, the SE process is appropriate for certain uses which by their nature or design can have an undue impact upon or be incompatible with other uses of land. Requiring SE approval for data centers in the C-3, C-4, and I-2 through I-6 Districts would allow the Board to consider land use impacts and mitigations through a public process. In the Planned Districts—where the use is allowed if represented on the approved development plan—the current standards could remain because the current process provides for an in-depth, site-specific review. However, the Board could consider clarifying the requirement for a data center to be specifically shown on the development plan, including its location, size, height, and setbacks.

While data centers could continue to be allowed by right with additional standards or conditions, some of the recommendations included in this report—such as reviewing building design and noise studies and encouraging increased open space, tree planting, and stormwater treatment—may be more appropriately and effectively implemented through an SE review in accordance with SE standards in the Zoning Ordinance and guidelines in the Comprehensive Plan. Applications for rezoning are reviewed for conformance with the applicable guidelines in the Comprehensive Plan, and SEs must be found to be in harmony with the Plan. The SE review process also allows for consideration of flexibility through Board modification of standards where appropriate.

A new appendix to the Land Use Element of the Policy Plan could be created with updated performance criteria that would apply in the review of all data centers undergoing a rezoning or SE review, not just those seeking additional intensity. As shown on the maps in

¹¹ Land Use Appendix 12: <https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/compplan/policy/landuse.pdf#page=39>

Attachment 1, some industrial districts are close to residential districts. Revised guidelines in a new Policy Plan appendix and SE standards in the Zoning Ordinance could bolster existing guidelines and regulations. These could address land use compatibility with existing and planned uses for the property and surrounding properties, including the size of the proposed data center, and the distance of the proposed building and generators from surrounding development. Setbacks and buffering can serve to minimize visual, noise and other impacts; therefore, guidelines could encourage enhanced buffering for data centers near residential development, other noise-sensitive uses, and environmentally sensitive areas.

As industrial uses, data centers are currently allowed in industrial zoning districts, and Appendix 12 of the Policy Plan provides guidelines for additional intensity in areas that are planned for industrial use; however, additional investigation may be warranted for consideration of data centers in areas that are planned in the Comprehensive Plan for future residential or mixed use. Although this report is focused on the potential impacts of larger data centers, smaller data centers with upgraded equipment and design features may be appropriate in areas not planned for industrial use if they meet certain performance criteria.

Additionally, as discussed below, due to the energy demands of data centers, they are typically located near a substation that is connected to major transmission lines. To reduce the need for new transmission lines and substations, a new Plan appendix could include consideration of the distance from and availability of a substation and transmission lines to serve a proposed data center.

2. Energy Demand

Current Regulations and Guidelines

The Zoning Ordinance does not include regulations for energy use and efficiency. As noted above, data centers are typically located close to an electrical substation, which is considered a light utility facility under the Zoning Ordinance and is allowed by right in the I-3 through I-6 Districts; with SE approval in all other conventional zoning districts; and in planned districts if shown on the development plan or with SE approval. When a substation is located in a residential area, the Zoning Ordinance requires a finding that there is no alternative site in a commercial or industrial district. Substations are also subject to the 2232 review process for public facilities.¹² Data centers also need to be located close to electrical transmission lines which, if over 138kv and approved by the Virginia State Corporation Commission (SCC), are not subject to the Zoning Ordinance.¹³

¹² The public facility 2232 process is summarized at: <https://www.fairfaxcounty.gov/planning-development/public-facilities-review/process>

¹³ If the voltage exceeds 138kv, SCC approval satisfies the requirements of local zoning and Virginia Code Sect. 15.2-2232 for the transmission line. Virginia Code Sect. 56-46.1(F). The locality retains jurisdiction to enforce local zoning over “associated facilities.” For any transmission line of 138kv and associated facilities, a public utility must either obtain a certificate of public necessity from the SCC or obtain approval under 15.2-2232 and the local zoning ordinance where the transmission line will be located. Virginia Code Sect. 56-265.2(A)(2).

Starting on January 18, 2024, the newly approved 2021 Virginia Energy Conservation Code (VECC)¹⁴ will require data centers to comply with “ASHRAE 90.4 - Energy Standard for Data Centers,” which will include several changes to the design and construction of these facilities. Prior to the 2021 VECC, there were no specific enforceable requirements for energy conservation related to data centers. With the adoption of the 2021 VECC, a new data center will be treated like any other commercial building for the purpose of energy conservation. ASHRAE 90.4 is a performance-based standard and will encourage a more efficient design, presumably leading to less energy usage.

The Environment Element of the Comprehensive Plan encourages the design and construction of new buildings and associated landscapes to use energy and water resources efficiently and to minimize short- and long-term negative impacts on the environment and building occupants. The Comprehensive Plan also recommends that development within designated Industrial Areas incorporate green building practices sufficient to attain certification through LEED-NC, -CS or equivalent. Additional recommendations exist within the Comprehensive Plan guidance for certain Suburban Centers, Transit Station Areas (TSAs), and other development centers. The Environment Element does not contain existing guidance for the evaluation or consideration of energy demand.

Research and Recommendations

Data center operations rely on large amounts of electricity from the electrical grid. Although there is not a consistent correlation between square footage and energy demand (expressed in megawatts, MW), a data center of about 400,000 square feet would likely have a capacity of 48 to 60 MW. Also, with the advent of more powerful computer chips, future data centers may need even more energy. For comparison, the energy demand for 250 homes is approximately 1 MW, the Fairfax County Government Center uses about 2 MW, a typical hospital uses 3 to 4 MW, and the Noman Cole wastewater treatment facility uses 5 to 6 MW. As discussed below, the large energy demand of data centers poses several concerns: a) the availability and reliability of energy for existing and planned development; b) the potential need for clearing and construction of new major transmission lines and substations and related costs relayed to rate-payers; c) potential water quality and air quality impacts of large numbers of diesel backup generators (see Water Quality and Air Quality sections below); and d) increases in greenhouse gas (GHG) emissions.

Availability and reliability: Most of Fairfax is served by Dominion Energy, and a portion of the western part of the County is served by the Northern Virginia Electric Cooperative (NOVEC). Both Dominion and NOVEC purchase power from the Pennsylvania-New Jersey-Maryland Interconnection (PJM), the regional transmission organization. Concerns have

¹⁴ Land Development Services Technical Bulletin, No: 23-07:

https://www.fairfaxcounty.gov/landdevelopment/sites/landdevelopment/files/assets/documents/23-07-adoption-2021-virginia-uniform-statewide-building-code-usbc.pdf?utm_medium=email&utm_source=govdelivery

been raised by the public that the uniquely large energy demands of data centers could present a challenge in planning for reliable power to all customers. However, in meetings with staff, Dominion has indicated that data center growth does not pose a risk in terms of reliability to residential and other customers. Dominion has also stated that PJM has sufficient power available, and the risks of inadequate transmission capacity would be borne by the data center customer. While the planning for power infrastructure falls to PJM and the utility companies, with regulation by the SCC, land use approvals for data centers are the purview of the County. Therefore, staff recommends that the County pursue discussions with Dominion and NOVEC on enhancing coordination on data center applications through the review of energy capacity analyses. Communication about proposed data centers could facilitate planning for utility service and inform County land use decisions. Energy capacity analyses would allow an assessment of regional power supplies into the future and a common understanding of the power demands of data centers. The growth in data centers and their associated electricity load could be compared against the ability of the existing infrastructure to satisfy those forecast load demands to identify needed transmission infrastructure upgrades, and potential reliability issues, including the timeframe and duration of any electricity delivery shortages. The analyses could also state whether electricity constraints may impact other electricity customers.

Transmission lines and substations: Because of their energy demands, data centers need to be located near a substation that is near a major transmission line. If sufficient substation and transmission line infrastructure does not exist, the utility company will have to plan for and construct the necessary infrastructure to serve its customers. Construction of substations and transmission lines usually involves land clearing. Once constructed, the utilities can have visual and noise impacts and, depending on their location, impacts on natural resources and environmentally sensitive areas. Although utility infrastructure is usually separate from a data center project, and the infrastructure is part of the larger grid that supports other customers, the need for certain infrastructure can be directly attributed to data center development. Therefore, when a proposed data center is proposed, related needs for utility infrastructure and its impacts should be evaluated as part of the new coordination process suggested above. Dominion has indicated that the costs of infrastructure projects are absorbed across the system's customers, with some of the costs covered by PJM as well. Because of the need for proximity, some data center developers seek land near existing transmission lines or include enough land area to support a substation. A substation typically has a 300 MW capacity, so a data center campus may need to provide a new substation. Data center developers may coordinate with the utility company in various ways to facilitate the development of a new substation, if needed, including selling or donating land. As noted above, a new Plan appendix could include consideration of the distance from and availability of a substation and transmission lines to serve a proposed data center.

Greenhouse gas emissions: Increased electricity demand also increases GHG emissions, which may make it harder to meet the state and County GHG emission reduction goals:

- The [Virginia Clean Economy Act](#) (VCEA) establishes mandatory renewable portfolio standards for Dominion Energy to deliver electricity from 100% renewable sources by 2045 and Appalachian Power by 2050.
- Fairfax County's [Community-wide Energy and Climate Action Plan](#) (CECAP) sets a goal for the entire community to be carbon neutral by 2050. Based on the 2020 GHG inventory, 48% of emissions come from the use of energy in buildings (25% commercial plus 23% residential).

Approximately 25% of GHG emissions in Fairfax County comes from commercial buildings. Fairfax County community-wide GHG emissions have decreased by 30% between 2005 and 2020, despite a 12% growth in population.¹⁵ This decline in GHG emissions reflects a strong and consistent effort across multiple sectors, especially increased energy efficiency and conservation in residential and commercial buildings, cleaner vehicles travelling fewer miles, and a greener electric grid. Strategies to reduce energy use and related GHG emissions include improving energy efficiency and transitioning to clean, renewable energy.

Energy Efficiency: A review of best practices indicates that data centers can improve energy efficiency with current technology. Data centers typically measure their power utilization efficiency (PUE), which is the total facility power including cooling systems divided by IT equipment power. The PUE is a performance metric, with a PUE of 1.1 to 1.3 or less representing an efficient facility. To promote energy efficiency, a PUE standard or another performance metric could be included in the new appendix in the Policy Plan for data centers undergoing rezoning or SE review. The ability for staff to review this standard would need to be considered. Additionally, given the substantial energy demands of data centers, proposed data centers could be encouraged to achieve LEED-Data Center Silver certification or greater. Under Section C405.12 of the 2021 Virginia Energy Conservation Code, data centers will be required to monitor their energy consumption. The County could pursue partnerships with data center operators for the voluntary sharing of that information with the County, which could assist in measuring the achievement of CECAP goals.

Renewables: Regarding the use of clean, renewable energy sources, data centers rely on the power grid and are not able, at this time, to generate sufficient power onsite through solar or other renewable sources. As previously noted, a data center of about 400,000 square feet would likely have a capacity of 48 to 60 MW. With current solar panel technology, approximately 5 acres of solar panels would be needed to produce 1 MW of power. Therefore, a 48 MW data center would need at least 260 acres of solar panels to be self-sufficient. Nevertheless, data centers should be encouraged to install onsite solar and invest in offsite renewable energy. Some data center operators have sustainability goals. For example, Meta states that they have maintained net zero GHG in global operations since

¹⁵ [Community-Wide Greenhouse Gas Emissions Inventory Summaries](https://www.mwcog.org/documents/2022/12/27/community-wide-greenhouse-gas-emissions-inventory-summaries-featured-publications-greenhouse-gas/), MWCOC:
<https://www.mwcog.org/documents/2022/12/27/community-wide-greenhouse-gas-emissions-inventory-summaries-featured-publications-greenhouse-gas/>

2020, primarily by purchasing 100% renewable energy. Meta has an additional goal to reach net zero emissions across its value chain by 2030.¹⁶ Amazon states that it is the world's largest corporate purchaser of renewable energy and is on target to power its operations with 100% renewable energy by 2025 and to reach net-zero carbon emissions by 2040.¹⁷

3. Water Demand

Current Regulations and Guidelines

The Zoning Ordinance does not regulate water demand. The Environment Element of the Comprehensive Plan Policy Plan provides limited recommendations on water demand topics through the discussion of water conservation for buildings sufficient to attain certification through LEED-NC, -CS, or equivalent. A majority of water-related recommendations in the Comprehensive Plan Policy Plan are related to exterior stormwater management mitigation and best practices.

Research and Recommendations

The amount of water used by a data center depends on the type of cooling system used. There are reports of data centers in other jurisdictions that use large amounts of water. However, since water demand is highly variable according to the technology used onsite and the climate of the area, the analysis in this report relies primarily on water use data and recommendations provided by Fairfax Water, which are included in Attachment 2.

Fairfax Water reviewed water use by data centers located on Sunrise Valley Drive and found that they use an average of approximately 38,000 gallons per day (gpd) which equals about 90 to 100 gallons/1,000 square feet. This is higher than the planning values Fairfax Water uses for office uses (60 gallons/1,000 square feet), but lower than retail (140 gallons/1,000 square feet) or hotel (180 gallons/1,000 square feet). Fairfax Water also compared water usage information from the Prince William County Service Authority and Loudoun Water and found comparable average water usage by data centers. Fairfax Water has concluded that with its periodic planning process, it is well prepared to address overall water supply needs.

Typically, it has been reported that air cooling systems use more energy but less water, while evaporative cooling systems use more water and less energy. However, not all data centers with evaporative cooling systems use large amounts of water. Techniques that data centers may use to reduce water consumption include, but are not limited to, rainwater harvesting and closed-loop cooling systems. The direct evaporative cooling systems being employed by newer data centers do not require chillers or cooling towers and the water usage is reported as approximately ten percent of older evaporative cooling systems. For example, Amazon has indicated that its typical data centers (250,000 square feet) use an average of approximately three million gallons of water per year, which equals only 8,220 gpd. [While recent articles

¹⁶ Meta sustainability: <https://sustainability.fb.com/2023-sustainability-report/>

¹⁷ Amazon: <https://sustainability.aboutamazon.com/products-services/the-cloud?energyType=true>

regarding a proposed Amazon data center campus in central Virginia reported a projected use of approximately 21 million gallons per building per year based on 640,000 gpd, Amazon has indicated this report is a miscalculation because the 640,000 gpd is the peak day demand, with an estimated average number of ten peak days per year.] According to industry sources, a data center with direct evaporative cooling systems in Virginia only needs to use water during the hot summer months.

Some data center companies have goals to reduce their water demand. For example, both Meta and Amazon have a water positive goal to return more water to communities than they use in data center operations by 2030.¹⁸ One approach to reducing water usage is to use recycled or reclaimed water systems for non-potable water uses, such as industrial cooling. Loudoun Water operates such a system serving over 50 data centers. Fairfax has a reclaimed water system available in the Lorton area, but to date, no data centers are using that system.¹⁹

Based on this information, staff has not identified any potential Comprehensive Plan or Zoning Ordinance amendments related to water demand at this time. As Fairfax Water noted, it is possible that the declining per capita and per employee water use trends could change; therefore, staff recommends that monitoring of data centers and coordination with Fairfax Water continue, and the issue of water demand be revisited on a regular basis.

4. Water Quality

Current Regulations and Guidelines

Stormwater runoff: The County's Stormwater Management Ordinance ([Chapter 124 of the County Code](#)²⁰) is designed to mitigate stormwater runoff impacts from all impervious cover regardless of land use type. Runoff from a data center building is no different than runoff from any other building. Additionally, development that requires a site plan and occurs within the [Water Supply Protection Overlay District](#)²¹ must provide water quality control measures designed to reduce the projected phosphorus runoff pollution by one-half for the proposed use. Stormwater impacts can also be mitigated by other measures, such as preservation of open space, floodplain protection, and landscaping and screening as required

¹⁸ Meta: <https://datacenters.atmeta.com/wp-content/uploads/2023/10/Water-Stewardship.pdf>; Amazon: <https://www.aboutamazon.com/news/aws/aws-water-positive-by-2030>

¹⁹ Fairfax reclaimed water system: <https://www.fairfaxcounty.gov/publicworks/wastewater/water-reuse>

²⁰ Chapter 124:

https://library.municode.com/va/fairfax_county/codes/code_of_ordinances?nodeId=THCOCOFAVI1976_CH124STMAOR

²¹ WSPOD: <https://online.encodeplus.com/regs/fairfaxcounty-va/doc-viewer.aspx?tocid=001.004.004.005#secid-2542>

under the Zoning Ordinance, as well as tree preservation as required under the Tree Conservation Ordinance ([Chapter 122 of the County Code](#)²²).

Additionally, to ensure that stormwater is appropriately managed (water quality and water quantity), the Comprehensive Plan promotes site design and low-impact development (LID) techniques that reduce stormwater runoff volumes and peak flows; increase groundwater recharge; and increase the preservation of undisturbed areas. Developments are expected to optimize stormwater management and water quality controls through the use of innovative infiltration techniques, nonstructural BMPs and bioengineering practices, and infiltration landscaping. The Environment Element of the Comprehensive Plan Policy Plan also identifies Environmental Quality Corridors (EQCs) as an integrated network of ecologically valuable land and surface waters that should be protected and enhanced for the present and future residents of Fairfax County. The policy categorizes characteristics of EQCs including habitat quality, connectivity, pollution reduction capabilities, hydrology, stream buffering, and stream protection; the policy recognizes that EQCs are delineated through the entitlement process based on policy criteria. The Plan also recommends protecting and restoring the ecological integrity of streams and protecting the Chesapeake Bay from the avoidable impacts of land use activities.²³

Diesel tanks for backup generators (spills): Federal, state, and County regulations address the fuel storage tanks for backup generators:

- Virginia Department of Environmental Quality (DEQ) requirements – [Aboveground Storage Tanks | Virginia DEQ](#)²⁴
- Fairfax County Fuel Storage Tank requirements – [Fuel Storage Tanks | Planning, Permitting and Construction \(fairfaxcounty.gov\)](#)²⁵

Research and Recommendations

Water quality impacts can include: a) cooling system discharges to the wastewater system; b) spills or leaks from diesel tanks; and/or c) stormwater runoff.

Cooling systems: According to data center industry sources, most newer interior cooling systems utilized by data centers, even those that use water, do not have cooling towers that discharge to wastewater or stormwater systems. However, for those that do have cooling

²² Chapter 122:

https://library.municode.com/va/fairfax_county/codes/code_of_ordinances?nodeId=THCOCOFVI1976_CH122TRCOOR

²³ [Objective 2, 3 and 9: Fairfax County Comprehensive Plan, 2017 Edition, Policy Plan, Environment:](#)

<https://www.fairfaxcounty.gov/planning-development/sites/planning-development/files/assets/compplan/policy/environment.pdf>

²⁴ VDEQ storage tank requirements: <https://www.deq.virginia.gov/our-programs/land-waste/petroleum-tanks/aboveground-storage-tanks>

²⁵ County storage tank requirements: [https://www.fairfaxcounty.gov/plan2build/fuel-storage-tanks#:~:text=Tank\(s\)%20capacity%20of%20500,and%20plan%20reviews%20may%20apply](https://www.fairfaxcounty.gov/plan2build/fuel-storage-tanks#:~:text=Tank(s)%20capacity%20of%20500,and%20plan%20reviews%20may%20apply)

towers, evaporative cooling concentrates salts in the water that must be periodically discharged to the wastewater system. Even if no other chemicals are added to the system, the discharge has concentrated sodium, a constituent of concern in drinking water. If the facility is in the sewer collection area of the Upper Occoquan Service Authority (UOSA), the treated wastewater discharges to the Bull Run River upstream of the Occoquan Reservoir, which is a potable water source. Although this is true of any commercial or industrial use that employs a cooling tower, the extensive cooling systems needed by data centers heighten the potential concern. Currently, the County prohibits the use of bromide as a treatment additive in cooling water systems that discharge to UOSA based on direction from UOSA.

As noted in the attached comments from Fairfax Water, their facility for treatment of raw water from the Occoquan Reservoir is not designed to remove salts or other emerging contaminants of concern. Although the federal Environmental Protection Agency (EPA) set a health advisory of 20 mg/L for sodium levels in potable water,²⁶ an advisory is not an enforceable federal standard and the UOSA pre-treatment requirements do not include a standard for sodium. Consideration could be given to establishing Comprehensive Plan guidance to encourage data centers to monitor their discharges and, if needed, provide for pre-treatment. Additionally, to reduce the potential for impacts to potable water, within the UOSA service area, the Plan could encourage the use of non-chemical/non-water-based cooling systems or systems that do not discharge to the wastewater or stormwater systems.

Diesel tanks for backup generators (spills): Typically, depending on the size of the generator, about 5,000 to 15,000 gallons of diesel fuel are stored in individual, above-ground, double-walled tanks below each generator to provide sufficient fuel for 24 to 72 hours. Existing state regulations include procedures to prevent pollution of state waters, lands, and storm drain systems from the discharge of fuel from aboveground storage tanks that are 25,000 gallons or more. Further analysis could be done to determine whether these existing regulations could be enhanced. Consideration could also be given to including SE standards in the Zoning Ordinance (or amending another chapter of the County Code) for tanks smaller than 25,000 gallons for proper surface grading, berms, or other additional containment practices to protect surface water and ground water by ensuring that if the tank were to fail or if a spill were to occur during filling, the fuel does not enter the stormwater system or open space areas.

Stormwater runoff: Regarding stormwater runoff, data centers are similar to other nonresidential uses with expansive impervious surfaces. With the provisions in place to address stormwater runoff as described above, in staff's opinion no additional recommendations are necessary for data centers. However, in general, water quality on industrial sites would benefit from site designs that include green roofs, increased open space and native tree and plant vegetation. Projects subject to rezoning or SE review should be

²⁶ EPA advisory on sodium: https://www.epa.gov/sites/default/files/2014-09/documents/support_cc1_sodium_dwreport.pdf

encouraged to exceed minimum requirements for open space, tree preservation and planting, and stormwater treatment.

5. Air Quality

Current Regulations and Guidelines

The Zoning Ordinance does not directly regulate air quality. Through the Comprehensive Plan, the County seeks to preserve and improve air quality and expects that state-of-the-art technologies will be applied to minimize emissions from stationary sources of air pollution.²⁷

For data centers, backup generators are the source of air pollutants that are a concern, and these emissions are regulated by DEQ. DEQ monitors criteria air pollutants across the state, in accordance with the Clean Air Act, a federal law that provides for the protection of human health and the environment. Data center projects require Minor New Source Review (NSR) permits from DEQ for their backup generators, which are powered by diesel fuel. Minor NSR permits in Northern Virginia receive stricter scrutiny due to non-attainment of air quality standards in the Washington, DC region. Over the past decades, the EPA has developed a tiered regulatory system that applies to backup generators (non-road diesel engines):²⁸

- Tier I – phased in from 1994 to 1997
- Tier II – phased in from 2000 to 2005
- Tier III – phased in from 2006 to 2008 for smaller engines with 50 to 750 hp
- Tier IV – phased in from 2008 to 2015 and requires a 90% reduction of certain emissions with reductions made possible through newer control technologies.

Research and Recommendations

Potential pollutants released into the air from generator use include nitrogen oxides (NO_x), particulate matter (PM₁₀ and PM_{2.5}), carbon monoxide (CO), volatile organic compounds (VOC), and sulfur dioxide (SO₂), all of which are regulated by DEQ. DEQ maintains 36 monitoring sites across the Commonwealth to measure air pollutants. One air quality monitoring station is located in Loudoun County and two are located in Fairfax County:

- Broad Run High School: Ashburn, Loudoun County, Virginia - Pollutants measured: O₃, NO₂, and PM_{2.5}
- Franconia District Park: Franconia, Fairfax County, Virginia - Pollutants measured: SO₂, O₃, PM_{2.5}, and PM₁₀
- 6831 Backlick Road: Springfield, Fairfax County, Virginia - Pollutants measured: CO, NO₂, and PM_{2.5}

²⁷ [Objective 1](#): Fairfax County Comprehensive Plan, 2017 Edition, Policy Plan, Environment, Amended through 6-28-2022, Pages 2-5

²⁸ EPA: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression>

Due to the current and expected growth of the data center industry in Northern Virginia, additional monitoring may be beneficial in tracking air quality near large numbers of data centers.

Along with lower emissions, Tier IV generators provide increased fuel efficiencies, incorporate modern pollution-control technologies, require less maintenance, and reduce operating costs. These emission reductions are typically achieved by using advanced exhaust gas after-treatment technologies, with most Tier IV engine families using urea-selective catalyst reduction filters (SCR) for emissions control. The use of diesel generators for backup is the current industry standard. Until cleaner alternatives become more available, staff recommends that the Comprehensive Plan encourage the use of Tier IV generators and state-of-the-art technology to reduce GHG emissions.

Renewables: As energy providers are able to produce more power from renewable sources, air pollutants and GHG emissions from non-renewable sources will decrease over time. Dominion does not allow commercial consumers to choose the generating source for the power they consume, since all types of energy sources are placed into the entire grid; however, as noted above under Energy Demand, data center operators should be encouraged to invest in renewable energies to offset their carbon footprint. Through the Virginia Clean Economy Act, Dominion Energy Virginia and Appalachian Power are required to retire electric generating units located in the Commonwealth that emit carbon as a by-product of combusting fuel to generate electricity; the utilities are also required to construct, acquire, or enter into agreements to purchase generating capacity located in the Commonwealth using energy derived from sunlight or onshore wind.²⁹

6. Noise

Current Regulations and Guidelines

The Fairfax County Noise Ordinance (Chapter 108.1 of the County Code) regulates sound generation for all uses, including data centers. Among other standards, the Noise Ordinance limits the maximum sound levels that can be generated when the sound is measured at the property boundary or at any point within another property affected by the sound. The standards in the table below apply according to the use and zoning district of the property impacted by the noise (not the property generating the noise).³⁰

²⁹ [Virginia House of Delegates Bill 1526](#), adopted as the Virginia Clean Economy Act

³⁰ [Section 108.1-4-2](#) of the Noise Ordinance:

https://library.municode.com/va/fairfax_county/codes/code_of_ordinances?nodeId=THCOCOFAVI1976_CH108.1_NOOR

| Maximum Sound Levels | | | |
|---|-------------------|------------------------|--------------------|
| Use and Zoning District Classification | Time of Day | Continuous Sound (dBA) | Impulse Sound (dB) |
| Residential areas in residential districts | 7 a.m. to 10 p.m. | 60 | 100 |
| Residential areas in residential districts | 10 p.m. to 7 a.m. | 55 | 80 |
| Nonresidential areas in residential districts | All | 60 | 100 |
| Mixed use area | 7 a.m. to 10 p.m. | 65 | 100 |
| Mixed use area | 10 p.m. to 7 a.m. | 60 | 80 |
| Commercial districts | All | 65 | 100 |
| Industrial districts | 7 a.m. to 10 p.m. | 72 | 120 |
| Industrial districts | 10 p.m. to 7 a.m. | 65 | 100 |

Table 2: Noise Ordinance Standards

Section 108.1-5-1(g) of the Noise Ordinance exempts the operation of backup generators during power outages from storms or other emergencies as well as the testing and maintenance of generators between 7 a.m. and 9 p.m. for up to two hours per day. Separately, DEQ does not allow for generator testing between 7 a.m. and 5 p.m. from May 1 to September 30 to minimize impacts on air quality from ozone. Therefore, during those months, generator testing would be limited to the evening hours from 5 p.m. to 9 p.m.

To reduce noise impacts, a use standard for data centers in the Zoning Ordinance requires all equipment for cooling and backup generators to be contained within an enclosed building, except in the I-4, I-5, and I-6 Districts.³¹

The Environment Element of the Comprehensive Plan Policy Plan currently provides guidance and recommendations only for transportation-related noise, such as motor vehicle and airport-related noise. There are no other policies for non-transportation-related noise uses.

Research and Recommendations

Noise from data centers, which can be significant if not mitigated, is primarily generated by two sources: the cooling systems and the backup generators. The potential impacts vary considerably according to the type of equipment, location (proximity to residential or other noise-sensitive uses), site design, and the mitigation measures employed. Related infrastructure such as electric substations may also generate noise.

³¹ Subsection 4102.6.A(1) of the Zoning Ordinance: <https://online.encodeplus.com/regs/fairfaxcounty-va/doc-viewer.aspx#secid-2854>

Data centers require substantially more cooling as compared to other uses due to the heat produced from densely packed servers. To provide context, a data center server room might require 100 tons of cooling (per 10,000 square feet, using a median total heat number) as compared to a shopping mall which would require 40 tons, or an office which would need 29 tons. Cooling systems generate a continuous noise, and concerns have also been noted in articles about the low frequency of the noise generated by certain cooling equipment. Generally, the sound from lower frequencies propagates farther than that from higher frequencies and may be felt, even if it is not audible. As noted above, the use of diesel generators for backup is the current industry standard. To provide for backup in the case of power interruption, data centers have large numbers of generators as compared to other uses. For example, a hospital would typically have three to five backup generators, while a data center typically has over 20 generators.³² Although the generators are only for emergencies, each one needs to be tested and maintained, requiring a runtime of about five to 15 minutes per generator each month. It appears that in the past, the emergency use of backup generators in Fairfax and surrounding areas has been infrequent. One data center representative indicated that backup generators are typically used for emergency purposes a few hours each year while another stated that the generators are typically used for about 53 total hours per facility per year. Consideration could be given to amending the Noise Ordinance for uses such as data centers with large numbers of backup generators to remove the exemptions for testing and maintenance of generators, as well as the full emergency use of backup generators.

A review of noise studies submitted as part of rezoning or SE applications for data center projects in Fairfax County indicated that measures were consistently needed to reduce the potential noise to comply with the Noise Ordinance. A variety of measures were proposed in those cases, including upgraded equipment, sound-attenuating enclosures for generators, acoustical barriers and louvers, silencers on air handling equipment, attenuators on both the intake and exhaust for generators, and the location of the mechanical yard. Given the need for noise mitigation and the variety of options that may be tailored for each site and facility, consideration could be given to providing guidelines in the Comprehensive Plan for the review of noise studies for projects undergoing rezoning or SE review and for amending the Zoning Ordinance to include noise study submission requirements for zoning applications. Noise studies could be submitted as part of a rezoning or SE application and updated pre-construction (prior to building permit approval) and post-construction (prior to issuance of a Nonresidential Use Permit) to demonstrate compliance with the Noise Ordinance. The noise modeling could address the worst-case scenario, including all cooling equipment at full operational load, as well as the maximum number of generators that may be tested at one time. In addition, the noise modeling could address the emergency use of backup generators

³² The number of generators varies according to the energy demand of the data center. For example, one data center in Fairfax with approximately 400,000 square feet of gross floor area has 20 generators with a total capacity of about 45 MW. Another campus project with over 2 million square feet is planned to have over 100 generators with a total capacity of about 259 MW.

and include the frequency octave band limits. Comprehensive Plan guidance could be considered for noise studies to include particular attention to impacts on residential uses and sensitive habitats. Noise mitigation equipment could be considered to avoid noise impacts to both the human environment and the habitats of local fauna.

As previously noted, the Zoning Ordinance requires all equipment for cooling and backup generators for data centers to be contained within an enclosed building, except in the I-4, I-5, and I-6 Districts.³³ The exemption of these industrial districts recognized other industrial uses allowed in those districts. However, given the potential noise impacts from data centers because of their unique cooling requirements and use of generators, consideration could be given to requiring equipment enclosures for all data centers and other similar industrial uses.

As noted above, the maximum sound levels apply to all uses, whether that be the cooling system for an office building, the trucking associated with a freight distribution facility, or a contractor's storage yard. It has been suggested that lower sound levels should apply to data centers; however, staff does not have information that the dBA for a data center should be regulated differently from that for other uses. On the other hand, further research and consideration could be given to establishing standards for lower frequencies, perhaps measured as dBC.³⁴

7. Building Design

Current Regulations and Guidelines

The Zoning Ordinance does not currently have any regulations regarding the architectural design of data centers. Architectural design standards are included in the Ordinance for large retail sales establishments and goods distribution hubs when approved by SE, to minimize the impacts of building bulk through variations in roof lines and setbacks, landscaping, and enhanced architectural treatments such as windows. Standards are also included for self-storage facilities in certain zoning districts to require that storage bay doors or lighted hallways not be visible from the outside, and the building must be multistory and office-like in appearance. The I-4, I-5, and I-6 Districts limit the maximum building height to 75 feet and the FAR to 0.5, without SE approval. For projects undergoing rezoning or SE review, Appendix 12 of the Policy Plan specifies criteria for building design, including the need for high-quality design and materials that complement the architecture of surrounding uses. Loading areas should be screened, and visual impacts should be minimized by avoiding undifferentiated facades and providing variation in height, fenestration, materials, patterns, textures, colors, and accent materials.

³³ Subsection 4102.6.A(1) of the Zoning Ordinance: <https://online.encodeplus.com/regs/fairfaxcounty-va/doc-viewer.aspx#secid-2854>

³⁴ Generally, dBA is intended to match typical human hearing; dBC does not have the weighting applied for dBA and may be more appropriate for consideration of low frequencies.

Research and Recommendations

The development of large data centers raises concerns regarding building design and aesthetics because of their bulk and height. They are typically constructed of concrete with minimal fenestration. Larger data centers are often 75 feet in height or more. Also, data centers have related equipment, which, in addition to backup generators, may include water towers and electrical substations.

As identified in the attached report from Clarion Associates, certain other jurisdictions have or are in the process of adopting zoning standards for building design, including Prince William and Loudoun Counties, and Atlanta, Georgia. Similar to the Comprehensive Plan guidance, the standards are intended to provide for variation and interest in design, such as requiring façade changes for height, recesses, fenestration, building and accent materials, and a defined main entrance, as well as mechanical screening.

Given the potential impacts of the bulk of larger data centers, the current guidelines for building design in Appendix 12 of the Policy Plan could be reviewed and considered for all data centers undergoing rezoning or SE review to improve the view of the data center and related equipment from public roads and nearby residential uses. Additionally, submission requirements for rezoning or SE applications could be added to the Zoning Ordinance for architectural elevations (for consideration of the large massing and scale impacts), proposed materials and color palette, and provision of sight line studies with renderings or perspectives from surrounding roads and residential areas.

SUMMARY OF RECOMMENDATIONS FOR GUIDELINES AND STANDARDS

Below is a summary of the recommendations included in the text of this report. These recommendations are presented for Comprehensive Plan guidelines and Zoning Ordinance standards that could be established for data centers to be approved by SE in conventional zoning districts and rezoning/development plan approval in planned districts, where permitted. As previously noted, data centers could continue to be allowed by right; however, some of the recommendations, such as a review of noise studies and building design and encouraging increased open space, tree planting, and stormwater treatment, may be more effectively implemented through an SE review. The SE review process would ensure a robust County review with careful consideration of potential impacts and allow for public hearings to solicit community feedback.

1. Land Use and Site Design

Zoning Ordinance:

- Consider revising permissions to require SE approval for data centers, regardless of size, in the C-3, C-4, and I-2 through I-6 Districts. In addition to recommendations included below under other topic areas, standards for special exception review should include the

consideration of the size of a proposed data center and its distance (buildings and generators) from surrounding existing and planned residential development.

- Where data centers are allowed in the Planned Districts, add a standard to clarify that the use must be specifically identified on the approved development plan, including the location, size, height, and setbacks.

Comprehensive Plan:

- Create a new appendix to the Land Use Element of the Policy Plan for data centers with updated performance criteria. The new appendix should include guidelines that would be utilized in the review of all data centers through the rezoning or special exception process, not just those seeking additional intensity in industrial areas. The guidelines could include consideration of compatibility with future planned uses for the property and surrounding properties.
- Consider recommendations for enhanced buffering for data centers located near residential, noise sensitive uses, and environmentally sensitive areas.
- Consider guidelines for distances from existing or planned substations or transmission lines that can service the data center.

2. Energy Demand

Zoning Ordinance:

- Add zoning application submission requirements for rezoning and SE applications for assessments of future energy needs that will be used in staff's review in accordance with Comprehensive Plan guidelines.

Comprehensive Plan:

- Consider adding an energy performance standard like PUE to promote energy efficiency data centers undergoing rezoning or SE review.
- Encourage LEED-Data Center Silver certification or greater for data centers undergoing rezoning or SE review.
- Encourage data centers to install onsite solar and invest in offsite renewable energy to offset their energy demand and carbon footprint for data centers undergoing rezoning or SE review.

Other Recommendations:

- Establish a new process for coordination with Dominion and NOVEC about proposed data centers during the review of zoning applications, which may include assessments of future energy needs as it relates to existing and planned power infrastructure.
- Pursue partnerships with data center operators for the voluntary sharing of facility energy consumption to assist the County in measuring the achievement of CECAP goals.

3. Water Quality

Zoning Ordinance:

- Consider adding SE standards in the Zoning Ordinance (or amending another chapter of the County Code) for fuel tanks smaller than 25,000 gallons for proper surface grading, berms, or other additional containment practices to protect surface water and ground water by ensuring that if the tank were to fail or if a spill were to occur during filling, the fuel does not enter the stormwater system or open space areas.

Comprehensive Plan:

- Encourage data centers to address potential water quality concerns through the monitoring of cooling system discharge into the wastewater system and, if needed, providing pre-treatment.
- To avoid potential impacts on potable water, within the UOSA service area, encourage the use of cooling systems that do not discharge to the wastewater or stormwater systems, or non-chemical and non-water-based cooling systems.
- Encourage projects subject to rezoning or SE review to exceed minimum requirements for open space and tree preservation and planting.

4. Air Quality

Comprehensive Plan:

- Encourage data centers undergoing rezoning or SE review to minimize air quality impacts through a variety of approaches:
 - Apply state of the art technology to minimize air pollution from backup generators.
 - Encourage the use of Tier IV backup generators, and replacement of existing Tier II generators with Tier IV generators.

Other Recommendations:

- Request DEQ to install additional air quality monitoring stations in Fairfax County.

5. Noise

Zoning Ordinance:

- Consider adding zoning application submission requirements for data centers undergoing rezoning or SE review to quantify the increase in noise on adjacent uses, support review in accordance with Comprehensive Plan guidelines, and demonstrate compliance with the Noise Ordinance.
- Consider expanding the current Zoning Ordinance equipment enclosure requirement to apply in all zoning districts where data centers and other similar industrial uses are allowed.

Noise Ordinance:

- Consider amending the Noise Ordinance to remove exemptions for uses with large numbers of backup generators and require the testing and maintenance as well as the full emergency use of backup generators to comply with the Noise Ordinance standards.

Comprehensive Plan:

- Noise studies for projects undergoing rezoning or SE review could include an evaluation of impacts on residential uses and sensitive habitats. Noise mitigation equipment should be considered to avoid noise impacts to both the human environment and the habitats of local fauna.
- Consider amending the Plan to recommend that data center proposals evaluate and mitigate potential noise impacts:
 - Noise studies could be submitted as part of a rezoning or SE application, for pre-construction (prior to building permit approval) and post-construction (prior to issuance of a Nonresidential Use Permit) to quantify the increase in noise on adjacent uses and demonstrate compliance with the Noise Ordinance.
 - Noise modeling could address the worst-case scenario, including all cooling equipment at full operational load, as well as the maximum number of generators that may be tested at one time.
 - Noise modeling could also address the backup use of backup generators.
 - Noise modeling could include the frequency octave band limits.

Other Recommendations:

- Conduct additional research on establishing standards for lower frequencies in the Noise Ordinance.

6. Building Design

Zoning Ordinance:

- Consider adding submission requirements for rezoning and SE applications to include:
 - Architectural elevations (to address the large massing and scale of data centers)
 - Materials and color palette
 - Sight line studies, including renderings or perspectives from the right-of-way and nearby residential uses.

Comprehensive Plan:

- Review the current guidelines for Building Design in Appendix 12 and consider applying them to projects undergoing rezoning or SE review, including consideration of façade variation, a defined entrance feature, screening of equipment, and other techniques to improve the view of the building from public roads and nearby residential uses.

NEXT STEPS

Data centers are important facilities to support the modern, digital world – particularly in the Northern Virginia region where data center infrastructure is significant. Given their unique characteristics, careful consideration of their location, design, and impacts (including potential mitigation measures) is needed to ensure that data centers are compatible with the surrounding community. This report presents research and related recommendations for possible amendments to the Comprehensive Plan, Zoning Ordinance, Noise Ordinance, and potentially other chapters of the County Code. While staff will use these considerations in the review of any data center entitlement applications in the context of our current guidelines and regulations, staff recommends that the Board direct staff to begin work on amendments to the Comprehensive Plan, Zoning Ordinance, and other chapters of the County Code to facilitate implementation of the recommendations as outlined above and any others the Board might recommend.

Additionally, staff would support future direction from the Board on a closer evaluation of legislative authority for related topics in which the County currently lacks sufficient regulatory authority. Examples of this could include addressing energy efficiency (e.g., PUE), salinity in water discharges, and air quality.

The County's One Fairfax policy would provide the framework to consider equity in the development of any future amendments to the Comprehensive Plan, the Zoning Ordinance, or other chapters of the County Code. This could include enhanced outreach to ensure diverse perspectives are heard and respected. An equity impact analysis could include consideration of the location of vulnerable areas within the County and their relationship to potential data center locations.

If requested, staff is available to present these recommendations at an upcoming Land Use Policy Committee meeting. Questions and comments can be directed to Carmen Bishop at 703-324-1314, and Katie Hermann at 703-324-1280, or by email to ffx-data-centers@PublicInput.com.

ATTACHMENTS

1. Data Center Maps
2. Fairfax Water Comments
3. [Clarion Report](#)

Attachment 1: Data Center Maps

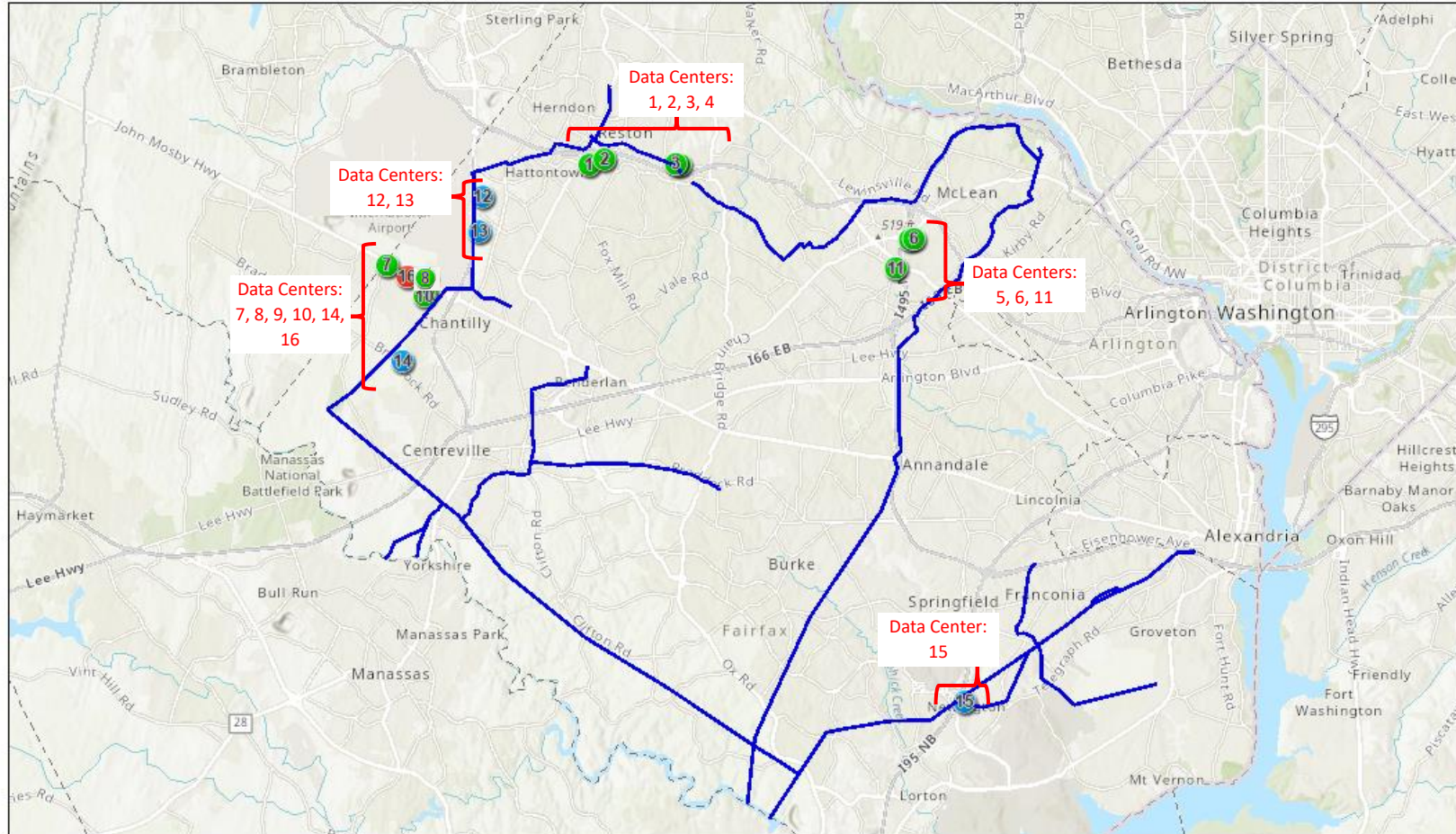
Fairfax Data Centers

| | Name | Address | Tax Map | Zoning District | Square Feet of Gross Floor Area | Zoning Case or By Right |
|--------------------------------|---------------------------------|-------------------------------------|---------------------|-----------------|---|--|
| Existing | | | | | | |
| 1 ¹ | Coresite VA3 | 12379A Sunrise Valley | 17-3 ((1)) 32A | I-5 | 332,957 (existing)
943,600 (total approved by SE) | RZ 2017-HM-032 & SE 2017-HM-030;
Rezoning & increase in FAR |
| 2 | Coresite 12100 SV & 12098 SV | 12098 Sunrise Valley | 17-3 ((8))(3A) 1A | I-4 | 423,341 (existing) | SE 2011-HM-019 for increase in FAR |
| 3 | Faraday Building | 1807 Michael Faraday | 18-3 ((5)) 10 | I-5 | 30,609 (existing) | By right |
| 4 | Digital Realty/Lemur Properties | 1780 Business Center | 18-3 ((8)) 9A | I-3/I-4 | 264,888 (existing) | By right |
| 5 | Elias DC Assets | 1764A Old Meadow | 29-4 ((6)) 97F | PTC | 69,089 (existing) | Pre-existing use before rezoning to PTC under RZ -2014-PR-021 |
| 6 | Roosevelt Building | 1755 Old Meadow | 29-4 ((6)) 105 | PTC | 72,546 (existing) | Pre-existing use before rezoning to PTC under RZ -2014-PR-021 |
| 7 | Lafayette Business Data Center | 4030 Lafayette Center | 33-2 ((1)) 10D | I-4 | 145,409 (existing) | By right |
| 8 | AWS Virginia Mallory | 3980 Virginia Mallory / 14501 Avion | 34-1 ((3)) 13 | I-5 | 542,942 (existing)
768,392 (approved by site plan) | By right |
| 9 | AWS Westfax B | 4100 Westfax | 34-3 ((9)) 3A | I-5 | 95,000 (existing) | By right |
| 10 | AWS Westfax A | 4101 Westfax | 34-3 ((9)) 4 | I-5 | 95,000 (existing) | By right |
| 11 | Equinix | 7990 Quantum | 39-2 ((1)) 13D | I-3 | 202,500 (existing) | By right |
| In Progress² | | | | | | |
| 12 | Renaissance Technology Park | 13860 Redskin | 24-2 ((14)) 1 - 6 | I-5 | 2,136,040 (approved by SE)
2,130,000 (approved by site plan) | SE-2021-SU-00017 for increase in height |
| 13 | Perspecta Datacenter Campus/AWS | 13600 EDS | 24-4 ((1)) 6B7, 6B8 | I-5 | 1,046,632 (approved by site plan) | By right |

¹ Numbers correspond to maps

² In progress includes projects where any necessary zoning entitlement has been approved, or for by right projects, a site plan has been approved, but a certificate of occupancy has not been issued.

| | Name | Address | Tax Map | Zoning District | Square Feet of Gross Floor Area | Zoning Case or By Right |
|----|----------------------|------------------------|-----------------|------------------------|--|---|
| 14 | Parkstone Tech Park | 5140 Parkstone | 43-4 ((6)) 37B | PDC | 500,000 (approved by RZ)
419,410 (approved by site plan) | RZ-2021-SU-003 |
| 15 | AWS Loisdale Station | 7951 and 7961 Loisdale | 99-2 ((1)) 8A | I-5 | 240,000 (approved by RZ/SE)
235,422 (approved by site plan) | RZ-2021-LE-015 & SE-2021-LE-010;
Rezone & increase in height |
| | Proposed | | | | | |
| 16 | Chantilly Premier | None | 33-2 ((1)) 6 pt | I-5
(proposed) | 402,000 (proposed) | RZ-2022-SU-00019 & SE-2022-SU-00038;
Rezone & increase in height |



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Data Centers

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Existing (11)

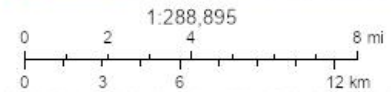


In Progress (4)



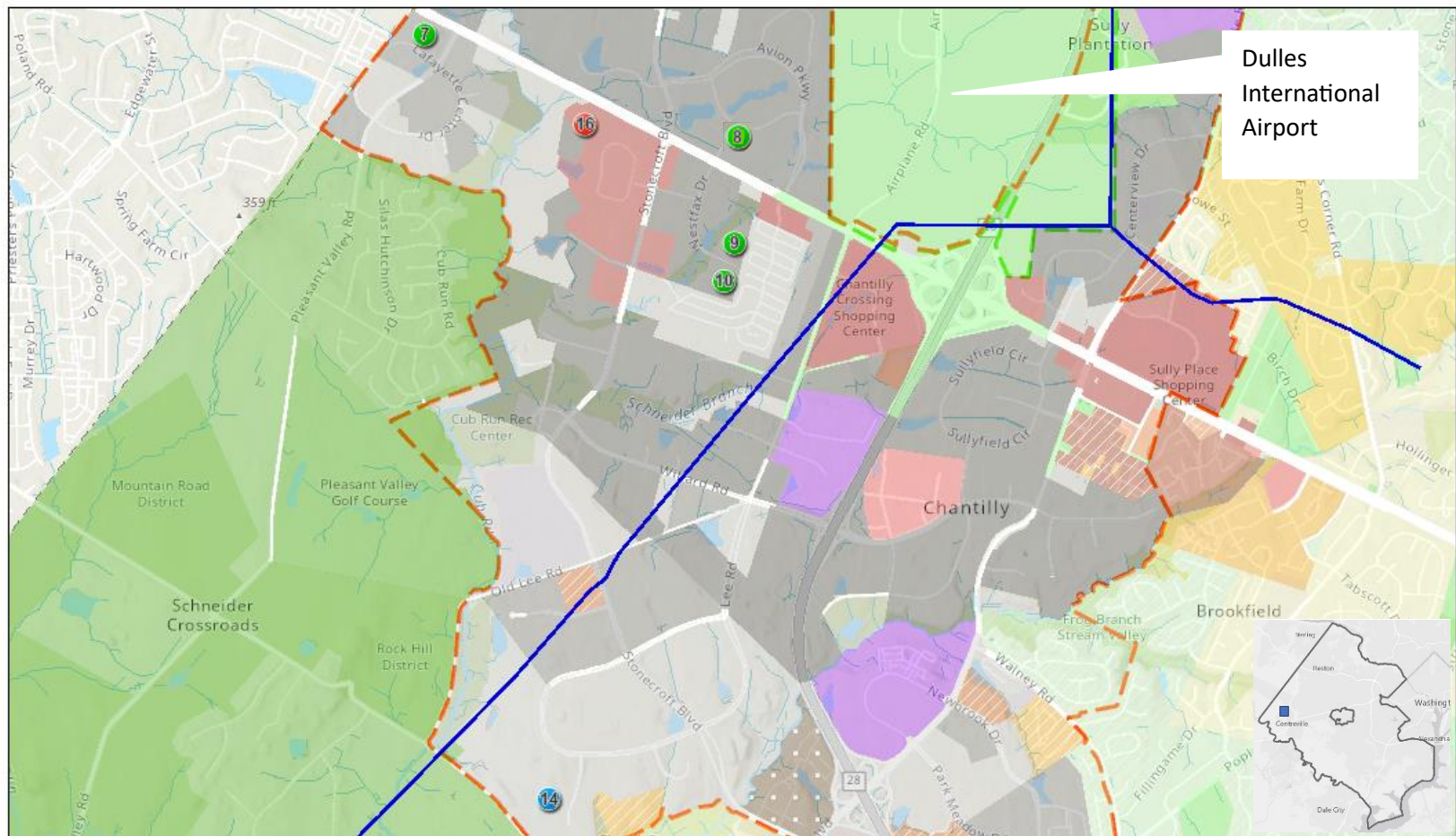
Proposed (1)

Electric Lines

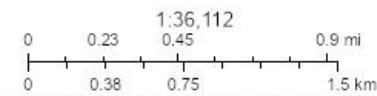
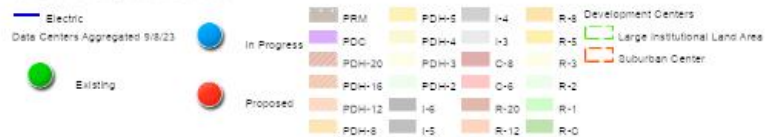


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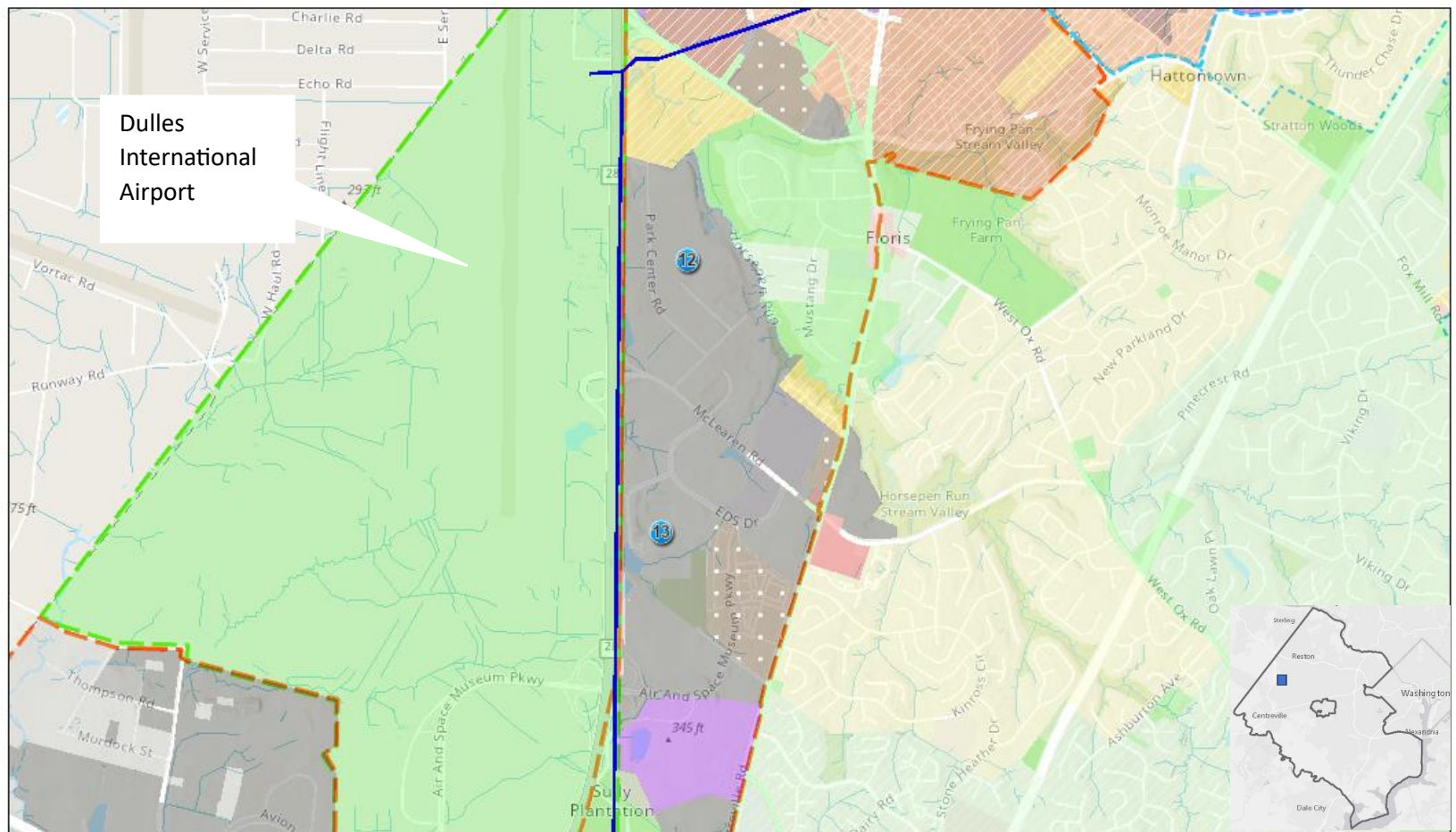


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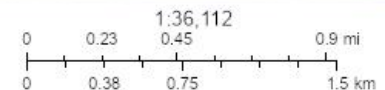
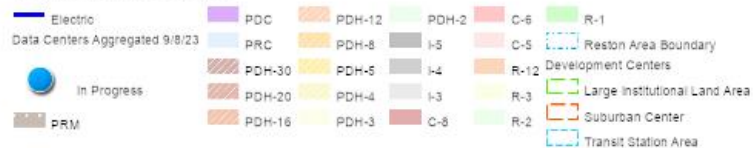


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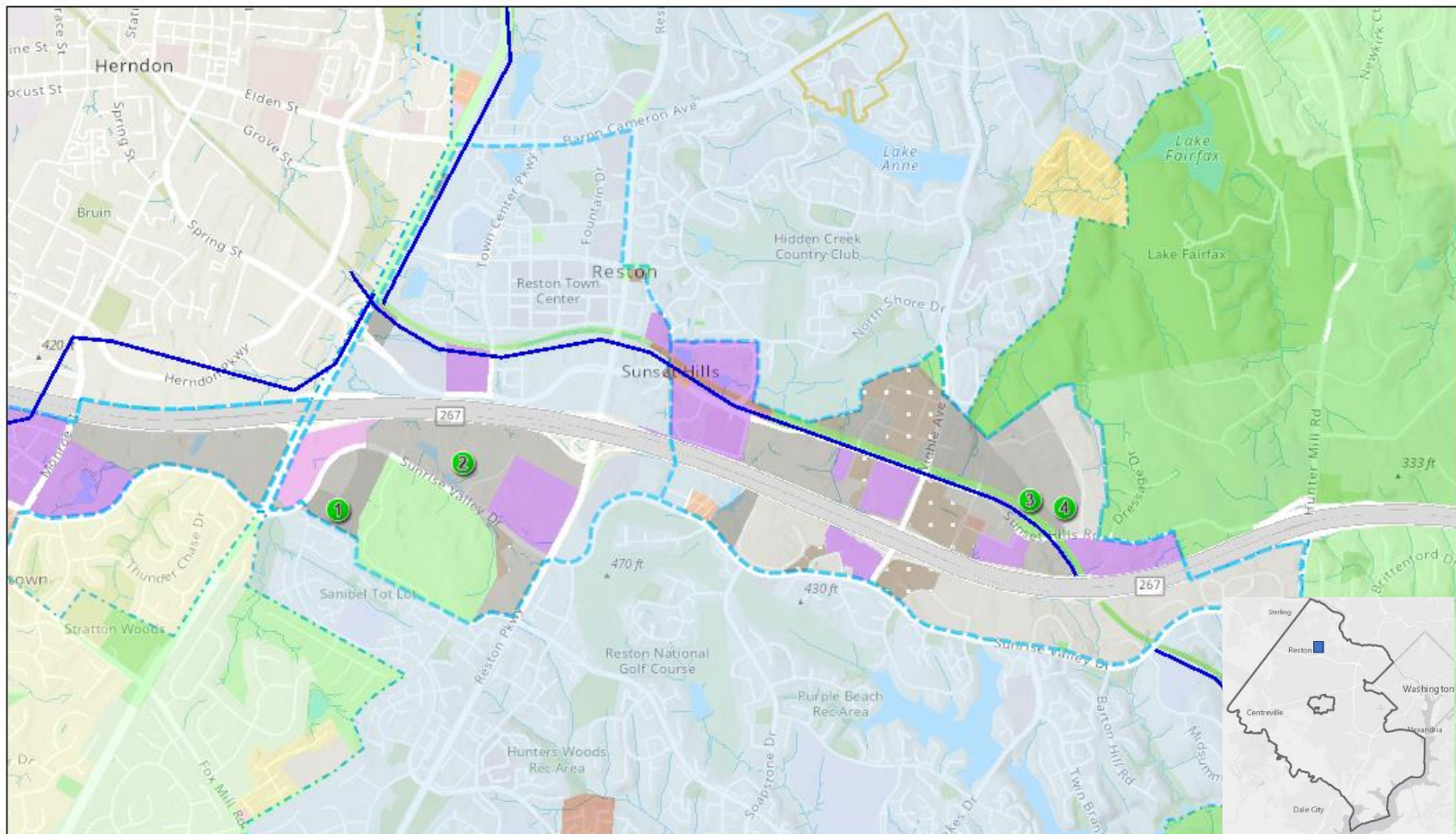


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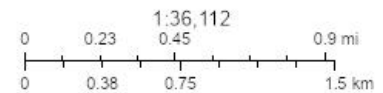
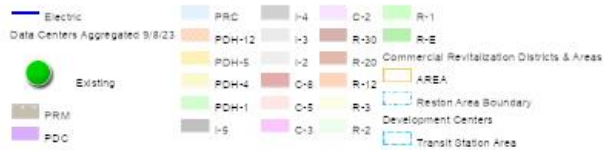


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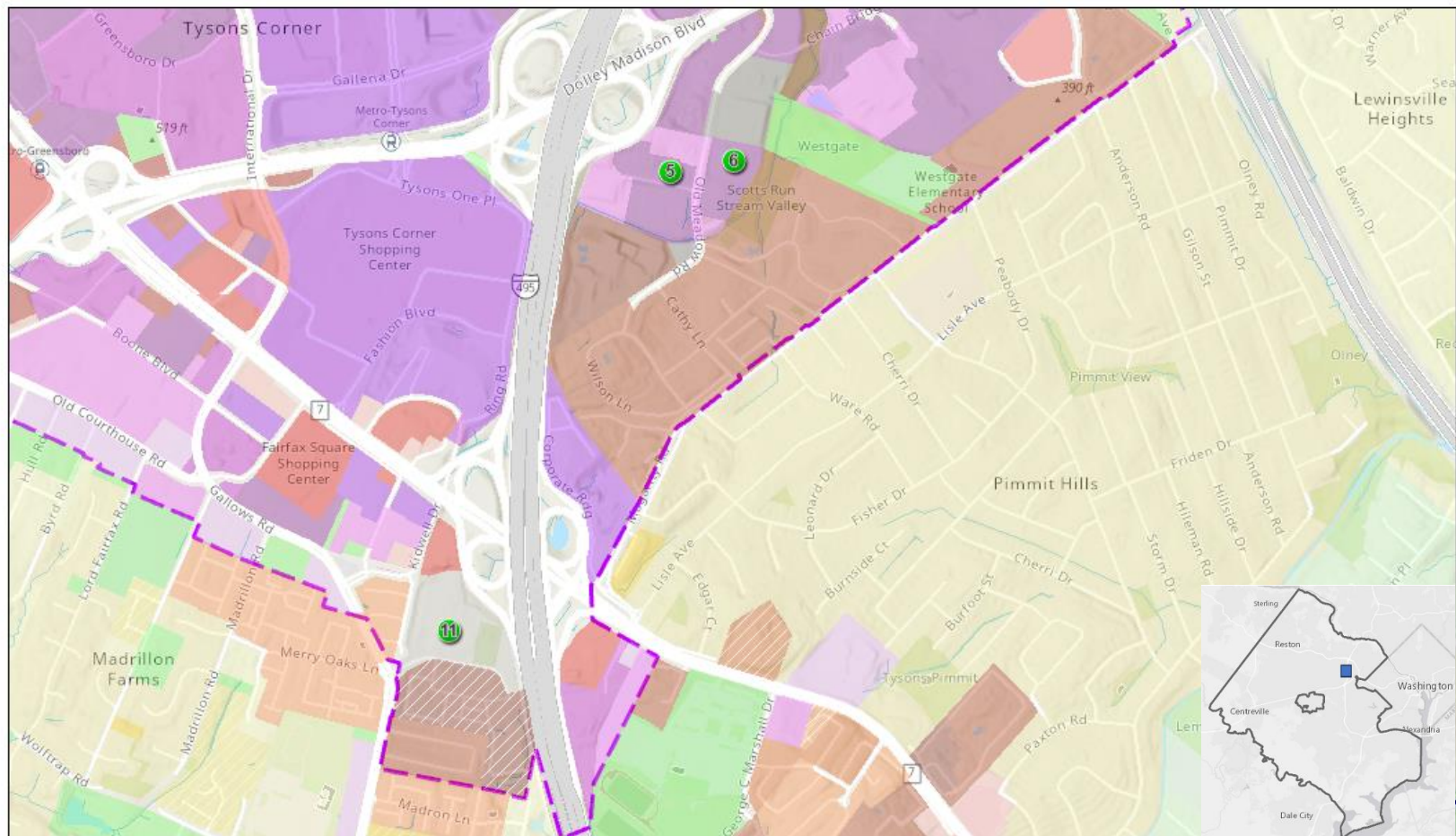


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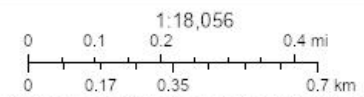
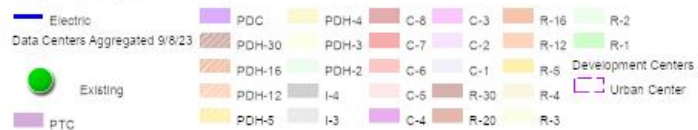


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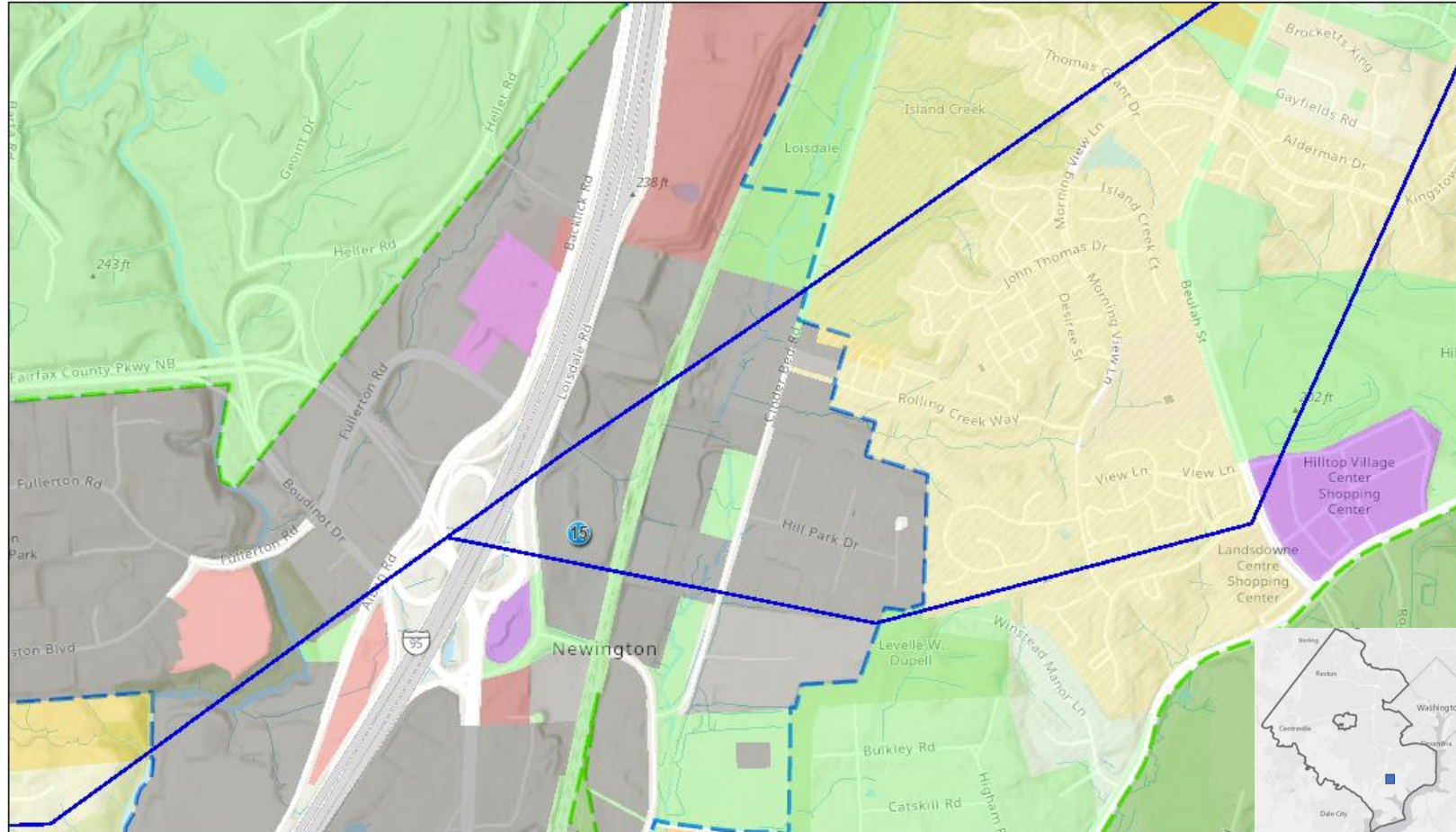


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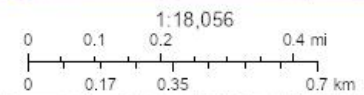
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- Electric
- Data Centers Aggregated 9/8/23
- In Progress
- PDC
- PDH-5
- PDH-4
- PDH-3
- PDH-2
- PDH-1
- I-5
- I-4
- I-3
- I-2
- R-8
- R-5
- R-4
- R-3
- R-2
- R-1
- R-C
- Development Centers
- Industrial Area
- Large Institutional Land Area

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8560 Arlington Boulevard, Fairfax, Virginia 22031

PLANNING & ENGINEERING DIVISION
Nat Atapoor, P.E., CCM
Director
(703) 289-6325

November 6, 2023

Ms. Carmen Bishop
Deputy Zoning Administrator
Ordinance Administration Section
Zoning Administration Division
12055 Government Center Parkway, Suite 807
Fairfax, VA 22035

Re: Fairfax Water Responses to Fairfax
County Staff Questions Regarding
Data Centers

Dear Ms. Bishop:

Please find the following summarizing water system impacts to assist in your response to the Board of Supervisors directive to evaluate guidelines for new data centers.

Question 1: *Do we have sufficient water and infrastructure to accommodate data centers and other projected growth?*

Response: Fairfax Water uses land use and demographic information furnished by local governments to evaluate projected water demands on the water system and plan sufficient water infrastructure system to meet the community's need. Future demands are calculated based on projected regional population and employment growth projections provided by the Metropolitan Washington Council of Governments. Projections are developed and used to evaluate the water system to meet demands, currently assessed through the year 2045. As a result of this periodic planning process, Fairfax Water remains well-prepared to address any water infrastructure needs that may be needed.

Employee water unit use in Fairfax Water's retail service area continues to decline, a long-term trend that has occurred over the past few decades and continues today. This trend is consistent with national water use trends that have documented declining per capita and per employee water use. Please note that data center water use depends on many site-specific factors, including but not limited to the type of cooling used (air/water) and facility specifics (size, equipment, cooling technology, and other factors). Given the uncertainty in site-specific factors, it's possible that a large increase in the number of data centers could, over the long term, change or reverse Fairfax Water's employee unit water use trend.

Ms. Carmen Bishop
November 6, 2023
Questions Regarding Data Centers

A more in-depth evaluation of this would require an assessment of data center re-development potential, data center development market viability, and land-use entitlement potential for land units under consideration for data centers. Given a comprehensive inventory of land units that could be converted to data centers in Fairfax County, a comparison of water use with Fairfax Water's projected population and employment forecasts could be estimated. Such an analysis could be useful to assess the maximum potential water demand that may be required to serve new data centers in Fairfax Water's retail service area.

Question 2: *How does the water consumption from data centers compare to other nonresidential users?*

Response: It can be difficult to directly compare data center water use with other non-residential uses. As mentioned, water consumption of data centers depends on many site-specific factors, including but not limited to the type of cooling used (air/water) and facility specifics (size, equipment, cooling technology, etc.). At the request of Fairfax County DPD staff, Fairfax Water recently reviewed data center water use for a few large data center facilities (both in the 12000 block of Sunrise Valley Drive) located in our retail service area with sufficient operating history to assess their water use. Our review determined that during calendar year 2022, data center water use for each facility was approximately 38,000 gallons per day. Based on the gross floor area of these facilities, water use averaged between 90 and 100 gallons per 1,000 square feet of area. By comparison, planning values used by Fairfax Water for other types of commercial use include:

- Retail: 140 gallons per 1,000 sq ft
- Office: 60 gallons per 1,000 sq ft
- Hotel: 180 gallons per 1,000 sq ft

Therefore, based on square footage basis, water use of data centers appears to be more than office use but less than retail and hotel use.

Question 3: *Using known water usage rates by existing and proposed data centers in the County and in other nearby jurisdictions, could Fairfax Water provide a value for typical water usage, perhaps correlated to the gross floor area of these existing data centers?*

Response: Recognizing that water consumption of data centers depends on many site-specific factors, data center water use in our region for existing operational data centers can serve as a reference point.

Consider the following:

- The Prince William County Service Authority provided information to the Prince William County Planning Department summarizing water use for 25 operating data centers in Prince William County (as of late 2021). This records review found the

Ms. Carmen Bishop
November 6, 2023
Questions Regarding Data Centers

average daily water consumption of a single data center building was about 18,000 gallons per day, while the maximum day consumption of a single data center building is about 88,000 gallons per day. Reference: <https://www.pwcva.gov/assets/2021-10/DCOZOD%20%20Economic%20Development%20memo.pdf>

- Loudoun Water operates a reclaimed water system serving over 50 data centers in Loudoun County. The water use of the reclaimed water system by these data center customers averaged 1.9 MGD in 2022, or about 37,000 gallons per day per data center. Reference: <https://www.loudounwater.org/commercial-customers/reclaimed-water-program>

Recognizing that many site-specific factors need to be considered, the water use review conducted by Fairfax Water (mentioned in the response to Question #2) confirmed the general water use ranges for data centers in Northern Virginia identified by our neighboring systems. Average water use on a unit basis is estimated in the response to question #3.

Question 4: *Do you anticipate any changes to water demand forecasts based on a potential increase in data centers in Fairfax?*

Response: Consistent with our long-range planning process, Fairfax Water’s water demand forecasts will be adjusted over time to reflect changes in population and employee unit water use. Site-specific factors including the equipment specifics, type of cooling and other site-specific factors that impact water use vary among different facilities. Fairfax Water’s long-term decline in per employee water use has continued despite dozens of existing data centers in Fairfax Water’s retail service area. Currently, there is no evidence that our water demand forecast requires a change to our traditional forecasting methodology.

Question 5: *How do data centers impact the water quality of the Occoquan?*

Response: Fairfax Water is concerned with chemical use in the Occoquan watershed, particularly from commercial and industrial sources. These chemicals are discharged into the sanitary sewer system and readily pass through the municipal wastewater and water treatment process. Chemical use associated with data centers can include sodium and bromide-based chemicals (salts) designed to provide and protect water quality in the recirculating cooling water systems. A portion of the water used in these systems needs to be “blowdown” or discharged into the sanitary sewer system. Since the municipal wastewater treatment process at the Upper Occoquan Service Authority (UOSA) is not designed to remove these chemicals, they can pass through without substantial reduction and increase pollutant load into the Occoquan Reservoir, one of the two water supply sources of drinking water for Fairfax Water. Fairfax Water’s water treatment plant is not designed to remove salts (and other emerging compounds such as per-and polyfluoroalkyl substances or PFAS) through the water treatment process.

Ms. Carmen Bishop
November 6, 2023
Questions Regarding Data Centers

Question 6: *Overall, what concerns do data centers raise for Fairfax Water and does Fairfax Water have suggested approaches to addressing those concerns?*

Response: Fairfax Water suggests that data centers within the Occoquan watershed (such as Fairfax County's sewershed treated at the UOSA plant) use non-chemical/non-water based cooling or have industrial pre-treatment permit requirements to eliminate chemical discharge to the sanitary sewer system upstream of the Occoquan Reservoir. As noted above, Fairfax Water has concerns with certain chemical uses associated with data centers that can be transmitted to the UOSA sanitary sewershed and pass through the wastewater treatment process without reduction or removal. To address potential non-point source pollutant impacts on the Occoquan Reservoir, Fairfax Water suggests: the use of stormwater management practices consistent with County and Water Supply Overlay District (WSPOD) requirements that go above and beyond Virginia Stormwater Management requirements, and the use of environmental, stream resource and tree protection management practices to reduce the impacts of runoff on the Occoquan Reservoir.

Should you have any further questions or require additional information, please do not hesitate to contact me at (703) 289-6318.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Gregory J. Prelewicz', with a long horizontal flourish extending to the right.

Gregory J. Prelewicz, P.E.
Manager, Planning

Fairfax County Data Center Research

October 2023

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Fairfax County Data Center Research

October 2023

1: Project Overview

Background

In May of 2023, the Fairfax County Board of Supervisors approved a directive for planning staff to research issues and potential mitigations for impacts associated with data centers. The Board directed staff to provide findings and recommendations by the end of the year, with locational guidelines for siting facilities, and recommendations for how applications for data centers should be reviewed. As part of this task, the Board also sought a recommendation on whether any new guidelines or standards should be located in the Comprehensive Plan, the Zoning Ordinance, or both. This report will assist the County to assess potential impacts of allowing or encouraging the location of additional data centers and offers examples of zoning regulations and plan policies that may help to manage those impacts.

As the demand for data storage and cloud computing has expanded exponentially in recent years, so has the need for facilities to store and safeguard all that data. This has led to the proliferation of data centers, the construction of which is expected to continue increasing as the demand for data storage grows over the coming decades. Northern Virginia is currently the data center capital of the United States, with the highest concentration of data centers in the country. Figure 1 below shows the ten U.S. locations with the greatest number of data centers as of January 2023.¹

Figure 1: Top Ten US Data Center Locations

| # | Location | Data Centers |
|--------------|--------------------------------------|--------------|
| 1 | Northern Virginia | 275 |
| 2 | Dallas | 150 |
| 3 | Northern California (Silicon Valley) | 160 |
| 4 | Phoenix | 90 |
| 5 | Chicago | 105 |
| 6 | Atlanta | 75 |
| 7 | Portland (including Hillsboro) | 40 |
| 8 | New York & New Jersey | 140 |
| 9 | Seattle (including Quincy) | 75 |
| 10 | Los Angeles | 65 |
| Total | — | 1,175 |

Source: Dgtl Infra Real Estate 2.0

This concentration of data centers did not happen by accident. Historically, Northern Virginia focused on the installation of a robust fiber optic network throughout the region. So, long before data centers came to call, the state had installed the infrastructure that could support them. The state also offers reliable electric power, which is and has been priced inexpensively compared to other East Coast metro areas (see Energy cost discussion later in this report). In addition, the state's economic development department, Virginia Economic Development Partnership

¹ Footnotes in the text of this report refer to the source material at the end of this document, organized in a numbered list. Clicking the numbers listed in the footnote, e.g., 5:1, links to the source material.

(VEDP), has aggressively pursued data centers to locate in the state and has succeeded in attracting centers operated by Microsoft, Google, Amazon Web Services, and Meta, along with many other enterprise and colocation centers.² (An enterprise data center is one operated by a company to house its own servers and data storage, while a colocation data center is a company that hosts servers and data storage for numerous external businesses. Equinix, Digital Realty, and Cxtera are among the largest operators of colocation facilities.)

2: Considerations Related to Data Center Impacts

Like all other land uses, data centers can have impacts on surrounding land uses, transportation and mobility systems, the environment, and the economic health of a community. Some of the factors to be considered in evaluating the “fit” of data centers to the needs and desires of Fairfax County are discussed below. More detailed information on many of these topics is available in the case studies that follow in Section 3 of this report.

While there is an emerging trend for smaller, dispersed “edge” or “micro” data centers – which can range in size from a utility supply box to around 10,000 square feet – and for those smaller equipment centers to be organized in clusters near the markets or users that they serve, at the County’s request this report focuses on the larger, industrial scale data centers and their potential impacts. Although this report focuses on those types and scales of data centers that have been attracted to northern Virginia, and on those topics that we understand may be of particular interest to the Fairfax County Board of Supervisors and Planning Commission, additional general information about trends in data center development (including specific trends related to the use of data centers for crypto-currency mining) can be found in the American Planning Association’s recent Zoning Practice monograph titled Practice: Data Centers (June 2022, Issue 6).

Energy Consumption

Data centers consume a lot of electrical energy. On a global scale, data centers account for about 4% of the world’s energy consumption, and 1% of global greenhouse gas emissions. In Northern Virginia, approximately 275 data centers consume 21% percent of Dominion Energy’s current supply, equal to 2.8 gigawatts of electricity in 2022.³ The electricity is used both to power the center’s servers and to cool the facility (unless water is used for cooling as discussed in the Water Demand discussion below). Centers have also used air cooling, which simply relies on circulating cooler air around heat-generating equipment. While air cooling sounds benign, it still relies on some kind of energy to circulate and cool the air. Because air is relatively inefficient as a heat transfer medium compared with liquid (water is at least 50 times more efficient at transferring heat than air) the amount of energy required for air cooling quickly adds up. More modern equipment with increased computing capacity generates even more heat than older equipment, further reducing the efficiency of air cooling.⁴ As larger-scale data centers pack more powerful equipment into smaller spaces, the cost of air cooling combined with its relative inefficiency as a cooling medium suggests that air cooling will decline, and water cooling will increase, in the future.

Renewable and non-renewable energy sources

According to its web site, Dominion Energy’s sources of energy are nuclear, solar, coal, natural gas and hydroelectric. As of 2020, its energy generation portfolio consisted of “roughly one-third natural gas, one-third nuclear and one-quarter coal, with just over 5 percent ascribed to renewable energy, much of it hydropower and biomass.” The company is working to develop greater capacity with renewable power, developing an offshore wind farm off the Virginia coast. Once operational the wind farm will have “the capability to generate 2,600 megawatts – enough energy to power almost 700,000 homes” ... or enough energy to meet the current demand of the existing data centers in Northern Virginia. In the meantime, the composition of the generation portfolio means that 95% of the

² 5:2

³ 5:3

⁴ 5:4

energy currently used to power data centers (and other uses) in Virginia is derived from non-renewable sources, several of which contribute to the state’s greenhouse gas emissions.⁵

As energy providers are able to produce more power from renewable sources, the greenhouse gas emissions from non-renewable sources will decrease over time. However, at present, it is not clear whether Dominion allows commercial consumers to choose the generating source for the power they consume. If it were possible to choose to purchase only power from renewable sources, Dominion’s renewable power rates are currently higher than those for its traditional sources (see Energy cost below) which would likely deter large-scale users from buying only renewable energy. Because of these constraints, at this time it may not be possible to adopt – or enforce -- a requirement that data centers rely only on renewable energy sources for the power they consume.

Power grid capacity and reliability

Dominion Energy has historically been seen as a reliable distributor, with none of the capacity and outage issues that have plagued providers elsewhere, such as Pacific Gas & Electric in California or the grid operator Electric Reliability Council of Texas (ERCOT), which not infrequently has issues with shortages and blackouts. However, in 2022 Dominion faced potential “transmission constraints” that could have resulted in power outages. While this ultimately did not affect Fairfax County, if demands on the power grid from energy-intensive data centers and other sources significantly outpace the utility’s ability to expand its generation or transmission capacity, the issue could resurface.

Data centers deal with the possibility of such transmission capacity outages – or those caused by emergencies or natural disasters – by having backup generators that can power the facility in the event of interruptions to service. The amount of power required from backup generators is very large, and many generators operate on diesel fuel. Diesel is not considered a clean fuel and generates harmful greenhouse gas emissions, to a greater or lesser extent depending on how long backup power is used. There can also be noise issues (discussed further in the Noise section of this report), significant enough that some jurisdictions have limited the length of time available for periodic testing of backup generators. Even in those communities, however, the noise and time limitations applicable to generator testing would not apply during the period that backup power was necessary.

Energy cost

One of the reasons Northern Virginia is attractive to data centers is the low cost of energy (\$0.06 to \$0.07 per kilowatt hour), as compared with Silicon Valley (\$0.12 to \$0.15 per kilowatt hour) and other Northeast locations such as New York or Northern New Jersey (\$0.09 to \$0.10 per kilowatt hour). Texas and Atlanta offer lower rates (\$0.04 to \$0.06 per kilowatt hour in Texas, and \$0.035 to \$0.05 per kilowatt hour in Atlanta), while the Phoenix and Chicago metros match Virginia rates.⁶ However, the combination of low rates, along with reliable transmission and attractive economic incentives, may make locating in Virginia a stronger economic proposition than other locations with lower or comparable rates. Purchasing “green power” from renewable sources changes this cost, as Dominion’s renewable power costs an additional 1.2 cents (\$0.012) per kilowatt-hour (kWh).⁷ Given the scale of data center power consumption, this higher rate could add up to an additional hundreds of thousands of dollars in cost to operate a data center. Again, this suggests that, even if data centers could choose to use only Dominion’s renewable energy, the added costs would undercut Northern Virginia’s competitive advantage in energy pricing, and this is not something many data center operators would voluntarily choose to pursue.

Location with respect to substations

Because of the very high energy consumption of data center uses, there is an equally high potential for energy transmission losses if the facility is located far from the electrical substation that provides the power. As a result, data centers generally want to locate close to substations. While there has been some discussion about requiring

⁵ 5:5

⁶ 5:1

⁷ 5:6

that data centers be located within a stated distance of the substation providing service, we were not able to find any examples of comparison communities that have adopted such a regulation.

Water Demand

While much of the concern about the environmental impact of data centers focuses on power usage, data centers also use large amounts of water. Estimates of water use vary widely depending on the size of the center and the source of the information. Industry sources report low end estimates of 450,000 gallons per day, while news reports and wastewater treatment professionals estimate that daily water consumption may be between 3 and 5 million gallons of water per day for large facilities, which is equivalent to the daily household use of 30-50,000 people. SmartWater, an organization of water sector professionals, reports that U.S. data centers use more water annually than is used for potable water and irrigation -- for the whole country -- combined (165 billion gallons for data centers, 156 billion gallons for potable water and irrigation). Using any of these figures, data center water use is significant, with the impacts being of more concern in water-stressed regions and where data centers rely on potable water rather than grey water or wastewater for cooling purposes.⁸ While data center operators have recently focused on improving their sustainability profile, they remain reluctant to disclose exact amounts of water (or electricity) consumed in daily operations.

Data centers use water to keep equipment cool, which can be done either by relying on electricity to cool water as it circulates around warm equipment, or by relying on evaporative cooling, which uses chilled water to cool hot air and evaporates water in the process. Because water is generally cheaper than electricity, data centers often rely on evaporative cooling where they can, including in water-stressed locations in the West. A recent agreement between the City of Mesa, Arizona, and Google saw the city agreeing to provide Google with a minimum of 1 million gallons of water *per day* to cool the center, and possibly as much as 4 million gallons per day when the center reaches full build-out of 750,000 square feet. By comparison, local residents use about 120 gallons of water per day, and are continuously reminded to try to reduce that amount.⁹

While water usage is a less pressing concern outside water-stressed regions, given the quantities at issue and the fact some of the water is lost through evaporation during the cooling process, even temperate areas often consider the pressure on local water supplies created by data centers. Rising temperatures in the future are expected to result in greater demands on existing water supplies for both human consumption and for cooling, at the same time that supplies from rainfall may become less predictable. Climate uncertainty will increase the importance of protecting those water sources and supplies for future use, while in the present water suppliers could promote the use of grey water or wastewater for data centers cooling, preserving of the potable water supply for human consumption.

Water Quality

While most information related to data centers and water focuses on quantity of consumption, some sources note additional concerns related to water quality. Two different water quality concerns have been noted. The first is concerns about the quality of water discharged after use in cooling the center (i.e., impacts on wastewater); and the second is the consequence of converting undeveloped land to more intensive data center use (i.e., impacts on stormwater).

Wastewater discharge

The cooling systems of most large data centers rely at least in part on water, used in chillers, air conditioning systems, and cooling towers, to prevent computer equipment from overheating. While some of the water evaporates, at least some of the remaining water is usually discharged as wastewater. When potable water is used for cooling, the wastewater discharged from cooling towers can be a source of concern to nearby communities and wastewater treatment providers. Cooling towers are designed to recycle a significant percentage of the water they use, though the water is often heated repeatedly, and could provide a hospitable breeding ground for bacteria if the

⁸ 5:7, 5:8, 5:9, 5:10

⁹ 5:11

towers are not properly cleaned and maintained. Bacterial threats can be eliminated with regular cleaning and disinfection of cooling towers. This has been done using chlorine, and bromine, both of which are hazardous, though bromine in particular is “highly toxic for organic systems,” such as humans.¹⁰ A less toxic and an inexpensive way to accomplish disinfection is by treating the water using salt, which can increase the salinity of the discharged water. While wastewater treatment facilities are effective in removing or neutralizing many potential contaminants, salt is not one of them. Water desalination is a separate function from the typical disinfection that such facilities are equipped to provide. The result is that the drinking water sources of some communities undergo an increase in salinity to a level greater than that recommended for human consumption by water authorities.

If centers use untreated (i.e., non-potable) water, the process is similar, but the results may be slightly different. The cooling towers recycle that water repeatedly, and some water evaporates with each cycle of use. Filters are used to remove contaminants from untreated water, but they do not remove all contaminants. Through successive cycles of evaporative cooling, the water that does not evaporate contains increasing concentrations of those contaminants that the filters cannot remove. Removing those concentrations of contaminants prior to discharge of the cooling water adds cost to data center operations, but if it is not performed or required there is a risk that some contaminants go undetected and are returned to the source with this increased concentration of pollutants. The desire to avoid these risks may increase the pressure for data centers to use potable water for cooling, potentially impacting drinking water supplies, rather than assuming the costs and risks of using and then treating untreated non-potable water.

Stormwater runoff

All increases in the amount of land covered by buildings, roads, and parking lots increase the quantity of, and decrease the quality of, stormwater runoff. When rainfall can no longer infiltrate soil directly due to hard surface cover, it runs off roofs, driveways, parking lots, and streets into storm drains and ditches, carrying untreated pollutants along with it. This is true of all new development -- not just data centers. Because all types of raw land development can be and usually are required to implement on-site stormwater management to reduce the volume of runoff and best management practices to reduce pollutants in the runoff, there is no reason to believe that stormwater impacts from data centers are different from other similarly sized light industrial or warehousing facilities.

Noise

Noise impacts from data centers originate from two sources. One is heating, ventilation, and air conditioning (HVAC) equipment that generates a continuous hum. Given the quantity of equipment running continuously to cool the data center, this can generate more noise than would be expected from other similarly sized office, warehousing, or light industrial facilities. The other noise source is backup generators, which would be used in the event of a power outage. The generator arrays must periodically be tested to ensure functionality, and test periods sometimes generate significant noise. Both sources of noise could be addressed by local noise ordinances, and our research suggests that most communities do not adopt separate noise standards for data centers. However, at least one community (Chandler Arizona, described further in the examples section below) has gone further to adopt specific regulations that require no increase in noise level compared with pre-construction levels, and to require that testing of generators be limited to daytime hours with 24 hours’ advance notice to the City.

Traffic Generation

Despite their size, data centers require a relatively low number of on-site employees per square foot to run the center’s operations, as compared to other uses such as office (see Employment Generation). As a result, outside of rural areas with inadequate infrastructure, traffic generation is not one of the foremost concerns with the centers. The largest source of traffic generated would likely be during the construction phase, which would then drop off to lower levels when it is only the relatively small staff traveling to and from the centers daily.

¹⁰ 5:12, 5:13

Land Use Intensity

There are not many small data centers. The average size of a full-scale data center is 100,000 square feet, and often larger. While hyperscale centers – of which Virginia is the leading location in the world – technically include any location that is over 10,000 square feet, most hyperscale centers are magnitudes larger than this. The largest center in the U.S. is 7.2 million square feet, located in Tahoe Reno Nevada. In Virginia, the DuPont Fabros center in Ashburn is 3.3 million square feet. Whether single enterprise centers, or colocation facilities, data centers gain from efficiency of scale. This means that the structures built to house data centers are often very large, and the pressure for future centers is to become even larger. The only use that typically consumes more space is fulfillment or distribution centers. According to Amazon, their average fulfillment center is 800,000 square feet.¹¹ By contrast, the largest big box stores (“supercenters”) average 182,000 square feet, while a typical grocery store is about 50,000 square feet. Remaining vacant industrial land in Fairfax County has only nine sites that are 10 acres or larger in size, with the largest being 21 acres. The size of the remaining vacant sites may constrain the ability of the County to attract large-scale data centers, the more so as the average size of these facilities continues to increase over time. Centers could instead look towards redevelopment, consolidating adjacent parcels to secure enough land area to accommodate the scale of development needed for new facilities.

Historically, data centers have preferred to spread out horizontally in single story structures rather than grow upward in multi-story buildings. Because of this preference, many zoning ordinances apply the same maximum building height limits to data centers that they apply to other single-story light industrial and warehousing uses. Because of the need for specialized industrial equipment, these height limits are often fairly generous. As large tracts become more scarce and more expensive, however, it is likely that multi-story data centers on smaller sites may become more common, and these height limits may not be adequate to accommodate these facilities.

Among the communities we researched, the lowest maximum height applicable to a district where data centers are permitted is found in the Plano, Texas, Light Commercial district, where data centers may be adjacent to residential development. Maximum heights begin at two stories or 35 feet along that boundary, but increase by two additional stories for every additional 200 feet of separation between the center and the residential zone (with apparently no absolute cap on building height, which is not uncommon in some industrial districts). In contrast, at least one community imposes a minimum height to discourage low-rise, land intensive development in some zone districts where data centers are permitted. Loudon County, Virginia’s Town Centre Core district would require a data center to be at least three stories tall.

Aside from these examples, maximum height allowances in industrial districts vary widely, generally ranging from 60 to 100 feet in height. In addition, some communities impose no height limits at all in industrial districts. Maximum height limits in commercial zoning districts vary even more widely depending on their character and intensity in the various communities we studied. At the lower end, some communities allow data centers in districts with a 2-story height limit, while Plano, Texas, would allow a building up to 20 stories.

Our research did not identify any cities that impose a maximum lot size limit in districts that permit data centers, but some do specify minimum lot sizes. Where minimum lot sizes apply, they generally apply to all uses permitted in the district, rather than applying to specific listed uses. Prince William County’s requirement for lots of 15-25 acres for data centers is the exception. Here again, the required size varies greatly, and is most likely a reflection of land use patterns and land availability in the various cities included in the research. Denser, more built out areas have smaller minimum sizes, while “younger,” less developed areas have larger minimums. We were able to identify only one instance of a community that imposes a maximum size limit on data center facilities. Atlanta limits data centers to a maximum size of 150,000 square feet of floor area per floor if a proposed data center is not part of a “unified plan.” A center that is part of such a plan may be up to 300,000 square feet per floor in floor area.

Minimum building setbacks are common in most zoning districts where data centers are permitted, and are also generally unrelated to the specific permitted use of the property. Once again, the range of variation is very large – from a low of 25 feet to a high of 200 feet depending on the district and the community. Additional setbacks are

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sometimes required where a more intense commercial or industrial use abuts a less intense zone, and particularly one that permits residential uses, or as a result of impact studies evaluating potential noise from the facility.

More detailed information on these dimensional and intensity standards is available in the individual case study summaries that appear later in this report.

Design and Aesthetics

Data centers are generally constructed like industrial buildings. Absent regulation requiring a different outcome, they are often large box structures that feature few extraneous design elements. There are few windows, breaks in uniform facades, variations in roofline, vertical or horizontal articulation, variety in building materials, landscaping, or any other concession to aesthetic considerations that would add cost to construction. This tendency is one reason that locations with a number of centers require design elements to break up large, blank facades. The most detailed examples of design standards for data centers come from those locations with the greatest number of them, including Loudoun and Prince William Counties. While additional detail is available in the individual case study summaries that occur later in this report, we were not able to identify any communities that apply different design and aesthetic standards to data centers than they apply to other permitted large commercial or industrial districts in the same zoning districts.

Decommissioning and Reuse of Buildings

Reuse of large buildings can be difficult, as any community that finds themselves with a vacant former 200,000 square foot “supercenter” big box store on their hands can attest. Few enterprises need that amount of space, and repurposing the building is expensive and rarely cost-effective compared to new construction. That applies even if the structure is repurposed to house a number of smaller enterprises rather than a single big one. While it is possible that a data center operator could repurpose an empty big box store, the typical 200,000 square foot “supercenter” size would be at the lower end of the data center space needs, and we did not identify any examples of retail stores being repurposed for data center use. Being substantially larger than big box stores or most distribution warehouses, and being much more specialized in terms of HVAC and electrical capacity, a vacant data center building is even harder to repurpose. Despite this significant difference in size, however, those concerned with the re-usability of vacant buildings may want to look at regulations that address vacant big box stores for precedents on what might be done for potential data center vacancies in the future.¹² Numerous communities have imposed size limitations on new retail development to discourage the construction of large, hard-to-reuse structures. Big box stores are also frequently subject to design standards for the same reasons that apply to data centers, both to improve the initial aesthetics of the building and to make the building easier to reuse in the future.

Some communities have also required the original big box developer to submit a plan for the reuse or removal of a structure after a period of vacancy. In recent years, these types of requirements have been applied more often to require the decommissioning of wind energy or solar energy farms, rather than retail or commercial buildings. In some cases, communities have also required the posting of a demolition bond, or some other form of financial security, that the city or county can use to demolish the structure after some defined period of vacancy. Because data centers are a recent phenomenon, and the need for them continues to increase rather than decrease, we were not able to identify any communities that have adopted these types of standards to address potential decommissioning or repurposing of data centers.

Employment Generation

Some communities, particularly rural ones, look to data centers as a source of jobs in areas where living wage employment is scarce. These large centers offer an initial, though temporary, expansion in the local economy from the construction jobs as the facility is being built. Longer-term employment appears to be more limited, primarily due to the high degree of automation in the activities occurring in the building.¹³ A relatively small number of

¹² 5:15

¹³ 5:16, 5:17

employees is usually hired to manage the automated systems at the heart of the facilities. While office uses typically require approximately 250 square feet of floor area per employee, light industrial/warehouse uses typically vary between 750 to 1,000 square feet of floor area per employee.¹⁴ By way of examples, a 55,000 square foot data center (about half the size of a suburban Target store) in Simpsonville, Kentucky, created 15 jobs (equivalent to 3,667 square feet of floor area per employee), while a 250,000 square foot facility in Prince William County generated 50 permanent jobs (equivalent to 5,000 square feet of floor area per employee).

While data centers may not generate large numbers of permanent jobs, those they do create are typically well-paid. Nationally, the Bureau of Labor Statistics reports that in 2022, technology professionals earned an annual mean wage of \$108,100. This wage is lower for network support technicians, at \$76,060.¹⁵ In both cases, independent of experience level, local costs of living may increase or decrease annual salaries from these average figures. A commercial compensation source that specifically lists “Data Center Services” occupations reports a median base salary at \$88,000 per year. That figure blends annual salaries of \$42,000 to \$91,000 for data center technicians (approximately \$54,000 average) and \$58,000 to \$149,000 for data center managers (approximately \$120,000 average).¹⁶ With the exception of the low-end range for data center technicians, these wages exceed the 2023 U.S. median income of \$57,406.

The skills and educational background of the local workforce in rural areas attempting to attract data centers is sometimes mismatched with the qualifications and requirements for data center jobs. As a result, some rural areas have found that new data centers are staffed in part by employees transferred from other data center locations, rather than being hired from the local labor force. This is not the case in Fairfax County, where a highly educated workforce is likely a good match for the skilled jobs available in data centers, even if such jobs are created in limited numbers compared with some other employment uses.

3: Sample Code Summaries

Prince William County Virginia

Prince William County has created a Digital Gateway, which is supported by a [Master Corridor Plan](#). There is also a Data Center Overlay Opportunity Zone District (Chapter 32, Section 509.02 of zoning ordinance). This Overlay can be applied to the map with an affirmative vote from the Board of County Supervisors if it finds that there is existing infrastructure to adequately support the use in the requested location; to wit, “lands in proximity to high voltage transmission lines of 115kv or more and planned or zoned for office or industrial uses.” The required proximity is not defined.

1. Level of permission required for approval

Board of County Supervisors adopts the ordinance. Once approved, decisions on compliance with standards are made by the Planning Director administratively. The Director has considerable discretion in determining if a project complies.

2. Substantive use standards or restrictions — including maximum height

- a. Maximum height is determined by underlying zoning district. In office districts, this ranges from 45 feet (low-rise office) to 100 feet (high-rise office); in industrial zones, it is 60-75 feet. The Planned Development—Business District (PBD) and Planned Development—Mixed Use District (PMD) do not specify height limits.
- b. Data centers are allowed an increased FAR of 1.0, whereas in office districts the range is 0.35 (low-rise office), 0.65 (mid-rise office), 0.50 (office/flex), and 1.25 (high-rise office). Industrial districts FAR is normally 0.50 for light and heavy industrial zones, and 0.75 in the M/T, Industrial/Transportation zone.

¹⁴ 5:18

¹⁵ 5:19

¹⁶ 5:20

Presumably, data centers located in the underlying high-rise office district would be permitted a FAR of 1.25, rather than the 1.0 permitted in the other zones.

- c. Design standards apply to the principal building façade (defined as a façade that faces an adjacent major arterial or interstate), and require that the facade contain at least two of the following elements:

- (1) Change in building height;
- (2) Building step-backs or recesses;
- (3) Fenestration;
- (4) Change in building material, pattern, texture, color; or
- (5) Use of accent materials.

Further façade requirements apply if center is facing Manassas Battlefield Park, e.g., no reflective materials, and a dark green or brown façade color.

- d. Mechanical equipment (ground and rooftop) screening is required:
 - (1) When visible from adjacent arterials and interstates, or when abutting residentially zoned or planned properties;
 - (2) If screening is not provided by intervening building, existing vegetation, or landscape buffer on adjoining property;
 - (3) If none of the above applies, screening must be provided by a solid fence or wall. No height is specified, but screening material must be “compatible” with the building.
 - (4) The Planning Director may waive these requirements upon determination of no “adverse impact on adjacent roads or adjacent properties.”
- e. Buffer yards are required to screen from adjacent residentially zoned or planned properties.
 - (1) “Buffer yard required plantings installed on an earthen berm that has a minimum height of six (6) feet and a slope not steeper than 2:1, planted to a type C DCSM buffer standard.”
 - (2) The Type C standard is 50 feet wide, and requires 320 “Plant Units Per 100 Feet of R/W or Property Line.” Plant Units are defined according to a point system, where a large tree is 10 points, a shrub is 2 points, and ornamental grass is 1 point.
 - (3) Projects may preserve existing vegetation/topography, supplemented by new plants as needed, or seek Planning Director approval to install a six-foot-tall solid fence, with plantings on the outside, if the Director determines that provides adequate visual screening.
- f. Fences are permitted, but not required.
 - (1) Chain link and barbed wire are prohibited.
 - (2) Alternative compliance is permitted with Director approval.

3. Definition(s) of the use(s), size of the facility

Data center is defined as follows: a use involving a building/premise in which the majority of the use is occupied by computers and/or telecommunications and related equipment, including supporting equipment, where information is processed, transferred and/or stored.

No minimum or maximum facility size is specified in the overlay or in the definitions. If a data center is going to be established in the Planned Development—Business District (PBD), the minimum required lot area is 15 acres, and in the Planned Development—Mixed Use District (PMD) district the minimum lot area is 25 acres.

Loudoun County Virginia

Loudoun County is in the process of a zoning ordinance rewrite. The ordinance that is presently in effect dates to 2003 and does not address data centers. Existing centers have likely been approved under the current regulations as light industrial. The county's [2019 General Plan](#) notes that there are seventeen million square feet of data center facilities completed, under construction, or planned. The Plan defines place types, and the proposed zoning districts align with those place types. The draft zoning ordinance addresses data centers, and the information included in this section is from the draft ordinance. Given the prevalence of data centers in the county, it is not surprising that Loudoun is proposing the most detailed standards for the centers. Outside of the ordinance adoption process, the County has recently committed to hiring a consultant to study the possibility of creating an overlay zone that prohibits data centers along some stretches of Route 7.

1. Level of permission required for approval

In Loudoun County's proposed non-residential districts, data centers are permitted by right. These are the OP – Office Park, IP – Industrial Park, and GI – General Industry, and MR-HI – Mineral Resource Heavy Industry Districts. In these districts, a site plan is required for approval, and this is an administrative decision by the Director of the Department of Building and Development. The centers may be permitted in Suburban Town Center (TC) Districts (both TC Core and TC Fringe) with approval of a Special Exception by the Board of Supervisors, which may apply conditions to any approval granted.

Data centers have also been permitted by right in the RD-RDP – Planned Development-Research & Development Park District, and by Special Exception in the CLI – Commercial Light Industry District. Upon adoption of the new code, however, both of these would be considered legacy districts. New development would not be classified into these districts after adoption. There is also a legacy overlay, the Route 28 Corridor, which allowed data centers in the past but would not do so in the future.

2. Substantive use standards or restrictions — including maximum height

- a. Building height for data centers in Loudoun County's OP – Office Park, IP – Industrial Park, and GI – General Industry districts is 100 feet. In the MR-HI – Mineral Resource Heavy Industry District, building height is limited to 45 feet. In the Town Center districts, maximum height is 60 feet, while in the TC Core district, if a building is greater than 2,000 square feet, there is a minimum height requirement of 24 feet, thus requiring at least two-story structures.
- b. The County's proposed regulations rely on FAR (except in the Town Center zones), but there are no defined exceptions specifically for data centers. In each of the districts, data centers can request a special exception to obtain an increase in FAR, as can other permitted uses.
- c. Data centers in commercial districts must meet principal façade standards and a detailed set of general site design standards. The principal façade standards apply to building facades that face adjacent existing or planned public roads, or that face an adjacent property with existing, planned, or permitted residential development. Principal façade standards require:

(1) Differentiated Surfaces

- (a) Required every 150 linear feet.
- (b) Change in ONE of the following design elements: building material, pattern, texture, color, or accent materials.

(2) Consistent Design

Any façade visible as described above must have consistent design elements on all visible facades.

(3) Fenestration

- (a) Thirty percent of principal facades must include fenestration.

- (b) If clustered in bays, no single bay may account for more than 7.5% of the surface coverage area.
- (c) Must be distributed horizontally and vertically.
- (d) A Green Wall of living plants may be provided, and account for up to half of the fenestration requirement.

(4) Mechanical Screening

- (a) A building with two principal facades may devote one to mechanical equipment.
- (b) Mechanical equipment attached to or mounted on such a façade must be partially or fully screened. Whether partial or full screening is determined as “the maximum extent that permits necessary ventilation for the equipment.” Presumably compliance with this standard would be an administrative review as part of the site plan.
- (c) Differentiated surfaces requirements still apply.

(5) Defined Main Entrance

- (a) Entrance must project or recess from the main building plane, or be otherwise differentiated from the rest of the façade.
- (b) Building foundation plantings are required along 50 percent of the length of the façade with the main entrance. Plant materials are specified; quantities are not.
- (c) Enhanced buffering and parking area landscaping, with 20 percent more plant units than base requirements, may be substituted for the foundation planting requirement.

3. General Site Design Standards

There is an extensive list of proposed design standards that cover the following topics:

a. Loading bay location

Must be located along a single façade of the structure.

b. Mechanical equipment screening

- (1) Ground and roof equipment must be fully screened with material “compatible” with that used on the rest of the structure; perforations for ventilation are permitted.
- (2) Ground-mounted mechanicals must be separated from residential development by a primary structure.
- (3) Ground-mounted mechanicals may not be located in a front yard.
- (4) Adjacent to industrially zoned properties, the Director may waive screening requirements if there will be no adverse impact.

c. Screening for loading bays and refuse collection areas

Refuse collection areas must be fully screened on all sides and loading bays must be screened from view from adjacent properties and existing or planned public roads.

d. Utility location

Reference to regular code requirements for Utility location.

e. Transportation requirements

Reference to regular code requirements for connectivity, and trails.

f. Setbacks and building massing adjacent to residential

- (1) Parking must be at least 100 feet from shared property line.
- (2) Building must be at least 200 feet from shared property line.
- (3) Building façade facing adjacent residential property “must include a change in building height at a minimum interval no less frequent than every 150 horizontal linear feet or no less frequent than 3x the average height of the building.”
- (4) Within 400 feet of adjacent residential property, “building envelope must provide a step-back of no less than 15 feet from the building wall at a height point that begins at the top of the second story of the building or 40 feet, whichever of the two is lower.”

g. Generator noise adjacent to residential

Generators are limited to emergency use, and testing limited to weekdays between 8 AM and 5 PM.

h. Light and glare

Reference to regular code requirements for lighting; photometric plan required.

i. Noise studies

Reference to regular code requirements for Noise Study standards.

j. Landscaping, buffering, and screening

- (1) Plant unit requirements for buffering areas are tailored to data centers, to provide a greater percentage of evergreen and deciduous trees for greater screening (rather than reliance on shorter shrubs or grasses).
- (2) Natural topography and existing vegetation may be counted towards some buffering requirements.
- (3) There are particular buffering requirements that apply if the center is located along a “Gateway Corridor.”

k. Additional standards for the TC zone

- (1) Data center must be at least three stories in height, and is limited to 49% of the gross floor area of the building in which it is located.
- (2) Data centers may not be located in buildings with residential units.
- (3) No ground level security fencing or bollards are permitted.

4. Definition(s) of the use(s), size of the facility

Data center is defined as follows: an establishment engaging in the storage, management, processing, and/or transmission of digital data, and housing computer and/or network equipment, systems, servers, appliances and other associated components related to digital data operations.

Additionally, there is a definition for Data Center Mechanical Equipment: On-site exterior machines used to sustain and/or provide energy for the operations of a Data Center.

No minimum or maximum facility size is specified in any of the districts, or by the use-specific standards. There are minimum lot size requirements of 1 acre in all three industrial zones, and the office park zone. The Town Center zones have neither minimum nor maximum lot size.

Fauquier County Virginia

With only two data centers in the county, Fauquier County does not have regulations specific to data centers.

Culpeper County Virginia

Culpeper County has one very large data center campus, but the County does not have regulations specific to data centers.

Henrico County / Richmond Virginia

There are ten data centers in this area, and they are large. These ten centers occupy roughly the same amount of square footage (5.0 million sq ft) as the 33 centers in Prince William County. Despite the number and extent of data centers in the area, neither the city nor the county regulates data centers separately from general industrial development regulations.

Howard County Maryland

1. Level of permission required for approval

There are several districts in which data processing centers are permitted by right (described below). While the County does have a conditional use request process to approve uses in districts where they are not allowed by right, data processing centers are not listed among the uses for which the County Council will consider such a request. Therefore, if an applicant wanted to establish a center in a district that does not permit the use by right, presumably a rezoning request approved by the County Council would be required.

2. Substantive use standards or restrictions — including maximum height

Data processing centers are permitted in the County's office, employment, manufacturing, and TOD districts (specifically: POR Planned Office Research, PEC Planned Employment Center, CCT Community Center Transition, CEF Community Enhancement Floating, CR Commercial Redevelopment Overlay, M-1 and M-2 Light and Heavy Manufacturing, CE Corridor Employment, and TOD Transit-Oriented Development). In all of these districts, there are no standards specific to data processing centers; the use would have to comply with base district standards, the same as any other allowed use in the respective district. The standards cover minimum lot size in some cases, height, and bulk (setback) standards. Of note: the POR district requires a two-acre minimum site, while the PEC district requires a 50-acre minimum. None of the other districts that permit data processing centers specify minimum or maximum lot sizes. Permitted height generally ranges from 50-100 feet, though the CCT district is limited to 40 feet in height. Where there is a range, such as 50-80 feet in the POR and PEC district, the taller height is permitted subject to greater setbacks from property lines (i.e., one additional foot of setback distance over the district minimum will gain two additional feet of building height). The 100-foot height limit districts are industrial (M-1 and M-2) and CE. Finally, the CE district is also subject to regulations that apply to development along Route 1, as described in the Route 1 Manual.

3. Definition(s) of the use(s), size of the facility

The County does not define data processing center, and there is no indication of a minimum or maximum threshold for such a facility in Howard County. In districts such as POR and PEC, one can gain an approximate idea of the scale of the facility by considering the minimum size of the site requirements. This is two acres in the POR district, and 50 acres in the PEC district. The PEC may accommodate numerous establishments within the 50-acre area.

Philadelphia Pennsylvania and surrounding counties

The majority of data centers in the Philadelphia area (27 of them) are in the city proper, and the Philadelphia zoning code does not specifically reference data centers. The centers could be permitted as one of several uses in the Industrial category (Research and Development, Limited or General Industrial) or possibly as a commercial use, classified as Business Services. Surrounding counties (Montgomery, Bucks, and Delaware) also do not have zoning regulations specifically tailored to data centers.

Cincinnati Ohio and surrounding counties

Cincinnati is located in Hamilton County. The regulations for the county date to 2013, and there is no mention of data centers. While this research looked at the surrounding counties of Hamilton and Butler, a map of data center locations in southern Ohio shows they are concentrated in, not around, Cincinnati. The Cincinnati Zoning Code also does not reference data centers by name, nor do the Hamilton or Butler County codes.

Dallas Texas and surrounding towns

Dallas and its surrounding suburbs have a concentration of data centers. One reason for this is the low cost of power (though reliability of the grid is less than in other locations), and another is the light regulatory touch that is prevalent in many Texas locations. While the Dallas code does not mention data centers, some of the ordinances of the surrounding municipalities where centers are located do have data center-specific regulations.

Fort Worth Texas

1. **Level of permission required for approval**

Data centers are allowed by right in Fort Worth's three industrial districts (Light, Medium, Heavy). They are not permitted in any other districts, and there is no provision for special/conditional use approval in any non-industrial district.

2. **Substantive use standards or restrictions — including maximum height**

There are no use-specific standards. The only development standard that applies is that four percent of site area must be devoted to landscaping (this applies to all uses in these zones, not just data centers). The industrial districts have no minimum or maximum lot size, or lot coverage limits, though setbacks apply in light industrial zones. Twelve stories or 120 feet in height are allowed in Medium and Heavy Industrial zones, while Light Industrial has a maximum height of three stories, or 55 feet.

3. **Definition(s) of the use(s), size of the facility**

Data center is defined as follows: "Real and personal property consisting of buildings or structures specifically designed or modified to house networked computers and data and transaction processing equipment and related infrastructure support equipment, including, without limitation, power and cooling equipment, used primarily to provide, as a service to persons other than the company operating the data center, data and transaction processing services, outsource information technology services and computer equipment colocation services, or, used primarily to provide, to a single user, including the user's affiliates, customers, lessees, vendors and other persons authorized by the user, data and transaction processing services."

Plano Texas

1. **Level of permission required for approval**

Data centers are allowed by right in general office, light commercial, commercial employment, regional employment, research/technology center, and two light industrial zones. They are permitted with a specific use permit approval (Council decision) in corridor commercial, CBD, and regional commercial.

2. **Substantive use standards or restrictions — including maximum height**

There are no use-specific or design standards that apply. Because Plano allows data centers in a wide array of districts, height limits vary widely. There are no height limits in the general office or two industrial districts. Height can be 20 stories or 325 feet in the regional employment and research/technology zones. Conversely, in light commercial and commercial employment, height can be limited to two stories, since these districts may be adjacent to residential. With increasing distance from residential, increasing height is allowed. For every 200 hundred feet of additional distance, two additional stories are allowed. So, within

200 feet of residential, 2 stories are allowed, within 400 feet, 4 stories are allowed. At 800 feet distance or greater, there are no longer any height limits.

3. Definition(s) of the use(s), size of the facility

Data center is defined as follows: “A facility whose primary service is data processing and is used to house computer systems and associated components, such as telecommunications and storage systems, including but not limited to web hosting organizations and internet service organizations. A server farm, telecom hotel, carrier hotel, telco hotel, telehouse co-location center, or any other term applicable to facilities which are used for these specified purposes shall be deemed to be a data center. (This definition shall only apply to data center as a primary use.)”

Frisco Texas

1. Level of permission required for approval

Data centers are permitted by right in Frisco’s industrial district, and allowed with specific use approval by City Council in Highway Corridor and Commercial Districts. The centers are not permitted in Frisco’s IT Information and Technology District.

2. Substantive use standards or restrictions — including maximum height

There are no use-specific or design standards that apply. Design standards are not specific to data centers, but rather the same standards that apply to any use in the applicable district. No height limit is specified for Frisco’s Industrial district (this is also true of the majority of non-residential districts in the city).

3. Definition(s) of the use(s), size of the facility

Data center is defined as follows: “A building or group of buildings primarily used to house computers and/or related equipment for the purpose of collection, processing, storage or retrieval of data.”

Garland Texas

1. Level of permission required for approval

Data centers are permitted by right in Garland’s Heavy Commercial (HC) and Industrial (IN) districts. They may be allowed subject to a Specific Use Provision (SUP) approval by the City Council in the Commercial Office (CO) and Urban Business (UB) districts.

2. Substantive use standards or restrictions

There are no use-specific standards that apply. Design standards are not specific to data centers, but rather the same standards that apply to any use in the applicable district. The HC district has a height limit of 35 feet. There is no height limit in the IN or CO district. UB is not listed in the district standards table.

3. Definition(s) of the use(s), size of the facility

Data center is defined as follows: “A facility used to house computer systems and associated components, telecommunications systems, and storage systems. Generally includes redundant or back-up power supplies, redundant data communications connections, environmental controls (such as, air conditioning and fire suppression), and security devices.”

Atlanta Georgia

Atlanta’s zoning code does not have a consolidated use table, nor does it define data centers. However, they are permitted in the city’s Beltline Overlay, which is a roughly circular ring that surrounds the central city. In the Beltline area, data centers are subject to the standards below.

1. Level of permission required for approval

Data centers that are part of a unified development plan do not require approval of a special use permit; centers that are not part of such a plan do require special use permit approval.

2. Substantive use standards or restrictions

a. Separation distance

A data center that is not part of a unified development plan may not be located within 2,000 feet of another data center. However, a data center that is part of such a plan may be located within 2,000 feet of another center, whether that center is part of a unified plan or not.

b. Building design requirements for all structures

- (1) Building design standards require parapets, cornices, and other design features to be used to articulate roof lines.
- (2) Art or green walls, or architecturally treated custom precast concrete may be installed along blank walls facing a public right-of-way or Beltline Corridor in lieu of meeting fenestration requirements.

c. Building design standards for new construction

- (1) Every 75 feet of building length on a single façade requires “a variation in the exterior [including] projections, recesses, changes in patterns or materials, or green walls.”
- (2) Buildings with facade(s) facing the public right-of-way or the Beltline Corridor shall have architectural articulation and architectural design elements of the facade(s) up to the first three levels of the building or within a minimum height of 24 feet as measured from the sidewalk level. Architectural articulation and architectural design elements such as a variety in facade treatment, materials, textures, colors and/or window and door patterns to provide visual interest are allowed.
- (3) Barbed wire, coated and uncoated chain link fence, or razor wire fencing is prohibited.
- (4) Aluminum siding and synthetic stucco is prohibited.
- (5) Mechanical equipment shall be located in the side or rear yard of the principal structure and where possible in the location least visible from a public street or park. Screening with appropriate plant material or fencing is required if the equipment is visible from a public right-of-way or park.

d. Building design standards for existing structures being converted to data center use

- (1) Only buildings older than 50 years may be converted.
- (2) Barbed wire, coated or uncoated chain link fence, or razor wire fencing is prohibited.
- (3) Architectural articulation and architectural design elements such as a variety in facade treatment, materials, textures, colors and/or window and door patterns to provide visual interest are allowed.

e. Height limit

No height limit is specified for the overlay. Instead, it relies on the height of the underlying zoning districts.

3. Definition(s) of the use(s), size of the facility

There is no definition in Atlanta’s code. However, size is limited to 150,000 square feet of floor area per floor if a proposed “data center [is] not a part of a unified plan.” A center that is part of such a plan may be up to 300,000 square feet per floor in floor area.

Chicago Illinois

Ninety-four of the 101 data centers in Illinois are located in Chicago. In addition to applicable Chapter 17 zoning regulations as described below, the city has Building Energy Use Benchmarking requirements ([Chapter 18](#)) that apply to water and energy use. These standards apply to data centers.

1. Level of permission required for approval

Data centers that are permitted by right in Chicago's three manufacturing districts (Light/Business Park, Light Industry, and Heavy Industry), three commercial districts (C1-C3) and one business district (B3, Community Shopping District). They are not allowed in the Downtown district.

2. Substantive use standards or restrictions — including maximum height

There are no use-specific or design standards that apply. Height in B and C districts depends on intensity of the applicable subzone, and can range from 38 to 80 feet (in addition to FAR that varies from 1.2 to 5.0, again dependent on subzone intensity). In M districts, there is no height limit.

3. Definition(s) of the use(s), size of the facility

Data center (alternately referred to as Electronic Data Center Storage) is defined as: "A space specifically designed and equipped to meet the needs of high-density computing equipment such as server racks, used for data storage and processing, as defined by the benchmarking tool. "Energy performance rating" means an energy performance star designation that the commissioner assigns to a covered building pursuant to the energy performance rating system."

In B3 and C1 districts, building size is limited to 25,000 square feet. In M districts, there is no height or building size limit. No district has minimum lot size, but all districts have FAR, ranging from 1.2 to 3.0, depending on intensity of subzone.

Chandler Arizona

The primary concern for Chandler AZ in adopting regulations on data centers was to address resident complaints about noise. The air conditioning for the centers generated complaints from nearby residents about the constant hum sounding like a buzzing mosquito. As a result, Chandler adopted data center regulations that focus on noise, but do not address any other common concerns such as water use or structure design. The City's regulations do not mandate *how* data center operators must mitigate the noise, only that they must do so. This is verified by means of an ambient noise study submitted prior to, and periodically after, construction. These studies must demonstrate that noise at the property line is no greater after the construction of the center than it was prior to construction of the center.

1. Level of permission required for approval

Data centers are only allowed in Chandler with City Council approval of a Planned Area Development. This is effectively a rezoning request to accommodate a specific development proposal.

2. Substantive use standards or restrictions

a. Neighborhood Notification

- (1) Two neighborhood meetings to discuss proposed sound mitigation aspects of the project design are required prior to application consideration.
- (2) Mailed notification for these meetings must be sent to all *residents* (not just property owners) and registered homeowners' associations within a ½ mile radius of the data center property.
- (3) Signed notice must also be posted on the site 15 days prior to each neighborhood meeting. Signs must meet city standards for design, content, and location. The signs must face an arterial, or other high-visibility location approved by the Zoning Administrator.

b. Noise Mitigation

- (1) Before the first neighborhood meeting, a third-party acoustic engineer must conduct a sound study to measure noise level at any property line shared with residentially zoned or planned land, or shared with other “noise sensitive use,” as determined by the Zoning Administrator.
- (2) The data center must be designed and built with noise mitigation such that noise levels at the property line during operation do not exceed those of the baseline study.
- (3) The data center operator must submit an annual third-party noise study to the city every year for the first five years of operation. This study must demonstrate no increase in property line noise levels.
- (4) Use and testing of backup generators (outside emergency use during outages) is limited to 9 a.m. to 5 p.m., and prior notification must be provided to the city, and posted on a public website announcing the time the generators will be in operation. Notice is required at least 24 hours prior to use or testing.
- (5) The City may require the data center to employ an on-site neighborhood liaison to respond to noise complaints.

3. Definition(s) of the use(s), size of the facility

Data center is defined as follows: A facility or portion of a facility housing networked computer systems and telecommunications equipment used for remote storage, processing, and distribution of data.

While this applies to standalone operations, data center operations are permitted as accessory uses to other enterprises provided that they do not provide services to third parties (i.e., the storage and processing services may only serve the primary use on the site), and they can occupy no more than 10 percent of the building in which they are located. These accessory data centers may not be housed in standalone structures.

Mesa Arizona

Though Mesa does not regulate data centers through zoning, the ordinance regulating Large Customer Sustainable Water Allowance (Chapter 10, Municipal Water System, Section 8-10-9) was adopted in 2019. This ordinance adoption occurred at the same time the Google data center request was approved, which guarantees the company at least one million gallons of water per day, and may rise to as much as four million gallons of water per day.

The ordinance allows for City review of water applications for “Multiple or Large Meter” (MLM) customers. The applicant must provide “a reasonable description of the nature and type of water use proposed on the property, and a reasonable estimate of the projected annual and monthly water demand,” and if the City determines it can serve the request it will enter into a Sustainable Service Agreement, which sets a water use allowance for the applicant, and requires City Council approval. If the user exceeds the allowance, there are nominal fines for the first two violations, and a possibility of fines and termination pursuant to a court judgment at the third violation.

While the intent of this ordinance may be good, it is likely too vague to be useful in actually limiting uses with large water demands, for the following reasons:

- The level of consumption at which the MLM provisions apply is not specified by the ordinance or in the water districts Rules and Regulations for Service.
- There is no explanation of the process or criteria the water department might use in assessing applications, or any indication of a water use threshold or limit at which a request could be denied.
- The fines for exceeding the defined allowance are too nominal to function as a deterrent to large, well-financed tech companies. It may be more to their benefit to exceed the allowance if they need to, and pay the fine, rather than comply.

- The threat of termination may not be effective. The termination clause may be invoked after three violations, but it is not mandatory. Companies could also simply be assessed fines, and subject to increased monitoring over a short period to ascertain that no further overages occur. Once that period is concluded, it is not clear if the clock “resets,” or if prior violations are considered in the event there are future overages.

Silicon Valley California

Silicon Valley is not a single community, but rather several communities in the area south of San Francisco where large tech companies are concentrated. There are a high number of data centers in the region, spread across various cities and towns, however, only San Jose has regulations that apply specifically to data centers.

San Jose California

- 1. Level of permission required for approval**
Data centers are permitted in San Jose’s CG General Commercial and Industrial districts. In the commercial district, they require City Council approval of a conditional use. In the industrial districts, the centers require administrative approval of a special use permit.
- 2. Substantive use standards or restrictions — including maximum height**
There are no use-specific standards for data centers. Minimum lot size ranges from 6,000 square feet in Heavy Industrial district, to 10,000 square feet in Light Industrial and Industrial Park. All districts have a height limit of 50 feet, and no setbacks unless adjacent to residential, which requires a 25-foot setback. IN the CG district, minimum lot size is one acre, maximum height is 65 feet.
- 3. Definition(s) of the use(s), size of the facility**
Data center is defined as follows: “A facility that houses computer systems and associated components, including but not limited to telecommunications and storage systems.”
- 4. Other information**
There are area plans for San Jose, and North San Jose in particular has a development policy that emphasizes light industrial development uses, including “buildings built primarily to house machines or utility equipment.” The policy does not specifically mention data centers, but they do seem to be one among other tech employment uses that the area seeks to attract.

4: Recommendations

Because data centers are a relatively new phenomenon, there are few accepted “best practices” specific to data center regulation. Some of the most detailed examples of data center regulations come from Loudoun and Prince William Counties in Virginia, while other examples of regulations addressing narrower topics related to data centers come from Howard County, Maryland, and Chandler, Arizona.

Zoning Ordinance

In light of the information presented in this report, Fairfax County may want to consider adopting the following types of regulations to help mitigate some of the potential impacts of new data centers within the County. Not all of the issues discussed in Section 2 of this report are covered below, as some do not create issues significant enough to warrant regulation (for example, traffic generation, which is minimal), and others cannot be directly addressed by zoning regulations (for example, employment generation).

Use Permissions and Related Size Limits

In the table of use permissions for Residential, Commercial, and Industrial Districts, data centers are currently “P” (Permitted) uses subject to size restrictions in the C-3, C-4, I-2, and I-3 districts, and as “P” uses not subject to size

restrictions in the I-4, I-5, and I-6 districts. Applicable size limits are 40,000 square feet in the C-3 and C-4 districts and 80,000 square feet in the I-2 and I-3 districts. In addition, in all districts except the I-4, I-5, and I-6 districts, all equipment for operating the building, including heating, cooling, and emergency power, must be in a contained building where the use is located. In the C-3, C-4, I-2, and I-3 districts, proposed facilities that do not meet these standards may still be approved by the Board of Supervisors through the Special Exception process.

Given the significant land, power, and water demands and potential water quality impacts associated with data centers, we recommend that equipment enclosure requirements and size limits applicable in the C-3, C-3, I-2, and I-3 districts remain in place for all data centers, regardless of how they are approved. In addition, we recommend that a maximum size limit (perhaps 200,000-250,000 square feet) be imposed in the I-4, I-5, and I-6 districts, with the alternative of approval by Special Exception to exceed that size. Alternately, these districts could require a Special Exception in all cases, regardless of facility size.

In the Planned Districts, data centers are only available when listed in an approved final development plan in the PRC/TC, PRC/CC, PDC (as a principal use), and PTC districts. While the size limits above do not apply in any of these districts, we assume that they may be included in the final development plans for these facilities. Approval by Special Exception is not currently listed as an option in any of these districts, but could be considered. Because of the complex nature and intent of these districts, sub-districts, and our lack of knowledge of any conditions (including but not limited to size limits) contained in approved data center final development plans, we are reluctant to offer specific recommendations for the Planned Districts. However, if Fairfax County determines that, in light of the information in this report and the trend towards larger data center buildings and larger land requirements, data centers are inconsistent with the intended character of one or more of the Planned Districts, we suggest that the checkmarks related to those districts be removed. As an alternative, the County could add some of the Planned Districts to the lists of districts subject to the size limits, or could make them subject to some or all of the new use standards discussed in the following section.

Additional Use Standards

Fairfax County could also consider the following types of new or enhanced use standards related to data centers.

A. Energy Consumption

Although it is possible to draft a use standard requiring that a defined percentage of energy provided to data centers must come from renewable sources, the discussion above demonstrates that it would be difficult or impossible to monitor or enforce that requirement. In addition, a requirement to use renewable energy sources would not reduce the heavy energy demands created by new data centers. Rather than imposing a use standard specifically addressing overall energy demand or renewable energy use, we think this impact could be addressed by strengthening the limits on new data center size and availability discussed above.

B. Proximity to Power

As a locational guideline, the County could consider adding a requirement that data centers need to be close to a major transmission line, connecting directly to a substation. This requirement could be related to anticipated power draw, and County staff could work with Dominion or adjacent counties to determine the proper proximity. Such a requirement could have beneficial effects on power transmission infrastructure, but could be complicated by the fact that many centers still wish to rely on water cooling, and not solely electrical cooling. Does closer proximity to power supply negatively affect access to water supply? It would be important to identify and balance potential tradeoffs involved in adopting such a regulation.

C. Water Demand and Water Quality

To address the significant water demands in facilities where water is the primary cooling mechanism, and the possible impacts on water quality discussed in this report, the County could prohibit the use of evaporative cooling systems in any new data centers approved after the effective date of these amendments. As a practical matter, however, this would require designs based on electrical cooling, since air cooling is not likely to be

efficient at large scale. Exclusively relying on electrical cooling would further increase the data center energy demands discussed above.

As an alternative, the County could require that new data centers include provisions to address water quality prior to discharge, including requirements that salinity levels match pre-intake levels before returning cooling water to the local water system for further treatment at wastewater treatment plants. This could alternately be addressed as a requirement for monitoring and periodic reporting, which poses a lesser burden of compliance, and may be desirable if the extent of the concern is unclear, or if it is uncertain that data centers are contributors to it. Additionally, the County could also consider imposing limits on the extent of potable water that centers can use for cooling, requiring instead reliance on grey water, recycled water, or other non-potable sources.

Because the County already administers detailed standards related to stormwater runoff, we do not recommend the adoption of additional standards to address the increased stormwater runoff from new data center facilities. The increased applicability of facility size limits discussed above, however, should prevent the creation of very large facilities with correspondingly large impervious surfaces and stormwater runoff volumes.

D. Noise

The Fairfax County Noise Ordinance (Chapter 108.1 of the County Code) specifically addresses the use and testing of backup generators. It prohibits routine testing of generators between 9 p.m. and 7 a.m., and further limits routine testing between 7:00 a.m. and 9:00 p.m. to durations of less than two hours. There are exceptions for emergency use. With these regulations, the County has already addressed one potential negative impact that data centers could pose, and we do not recommend additional or different standards for data centers in particular.

The noise ordinance also establishes maximum sound levels that limit the noise generated by mechanical equipment for heating and air conditioning, and that vary for different uses and zoning districts. In Industrial districts, sound is limited to 72 dBA between 7:00 a.m. to 10:00 p.m. for continuous sound, and to 65 dBA between 10:00 p.m. to 7:00 a.m. There are also limits for impulse sound (120 dB during the day and 100 dB overnight), but the more prevalent concern from HVAC hum is continuous sound. These maximum sound levels are similar to those used in other communities, and they are likely adequate for data centers in industrial districts. In addition, the current use standards for data centers in Section 4102.6A already require that in certain districts “all equipment necessary for cooling, ventilating, or otherwise operating the facility must be contained within an enclosed building where the use is located. This includes emergency power generators and other emergency power supply equipment.” When combined with the expanded applicability of size limit on new data center facilities described above, we think these existing standards reflect a reasonable approach to noise mitigation.

As an alternative, however, the County could take a more proactive approach, as Chandler Arizona did when responding to noise concerns around data centers. The County could require a baseline study of ambient noise submitted prior to, and periodically after, construction. These studies could be required to demonstrate that noise at each property line is no greater after the construction of the center than it was prior to construction, and if differences are found, to demonstrate that effective mitigation measures are being implemented.

E. Building Design

Unlike many development codes, the new Fairfax County zoning ordinance does not include a generally applicable set of design standards for industrial buildings. However, we understand that at least some new industrial buildings may be subject to urban design guidelines contained in the comprehensive plan, or in a Planned district, or in an approved final development plan. For those zone districts and development sites not covered by existing design standards and guidelines, the County could consider adopting new design standards for larger industrial buildings, or for data centers in particular. The major goal of the new standards would be to prevent the construction of large, long, undifferentiated building facades. In some newer development codes, standards to address these issues include a maximum building street frontage length of 150 or 200 feet in

commercial districts, 300 or 400 feet in light industrial districts, and no applicable maximum length in the heaviest industrial districts. Additional standards applicable to industrial buildings sometimes include requirements for horizontal articulation of street-oriented building facades every 50 or 100 feet through the use of insets to or projections from the wall plane (sometimes with a six or 12 inch minimum depth), the inclusion of functional or false windows or similar features within each 50 or 100 feet of horizontal building façade, and in some cases a requirement for at least one functional pedestrian entrance for employees or patrons along each street-oriented building façade.

As recommended above, the County could consider increasing facility size limits, or imposing them where they do not currently apply, but would be unusual in doing so. It is possible that the size of available sites could serve the purpose of limiting facility size, without adding or amending specific regulation on this topic. Likewise, the current height allowances in the County's industrial zones, ranging from 40-75 feet (potentially higher with Special Exception), are most likely adequate for now. If the County begins to see an increase in requests for taller centers, then these limits could be revisited for potential. Height and setback standards could both be increased based facilities nearby or abutting residential uses. Based on the current noise ordinance provisions and the information from comparison communities, increased setbacks to mitigate potential noise concerns may not be necessary. They may, however, still be desirable to address concerns about views, light trespass beyond property lines, or other issues. Over time, if taller heights for data centers become the norm, revising the requirement for a "[s]etback equal to building height" might be desirable, especially in areas where the surrounding parcels are also occupied by industrial uses.

F. Decommissioning and Reuse of Buildings

Although Fairfax County could require applicants for new data centers to provide a decommissioning or repurposing plan and/or to provide financial security to cover building demolition costs if the building cannot be repurposed within a set period of time, we are not aware of any community that has applied a similar requirement, and we do not recommend that the County do so. In our opinion, most of the concerns about repurposing a very large, very unique building would be addressed by continuing or adopting the maximum building size limits discussed in this report. Adoption of the design standards discussed (or already applicable through final development plans or comprehensive plan design guidelines) will help make any data center vacancies that do occur more attractive to reuse tenants. In short, the key approach to avoid potential "white elephant" buildings is to prevent their construction in the first place, and the use permissions and use standards recommended above will assist in achieving that goal.

Related Changes to Comprehensive Plan

There are several sections of the Policy Plan component of the Fairfax County Comprehensive Plan that are related to the zoning ordinance recommendations listed above. In general, the existing Policy Plan text is consistent with many of those recommendations. As a result, few changes to the Comprehensive Plan would be necessary, though certain changes that could better align plan content with the zoning regulations are noted below.

Land Use

The Land Use component of the Policy Plan has many goals, objectives and policies that are at least peripherally related to the possible expansion of data center facilities in the County. The most relevant and directly related element in this section of the plan is Appendix 12, which makes direct mention of data centers.

APPENDIX 12, GUIDELINES FOR HIGHER INTENSITY WITHIN AREAS PLANNED FOR INDUSTRIAL USES

Appendix 12 discusses the possibility of allowing data centers as approved higher intensity uses in some of the County's industrial areas. This Appendix proposes five performance criteria that should be used in determining whether a data center use is appropriate in the location where it is proposed. The most relevant among the criteria are:

Criteria 2. Mitigation of Noise and Other Impacts states “Noise, light and other environmental impacts should be examined to ensure that surrounding uses are not negatively impacted by this higher intensity.”

Criteria 3. Building Design: states “High quality design and materials should be used, and the design and materials should complement the architecture of surrounding uses. ... To minimize visual impacts on surrounding properties, building facades should avoid the use of undifferentiated surfaces by including the following design elements as appropriate: variation in building height, building step-backs or recesses, fenestration, variation in building materials, patterns, textures, colors, and use of accent materials.”

Criteria 5. Site Design states “Improvements to circulation or access, parking, landscaping and stormwater management should be provided. If there is a reduced need for parking as a result of redevelopment, consideration should be given to converting existing surface parking to new usable open space and/or permeable areas that improve stormwater runoff.”

Each of these criteria directly supports a topic where regulations already exist, or new zoning regulations are recommended. However, none of these criteria address the potential environmental impacts of data centers discussed in this report.

Potential Appendix Amendment

A Criteria 6 could be added requiring that measures to avoid potential environmental impacts should be incorporated into the project, including but not limited to electricity consumption, water consumption, and potential increases in water temperature and salinity.

In addition, a Criteria 7 could be added requiring or encouraging the location of data centers near the substations that provide them power, in order to minimize power loss through transmission over longer distances.

Other Land Use Plan elements

All four categories of countywide land use objectives and policies -- Land Use Pattern, Land Use Intensity, Pace of Development, and Land Use Compatibility -- are related to concerns about allowing additional data centers. Among the Board of Supervisors’ goals, Land Use, Private Facilities, and Employment Opportunities each have elements that relate to data center concerns, while among the Objectives and Policies supporting land use goals, the following are most directly related to the possibility of expanding the number and size of data centers in the County:

Objective 3: Fairfax County should maintain a supply of land sufficient to meet the need for housing, commercial, industrial, institutional/public services, and recreational and leisure activities to support the Comprehensive Plan.

Objective 9: Nonresidential redevelopment or repurposing should be in accord with the recommendations of the Comprehensive Plan.

Policy d. Optimize stormwater management and water quality controls and practices for nonresidential redevelopment consistent with revitalization goals.

Objective 14: Fairfax County should seek to achieve a harmonious and attractive development pattern which minimizes undesirable visual, auditory, environmental and other impacts created by potentially incompatible uses.

Potential Plan Amendment

No change recommended.

Environment

The County’s Board of Supervisors’ adopted goal related to Environmental Protection states that “[...]and uses in Fairfax County should be consistent with environmental constraints inherent in the need to preserve natural resources and to meet or exceed federal, state and local standards for water quality, ambient air quality and other environmental standards. Development in Fairfax County should be sensitive to the natural setting, in order to prevent degradation of the county’s natural environment.”

The Plan further specifies three broad categories of concern ... Among the Objectives and Policies supporting this goal, the following are most directly related to the possibility of expanding the number and size of data centers in the County:

A. Air Quality

Objective 1: Preserve and improve air quality.

Policy d. Support energy conservation, minimization of indoor air pollution and other green building practices consistent with Objective 13 of this section of the Policy Plan.

Policy g. Apply state of the art technology toward the minimization of emissions from stationary sources of air pollution.

Policy h. In cooperation with federal, state and regional agencies, bring Fairfax County into compliance with federal primary and secondary national air quality standards as soon as practicable.

Potential Plan Amendment

No change recommended; these policies as stated offer justification for adopting regulations that protect air quality.

B. Water Quality

Objective 2: Prevent and reduce pollution of surface and groundwater resources. Protect and restore the ecological integrity of streams in Fairfax County.

Policy j. Regulate land use activities to protect surface and groundwater resources.

Potential Plan Amendment

No change recommended; this policy as stated offers justification for adopting regulations that protect water quality. However, Policy j. could be strengthened by adding the words “from contamination by pollutants.”

C. Environmental Coordination

Objective 12: Improve the identification and mitigation of environmental impacts, and the monitoring and enforcement of environmental policies as applied to land disturbing activities.

D. Resource Conservation and Green Building Practices

Objective 13: Design and construct buildings and associated landscapes to use energy and water resources efficiently and to minimize short- and long-term negative impacts on the environment and building occupants.

Potential Plan Amendment

No change recommended; these policies as stated offer justification for adopting regulations that protect air quality.

Economic Development

The County’s Board of Supervisors’ adopted goal related to Economic Development and Employment Opportunities states that the “County should maintain its prosperous economic climate and varied employment opportunities by continuing to develop and pursue a broad range of actions, including public/private partnerships, designed to enhance its long-term competitive position in regional, national, and international economic development.”

Among the Objectives and Policies supporting this goal, the following are most directly related to the possibility of expanding the presence of data centers in the County:

Objective 1: Provide an environment where businesses flourish and jobs are created.

Policy a. Promote a regulatory framework that encourages business development and expansion. Regulations and ordinances should be written with consideration for their economic impact.

Policy d. Review county ordinances and regulations on a regular basis to ensure that ordinances and regulations are consistent with the objectives of this Plan.

Potential Plan Amendment

No change recommended; policy d is already consistent with the recommended changes to the zoning ordinance listed above, since those changes are supportive of established plan goals related to efficient land use, quality of life, and environmental protection.

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Location Check

This section lists locations where Clarion has searched for data center information in the codes of various cities and counties, but found no specific mention of them. Though not mentioned directly, data centers would likely be permitted under another use name.

A. OHIO

Columbus: The Columbus Code does not specifically mention data centers; however, it does have this use – “Computer Centers, Programming and Systems Design Services” which is permitted in the city’s C2 Office Commercial District. This district has a section that describes allowed uses in “Offices for Professional, Scientific and Technical Services” that includes computer centers.

New Albany: Does not list data centers in its zoning ordinance. They are mentioned in the comprehensive plan, but only as one use among others that are appropriate for “employment lands.”

B. PENNSYLVANIA

Conshohocken (Montgomery County): has one data center, but does not regulate the centers by name. The most likely location for them to be permitted is in the Limited Industrial District/Research, that allows warehouses and distribution centers, as well as “Scientific or industrial research, engineering, training, testing, experimental laboratory or similar establishment.”

Upper Merion Township (Montgomery County): This includes King of Prussia which has a large retail presence, but also a concentration of business parks. According to Upper Merion Zoning (which does not directly mention data centers), the use could be accommodated in either the Light Industrial or Commercial District, where it would likely be in the Professional Scientific and Technical Services category. If classified as Research & Development, a data center would not be permitted in one of the four commercial subdistricts (General Commercial). However, if classified as an office (support or professional) it would be allowed in the Neighborhood Commercial, Limited Commercial, General Commercial, and Shopping Center subdistricts. All enterprises in commercial districts are limited to 20,000 square feet of floor area.

Borough of West Chester: Though not mentioned directly, a data center would most likely be considered a warehouse or light industrial use. If a warehouse, it would be limited to the industrial district, whereas a light industrial use may be allowed in a mixed-use district. The mixed-use district allows higher lot coverage and smaller setbacks. It permits a lower height by-right (45 versus 60 feet); however, 60 feet can be allowed in the mixed-use district subject to conditional use approval.

C. TEXAS

Dallas: There are 150 data centers in the area, but they are not mentioned by name in the Dallas code.

Allen: Data centers are not listed as a use, but there is an “IT” industrial technology district, described as being “characterized by industrial parks accommodating distribution, processing and light manufacturing in a campus type development with building sites of four acres or more...” There is no research & development use, so data centers might be allowed in this district as warehouse with approval by City Council of a special use permit.

Irving: Data centers are not listed as a use in Irving, though they would likely be allowed under “Professional and business services and offices completely within an enclosed building” in the city’s commercial districts, or in heavy commercial zones, under “Any commercial business or service not included in any of the foregoing districts.”

Carrollton: Data centers are not mentioned by name in the Carrollton code.

Lewisville: Data centers are not mentioned by name in the Lewisville code.

Richardson: Data centers are not mentioned by name in the Richardson code.

D. SILICON VALLEY

Santa Clara County: Ordinance dates to 2003. There is no mention of data centers.

Palo Alto: Ordinance does not mention data centers. However, they would likely be included under Research & Development Facilities, and allowed by right in Research, Office and Limited Manufacturing (ROLM) District, General Manufacturing District [GM], or Research Park District [RP]. There are development standards that apply in these districts, but they are the same that apply to multi-family, commercial, and industrial development, and mainly focus on operational standards (light, noise, air quality, parking, trash and recycling, etc.).

Milpitas: No mention of data centers. Use list in code seems dated – is likely too old to mention them specifically. However, they would likely be permitted as “Plant or Facility” in one of the 3 industrial districts in Milpitas. In these districts, such facilities are permitted by right, and no special standards apply. Research & development is permitted as a conditional use in Milpitas’ C2 district, if approved by the Planning Commission.

Sunnyvale: Ordinance does not mention data centers. However, they would likely be included under Research & Development Facilities, and allowed by right in the M-S Manufacturing & Service District and the M-3 General Industrial districts.

San Francisco: Ordinance does not reference data centers by name. They may be permitted as Internet Service Exchange, which is conditionally allowed in industrial districts.

E. ARIZONA

Phoenix: There are 90 data centers in the Phoenix area, but they are not mentioned by name in the Phoenix code. The uses listed in the code seem dated, and it is difficult to ascertain what use name may be used to permit data centers, as there is no research & development, warehouse, or any IT-related use.

Tempe: The Tempe code allows “Computer Centers, including Computer Hotels and Similar Technology Facilities” in its three industrial districts (Light, General, and Heavy). There is no definition of this use, nor are there use-specific standards.

Goodyear: Goodyear does not list data centers as a use.



FAIRFAX COUNTY

PROPOSED ZONING ORDINANCE AMENDMENT

STAFF REPORT Data Centers

May 17, 2024

Hearing Dates

Planning Commission: June 5, 2024 @ 7:00 p.m.

Board of Supervisors: July 16, 2024 @ 4:00 p.m.

Staff Contact

Carmen Bishop, Deputy Zoning Administrator



Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 48 hours advance notice. For additional information on ADA call 703-324-1334 or TTY 711 (Virginia Relay Center).



PLANNING & DEVELOPMENT

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Background

On March 19, 2024, the Board of Supervisors (Board) directed staff to prepare a Zoning Ordinance amendment to strengthen the current provisions for data centers and authorized the scheduling of public hearings on an amendment. The [Board Matter](#) stated that the public hearing before the Board should be scheduled for July 2024.

Previously, on May 9, 2023, the Board directed staff to research and provide recommendations regarding data centers. In accordance with that direction, an interagency staff team researched data centers, met with numerous stakeholders, and provided a report to the Board on January 9, 2024. The proposed Zoning Ordinance amendment is based on the research included in the [Data Centers Report and Recommendations](#), the discussions at the Board’s Land Use Policy Committee meeting on March 12, 2024, and staff’s further research and outreach.

Current Regulations

The [Zoning Ordinance](#) currently allows data centers in the zoning districts shown in Table 1 below. Lot size and bulk regulations vary according to the zoning district. In addition, transitional screening and barriers are required in accordance with the recently amended [Section 5108](#) of the Zoning Ordinance. Among other provisions, these regulations require a 50-foot-wide landscaped transitional screening yard between industrial and residential uses.

The use-specific standards for data centers ([subsection 4102.6.A](#)) include the building size thresholds for by-right development listed in the table below, as well as a requirement that—except in the I-4, I-5, and I-6 Districts—all equipment for cooling, ventilating, or otherwise operating the facility, including emergency power generators and other power supply equipment, be contained in an enclosed building.

| Zoning District | By Right | Special Exception |
|--|--|--|
| C-3 (Office)
C-4 (High Intensity Office) | Up to 40,000 SF of GFA; or larger if repurposing a building existing on May 10, 2023 | Required for larger size; or for increase in height or FAR |
| I-2 (Low Intensity Industrial)
I-3 (Light Intensity Industrial) | Up to 80,000 SF of GFA; or larger if repurposing a building existing on May 10, 2023 | Required for larger size; or for increase in height or FAR |
| I-4 (Medium Intensity Industrial)
I-5 (General Industrial)
I-6 (Heavy Industrial) | Yes (limited by district height of 75 feet and FAR of 0.5) | Required for increase in height or FAR |
| PRC (Planned Residential Community – Town Center, Convention/Conference Center)
PDC (Planned Development Commercial)
PTC (Planned Tysons Corner Urban) | Yes, if shown on the development plan | n/a |

Table 1: Current Zoning Permissions¹

Proposed Changes

Proposed text is provided below. The proposed amendment revises the permissions and adds or revises the use-specific standards for data centers to address issues of compatibility with surrounding uses, noise, and aesthetics.

Permissions

The proposed amendment revises the permissions for data centers to show that in all conventional districts where a data center is allowed (C-3, C-4, and I-2 to I-6), a data center could either be allowed by right, subject to use-specific standards, or require a special exception (SE) to modify certain standards. For example, if a use standard specifies a maximum building size or a minimum distance to residential, then an SE could allow for a larger size or a lesser distance. This approach recognizes that the potential impacts of a data center may vary based on its size, location, equipment, and other features, as well as the evolving nature of the data center industry. It should be noted that although the proposed amendment recommends by-right development of data centers that meet certain requirements, as with any use or development, an SE is required to exceed the maximum height or FAR of the zoning district (where allowed), and an amendment to an approved rezoning with proffered uses or a specific plan of development is required to add a new use or modify an approved development plan.

For the C-3 and C-4 Districts, a use standard allows by-right data centers up to 40,000 square feet. An option is included to consider always requiring an SE in C-3 and C-4; these are

¹Abbreviations used in the table: SF – square feet; GFA – gross floor area; FAR – floor area ratio.

commercial office districts, and the only other industrial uses permitted in these districts are goods distribution hub and small-scale production establishment.

While data centers are currently permitted in the areas designated as Town Center and Convention/Conference Center within the PRC District, no existing or approved data centers are currently located in the PRC District. The purpose of the PRC District is to provide a variety of housing types, employment opportunities, and commercial services in an orderly and creative arrangement. No other industrial uses are allowed in the PRC District except for craft beverage production establishment and small-scale production establishment – uses with a customer focus that is compatible with the Town Center and Convention/Conference Center areas. Therefore, the amendment shows an option to remove the permission for data centers in the PRC District. Additionally, in the planned districts, sometimes the proffers allow all or most of the uses permitted in the zoning district. To ensure that a data center is specifically planned for a particular location, the proposed amendment revises the permissions in the applicable planned districts to SE (PDC, PTC, and the PRC District if the use is not removed).

To provide flexibility for the Board, the permission options will be broadly advertised to allow the Board to adopt any permission (other than special permit) – permitted, SE, permitted if shown on an approved development plan, and/or not permitted in certain districts. If the Board revises the permissions to require an SE in all districts where permitted, the use standards discussed below would also be revised accordingly to remove the standards relating to maximum size and building design for by-right data centers.

Use Standards and Submission Requirements

Several new and revised standards are listed in Table 2 and further described below. Also, see the discussion below for advertised options not included in the table.

| | By-right standards | SE standards |
|---|---|---|
| Equipment screening/enclosure
<i>(revised)</i> | All districts | Same |
| Maximum building size
<i>(revised)</i> | C-3, C-4: 40,000 SF
I-2, I-3, I-4: 80,000 SF | Size limit may be exceeded;
zoning district FAR still applies |
| Setback from residential
<i>(new)</i> | 200 feet | SE for lesser distance |
| Distance from Metro
<i>(new)</i> | ½ mile | SE for lesser distance |
| Noise study <i>(new)</i> | All districts | Same |
| Building design standards
<i>(new)</i> | Conventional districts: main entrance feature; variation in façade surface every 150 feet; minimum 30% fenestration | SE or development plan: submit architectural sketches, sight line studies; variation in massing if within 200 feet of residential |

Table 2: Data Center Use Standards (Staff Recommended Options)

The revised or new use-specific standards are intended to mitigate potential impacts. Certain standards that apply to by right development could be modified as part of an SE process. In addition, the text includes references to advertised ranges for consideration, and the advertising for the amendment will allow for consideration of new or revised use-specific standards.

- Screening and enclosure of equipment – The Zoning Ordinance currently requires equipment for data centers (HVAC, generators, etc.) to be in an enclosed building, except in the I-4, I-5, and I-6 Districts. The proposed amendment includes several revisions to this standard: (a) removes the exception for the I-4, I-5, and I-6 Districts; (b) adds that the purpose of the provision is to provide visual screening and reduce noise; (c) requires equipment to be fully enclosed, except where the Director of Land Development Services determines that it is not mechanically feasible and adds a requirement for a screening wall if the equipment cannot be fully enclosed; and (d) adds a requirement for a screening wall for any accessory electrical substation.

The revisions recognize that certain types of systems, such as a cooling tower, cannot typically be located within an enclosed building. Cooling system equipment requires that the heat be able to dissipate to the outdoor atmosphere. The manufacturer of the equipment sets the required clearances for the equipment to operate properly, including the types of enclosures. If the manufacturer specifications do not permit full enclosure, sound walls and equipment screens would still be required to mitigate visual and noise impacts. It should also be noted that, in accordance with [subsection 5100.2.C\(2\)](#) of the Zoning Ordinance, if the equipment and other rooftop accessory structures cumulatively exceed 25 percent of the roof area, then the mechanical equipment counts as part of the building height, which is limited by the zoning district regulations.

- Size thresholds for by-right data centers – The potential for certain localized impacts of data centers increases in accordance with the gross floor area. Size thresholds allow data centers to be approved by right up to a certain size, or larger with SE approval. The size thresholds are intended to reflect the purpose of each zoning district. In order to guide data centers to locate in the I-5 and I-6 Districts, the heaviest industrial areas in the County, no additional building size limit is proposed for these districts. Each district's limitations on FAR and height would continue to apply.
 - C-3 and C-4: These are commercial office districts. Recognizing that data centers are industrial uses which may not be compatible with the surrounding development, the Zoning Ordinance currently allows a maximum size of 40,000 square feet of gross floor area, or a larger size with repurposing of an existing building or with SE approval in a new building. The standard is clarified to indicate that the maximum size applies per building. Several options are shown for this use standard:
 - (a) Remove the allowance for a larger by-right size with repurposing. Given the specific needs for a data center, repurposing of an existing building would likely require

- extensive building and site modifications. If a large building were to be proposed for a data center use, an SE would provide for a site-specific review for compatibility with surrounding uses.
- (b) Add a maximum size of 200,000 square feet of GFA for a by-right data center through repurposing.
 - (c) Maintain the current Zoning Ordinance provisions.
 - (d) If the permissions in C-3 and C-4 are changed to always require an SE, then the standard for a maximum size would be deleted.
- I-2, I-3, and I-4: The proposed amendment adds the I-4 District to the standard that currently applies to I-2 and I-3, which limits the maximum size of a data center to 80,000 square feet of gross floor area. As with the standard that applies to C-3 and C-4, the Zoning Ordinance currently allows the 80,000-square-foot limit to be exceeded with SE approval or with the repurposing of an existing building. The standard is clarified to indicate that the size applies per building. Options are included to remove the allowance for a larger by-right size with repurposing or to add a maximum size of 200,000 square feet of GFA for a data center proposed by right through repurposing.
- Setback from residential – Setbacks can minimize potential visual and noise impacts on surrounding areas. A new standard is included that requires a data center building and/or its equipment (e.g., HVAC, generators) to be located a minimum distance from property with residential zoning or use, and a lesser distance could be allowed with SE approval. In addition to requiring the setback from any property developed with a residential use, the proposed standard refers to an “R district” which includes both conventional and planned district residential areas in accordance with subsection [9100.11](#) of the Zoning Ordinance. The proposed standard includes a setback of 200 feet, but up to 500 feet will be advertised for consideration. This setback is based on a review of other setbacks in the Zoning Ordinance for uses which can have impacts on adjacent residential property including, among other uses, 100 feet for a barn for livestock or poultry with an agricultural operation, 150 to 250 feet for an extraction activity, and 250 feet for a crematory. In addition, Loudoun County, with the recent update of its zoning ordinance, requires a 200-foot setback for a data center from residential property. Staff considered the possibility that a data center could be constructed or approved before an adjacent rezoning to an R district and how that could create a nonconformity. But staff nevertheless recommends a firm 200-foot setback, as any potential future data center expansion was not part of the original approval and should, at that point, have to account for an adjacent residential district or use.
 - Distance from Metro – Because of the expectation for pedestrian activity and active street fronts, and the desire to put high-population and employment centers near transit, data centers would not generally be compatible with the type of development planned for transit station areas and other areas near Metro stations. Therefore, a standard is included that would not allow a data center within ½ mile of a Metro station entrance without SE approval. The SE approval would allow an innovative data center form, such as wrapping a building with active uses, to be accommodated on a site-specific basis. The ½-mile distance is in accordance with the higher density/intensity planned for these areas in the

Comprehensive Plan. An advertised option to consider any distance up to one mile is included.

- Noise study – To ensure that data centers incorporate the features needed to mitigate potential noise impacts and comply with the Noise Ordinance, the amendment includes a use standard and submission requirements for a noise study to be submitted for by-right data centers as well as those undergoing rezoning or SE review. The standard also requires a post-construction noise study to confirm compliance with the Noise Ordinance prior to issuance of a Nonresidential Use Permit (NonRUP). Noise studies have been submitted as part of the review of certain data centers within Fairfax that have been approved by a rezoning or SE, and are required by other jurisdictions, including Loudoun County. The proposed standard requires that, prior to site plan approval and prior to issuance of the first NonRUP, a noise study demonstrate, to the Zoning Administrator’s satisfaction, that the proposed operation of the data center will comply with the Noise Ordinance. The noise modeling would address the worst-case scenario, including all cooling equipment at full operational load. The Noise Ordinance includes exceptions for the routine testing and maintenance of backup generators (between 7 a.m. – 9 p.m. for up to two hours per day) and the emergency use of generators during a power outage.
- Building design – A data center is an industrial building, and many have large blank façades. To facilitate a high-quality building design, standards are proposed for by-right data centers. The draft standards are objective and would require building designs that include a main entrance feature, façade variation, and a minimum amount of fenestration design features, which can include faux windows. For data centers undergoing rezoning or SE review, architectural renderings and sight-line studies would be required to demonstrate that the building would be reflective of a high-quality design. For data centers that are closer to residential areas, a variation in massing would also be required, such as changes in the building height.

In addition to the use-specific standards, all SE applications are reviewed for conformance with the general SE standards in the Zoning Ordinance and must be in harmony with the Comprehensive Plan. The general SE standards ([subsection 4102.1.F](#)) include, among other standards, that the proposed use must not adversely affect the use or future development of neighboring properties. The Comprehensive Plan review includes the Policy Plan and any site-specific text and may recommend that issues such as green building and renewable energy commitments, stormwater quality, and other environmental topics be addressed. On December 6, 2022, the Board authorized consideration of a [Comprehensive Plan amendment](#) to update the Countywide Policy Plan. The first stage of community engagement is scheduled to begin in the summer of 2024.

Several topics are not addressed in the proposed standards for the Zoning Ordinance amendment.

- Fuel tanks – As recommended in the report issued on January 9, 2024, staff further reviewed whether standards should be added for surface grading, berms, or other

containment around fuel tanks. The Virginia Code includes pollution prevention standards that apply to aboveground storage tanks.² The County requires permitting and inspection of diesel fuel or gasoline storage tanks through the Office of the Fire Marshal.³ Based on input from the Office of the Fire Marshal, no ruptures of tanks that meet the current requirement for double-walled construction have occurred, and no spills have occurred during re-fueling. In staff's analysis, the current regulations provide appropriate protection, and staff has not identified the need for additional regulations at this time.

- Energy demand – Energy transmission and usage are regulated at the state level by the State Corporation Commission. Aside from the context of zoning incentives, the Virginia Code does not authorize the County to regulate energy efficiency or to require the use of renewable energy directly through the Zoning Ordinance. The Zoning Ordinance currently requires SE approval for an increase in FAR, and that process provides for consideration of Comprehensive Plan policies, which include energy efficiency and use of renewables. The new building code standards that apply to data centers provide comprehensive guidelines for optimizing energy efficiency, indoor air quality, and sustainable building design. For projects undergoing rezoning or SE review, LEED certification is recommended, and commitments are typically obtained. LEED certification addresses energy efficiency and incorporates additional sustainability and design principles.
- Air quality – The emergency backup generators used by data centers are regulated by the Virginia Department of Environmental Quality (VDEQ) and the County does not have the authority to impose more stringent emissions standards. Encouragingly, it appears that the data center industry is trending toward use of Tier IV generators that have reduced emissions.
- Cooling water discharge – Some data centers (like other large commercial and industrial buildings) use cooling towers. The discharge from a cooling tower requires permitting, whether it is connected to the wastewater system or the stormwater system.⁴ If a cooling tower discharges to the stormwater system, permitting is required by VDEQ, with effluent limits established for certain pollutants.⁵ The stormwater discharge permit also requires ongoing effluent monitoring and reporting to ensure compliance with established pollutant limits. Due to stringent stormwater quality standards, data centers typically elect to discharge to the wastewater system. Discharge to this system requires review in conjunction with the plumbing permit, with limits on constituents established for the protection of the receiving treatment plant and the water body receiving its treated discharge. As described in the January 9, 2024, Data Center Report, there may be a concern about concentrated salts in the discharge, particularly within the sewer collection area of the Upper Occoquan Service Authority's (UOSA) Water Reclamation Plant (WRP) which treats wastewater for releases to the Occoquan Reservoir, one of the County's public water

² Chapter 91, Virginia Administrative Code: <https://law.lis.virginia.gov/admincode/title9/agency25/chapter91/>

³ Fuel storage tank program: [https://www.fairfaxcounty.gov/plan2build/fuel-storage-tanks#:~:text=Tank\(s\)%20capacity%20of%20500,and%20plan%20reviews%20may%20apply.](https://www.fairfaxcounty.gov/plan2build/fuel-storage-tanks#:~:text=Tank(s)%20capacity%20of%20500,and%20plan%20reviews%20may%20apply.)

⁴ Cooling tower permitting: <https://www.fairfaxcounty.gov/publicworks/stormwater/cooling-towers>

⁵ VPDES general permit: <https://law.lis.virginia.gov/admincode/title9/agency25/chapter196/section70/>

supplies. Additional information about the contribution of data centers to sodium levels is needed and DPWES is partnering with the Virginia Tech Occoquan Watershed Monitoring Lab to monitor known and suspected sodium sources, including data center, industrial laundry, and residential discharges in the County's portion of the UOSA sewershed, with results expected in the fall 2024. While UOSA has addressed sources of sodium on a case-by-case basis, there is no enforceable federal or state standard, and UOSA has not granted the County authority to regulate sodium or require pre-treatment for sodium. UOSA is re-evaluating its local limits for the WRP, including whether to establish a new local limit for sodium. Additionally, it may be possible for guidance to be included in the Comprehensive Plan.

- Noise Ordinance – Consideration of revising the exceptions for the use or testing of backup generators would require amending the Noise Ordinance, which is a separate chapter in the County Code. Additionally, any study of lower sound frequencies would need to be conducted and considered as part of a Noise Ordinance amendment.

Community Outreach

Following the Board Matter and authorization on March 19, 2024, staff held four community meetings to discuss draft text that was posted in advance of the meetings. The meetings were broadly advertised, and the recordings are posted on the project [website](#). Comments have also been submitted via email. The draft text was discussed at the Planning Commission Infrastructure Committee meeting of May 9, 2024, as well. Feedback has included concerns about energy demand, noise, aesthetics, proximity to residential, and other potential impacts of data centers.

Summary

Overall, the proposed amendment would strengthen the standards for data centers, including maximum sizes, setbacks, noise, and building design. Where options are presented in the amendment text, staff recommends Option 1. In addition, it is recommended that the amendment become effective at 12:01 a.m. on the day following adoption.

Proposed Text

In the revisions shown below, text to be deleted is identified with ~~strike-through~~ and text to be added is underlined.

ARTICLE 4 - USE REGULATIONS

4101. Use Tables

INSTRUCTION: In Table 4101.1, revise the permissions for Data Center from P to P or SE in I-4, I-5, I-6; and in Option 2, revise the permission from P or SE to SE in C-3 and C-4, as shown below. In Table 4101.2, Option 1 removes the permission for a data center in the PRC District, and both options revise the planned district permissions to SE. ***In addition to the options shown below, advertise all options for permissions (other than SP) – P and/or SE and/or if shown on a development plan for planned districts; or not permitted in certain districts.***

3. Use Table for Residential, Commercial, and Industrial Districts

TABLE 4101.1: Use Table for Residential, Commercial, and Industrial Districts

P = permitted; SE = special exception; SP = special permit; blank cell = not allowed

A = allowed as accessory use only; A+ = permitted as an associated service use; AP = allowed with approval of administrative permit

| Use | Residential Districts | | | | | | | | | | | | | | Commercial Districts | | | | | | | | Industrial Districts | | | | | | Use-Specific Standards
NOTE:
General Standards also apply | |
|---|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|-------|----------------------|-----|---------|---------|-----|-----|-----|-----|----------------------|-----|---------|---------|---------|---------|---|----------|
| | R-A | R-C | R-E | R-1 | R-2 | R-3 | R-4 | R-5 | R-8 | R-12 | R-16 | R-20 | R-30 | R-MHP | C-1 | C-2 | C-3 | C-4 | C-5 | C-6 | C-7 | C-8 | I-1 | I-2 | I-3 | I-4 | I-5 | I-6 | | |
| Industrial Uses | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Freight Movement, Warehousing, and Wholesale Distribution: uses involving the movement, storage, and distribution of goods. Goods are generally delivered to other firms or the final consumer. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data Center
OPTION 1 | | | | | | | | | | | | | | | | | P
SE | P
SE | | | | | | | P
SE | P
SE | P
SE | P
SE | P
SE | 4102.6.A |
| Data Center
OPTION 2 | | | | | | | | | | | | | | | | | P
SE | P
SE | | | | | | | P
SE | P
SE | P
SE | P
SE | P
SE | 4102.6.A |

4. Use Table for Planned Development Districts

TABLE 4101.2: Use Table for Planned Development Districts

✓ = permitted if shown on final development plan/PRC development plan and PRC plan;

✓/SE = permitted if shown on final development plan/PRC development plan and PRC plan, or as special exception if not on plan(s)

SE = special exception; SP = special permit; blank cell = not allowed

A = allowed as accessory use only; A+ = permitted as an associated service use;

AP = allowed with approval of administrative permit

| Use | PDH | | PRC | | | | | PDC | | PRM | | PTC | PCC | | Use-Specific Standards
NOTE: General Standards also apply |
|-----|-----------|-----------|-------------|---------------------------------|----------------|-------------|------------------------------|-----------|-----------|-----------|-----------|-----|-----------|-----------|--|
| | Principal | Secondary | Residential | Neighborhood Convenience Center | Village Center | Town Center | Convention/Conference Center | Principal | Secondary | Principal | Secondary | | Principal | Secondary | |

Industrial Uses

Freight Movement, Warehousing, and Wholesale Distribution: uses involving the movement, storage, and distribution of goods. Goods are generally delivered to other firms or the final consumer.

| | | | | | | | | | | | | | | | |
|--------------------------------|--|--|--|--|--|---------|---------|---------|--|--|--|---------|--|--|----------|
| Data Center
OPTION 1 | | | | | | ✓ | ✓ | ✓
SE | | | | ✓
SE | | | 4102.6.A |
| Data Center
OPTION 2 | | | | | | ✓
SE | ✓
SE | ✓
SE | | | | ✓
SE | | | 4102.6.A |

4102. Use Standards

INSTRUCTION: Revise the standards as shown below. Renumber/reletter as needed. *[Advertised options included below.]*

6. Industrial Uses

Freight Movement, Warehousing, and Wholesale Distribution

A. Data Center

Standards applicable to all data centers:

- (1) In all districts except the I-4, I-5, and I-6 Districts, To provide visual screening and reduce noise levels, all equipment necessary for cooling, ventilating, or otherwise operating the facility, including power generators or other power supply equipment, must be contained within an fully enclosed, except where determined by the Director not to be mechanically feasible, building where the use is located. This includes emergency power generators and other emergency power supply equipment. If the Director determines it is not mechanically feasible to fully enclose the equipment, it must be screened by a wall or similar barrier. In addition, any accessory electrical

substation must be screened by a wall or similar barrier. This standard does not apply to solar panels.

- (2) In the C-3 and C-4 Districts, the maximum building size is 40,000 square feet of gross floor area. However, this size limit may be exceeded:
- ~~(a)~~ If the use is located in a building existing on May 10, 2023; or **[OPTION 1: Delete (a) and combine (b) as part of (2) to read: However, this size limit may be exceeded with special exception approval in accordance with subsection 8100.3.]**
 - (a) **[OPTION 2]** If the data center use does not exceed 200,000 square feet of gross floor area ~~is located in a building existing on May 10, 2023~~ **(insert effective date of the amendment);** or
 - (a) **[OPTION 3]** If the use is located in a building existing on ~~May 10, 2023~~ **(insert effective date of the amendment);** or
 - (b) With special exception approval in accordance with subsection 8100.3.
- [OPTION 4: If the permissions for C-3 and C-4 are revised to always require an SE, delete standard (2)]**
- (3) In the I-2, ~~and I-3, and I-4~~ Districts, the maximum building size is 80,000 square feet of gross floor area. However, this size limit may be exceeded:
- ~~(a)~~ If the use is located in a building existing on May 10, 2023 **[OPTION 1: Delete (a) and combine (b) as part of (3) to read: However, this size limit may be exceeded with special exception approval in accordance with subsection 8100.3.]**
 - (a) **[OPTION 2]** If the data center use does not exceed 200,000 square feet of gross floor area ~~is located in a building existing on May 10, 2023~~ **(insert effective date of the amendment);** or
 - (a) **[OPTION 3]** If the use is located in a building existing on ~~May 10, 2023~~ **(insert effective date of the amendment);** or
 - (b) With special exception approval in accordance with subsection 8100.3.
- (4) Any data center building, equipment for cooling, ventilating, or otherwise operating the facility, power generator, or other power supply equipment must be located at least 200 feet from the lot line of an R district or a property developed with a residential use. A lesser distance may be allowed with special exception approval in accordance with subsection 8100.3. For the purpose of this provision, an R district does not include an area within a public street right-of-way. [option for a minimum distance up to 500 feet, and for a different distance within the 500-foot limit for I-5 and I-6 than other districts]
- (5) A data center building must be located at least one-half mile [up to one mile] from a Metro station entrance. A lesser distance may be allowed with special exception approval in accordance with subsection 8100.3.
- (6) Prior to site plan approval, a noise study must be submitted demonstrating to the Zoning Administrator's satisfaction that the operation of the data center will comply with the Noise Ordinance, Chapter 108.1 of the County Code. In addition, prior to issuance of a Nonresidential Use Permit, a post-construction noise study must be submitted demonstrating to the Zoning Administrator's satisfaction that the operation complies with the Noise Ordinance.

Standards when permitted by right:

- (7) A data center building must include a main entrance feature that is differentiated from the remainder of the building façade by a change in building material, pattern, texture, color, or accent material. The entrance feature must also either project or recess from the adjoining building plane.
- (8) All building façades must include:
 - (a) A change in the façade surface for every 150 horizontal feet of at least one of the following: building material, pattern, texture, color, or accent material; and
 - (b) Windows, doors, or similar fenestration design features such as faux windows, must be distributed horizontally and vertically across the façade and comprise a minimum of 30 percent of the individual façade.

Standards when permitted by development plan or special exception:

- (9) A data center building must be designed to minimize adverse visual impacts on surrounding development as demonstrated by the submission of elevations, architectural sketches, or sight line studies. The building should have a high-quality design as evidenced by the use of materials, color, and texture. If the building is located less than 200 feet *[distance to match the distance in A(4) above]* from an R district or a property developed with a residential use, it should include changes in building height or other design techniques to provide variation in building mass as viewed from the nearby residential district.

INSTRUCTION: Add rezoning and special exception submission requirements for a data center. Renumber as needed.

ARTICLE 8 - ADMINISTRATION, PROCEDURES, AND ENFORCEMENT

8101. Submission Requirements

2. Zoning Map Amendments (Rezoning)

E. Supporting Reports and Studies

The following additional information must be submitted:

(12) Data Center

For a rezoning to allow a data center, the application requires the following additional information:

- (a) A noise study demonstrating that the operation of the data center will comply with the Noise Ordinance, Chapter 108.1 of the County Code.

- (b) Architectural depictions of the proposed building and associated equipment as viewed from all lot lines and street lines.

3. Special Exceptions, Special Permits, and Variances

D. Additional or Modified Submission Requirements for Specific Special Exception Applications

The following are additional or modified submission requirements for special exception applications for:

(8) Data Center

- (a) A noise study demonstrating that the operation of the data center will comply with the Noise Ordinance, Chapter 108.1 of the County Code.
- (b) Architectural depictions of the proposed building and associated equipment as viewed from all lot lines and street lines.

ZO 112.1-2024-9
ZO 112.2-2024-8

ADOPTION OF AN AMENDMENT TO CHAPTERS 112.1 and 112.2
(ZONING)
OF THE 1976 CODE OF THE COUNTY OF
FAIRFAX, VIRGINIA

At a regular meeting of the Board of Supervisors of Fairfax County, Virginia, held in the Board Auditorium, Lobby Level, Government Center Building, 12000 Government Center Parkway, Fairfax, Virginia, on Tuesday, September 10, 2024, the Board after having first given notice of its intention so to do, in the manner prescribed by law, adopted an amendment to Chapters 112.1 and 112.2 (Zoning) of the 1976 Code of the County of Fairfax, Virginia, said amendment so adopted being in the words and figures following:

BE IT ORDAINED BY THE BOARD OF SUPERVISORS OF FAIRFAX COUNTY,
VIRGINIA:

Amend Chapters 112.1 and 112.2 (Zoning Ordinance), as follows

In Table 4101.1, revise the permissions for Data Center from P to P or SE in I-4, I-5, I-6. In Table 4101.2, remove the permission for a data center in the PRC District, and change the PDC and PTC permissions to SE.

3. Use Table for Residential, Commercial, and Industrial Districts

TABLE 4101.1: Use Table for Residential, Commercial, and Industrial Districts

P = permitted; SE = special exception; SP = special permit; blank cell = not allowed

A = allowed as accessory use only; A+ = permitted as an associated service use; AP = allowed with approval of administrative permit

| Use | Residential Districts | | | | | | | | | | | | | | Commercial Districts | | | | | | | | Industrial Districts | | | | | | Use-Specific Standards
NOTE: General Standards also apply | |
|---|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|-------|----------------------|-----|------|------|-----|-----|-----|-----|----------------------|-----|------|------|------|------|--|----------|
| | R-A | R-C | R-E | R-1 | R-2 | R-3 | R-4 | R-5 | R-8 | R-12 | R-16 | R-20 | R-30 | R-MHP | C-1 | C-2 | C-3 | C-4 | C-5 | C-6 | C-7 | C-8 | I-1 | I-2 | I-3 | I-4 | I-5 | I-6 | | |
| Industrial Uses | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Freight Movement, Warehousing, and Wholesale Distribution: uses involving the movement, storage, and distribution of goods. Goods are generally delivered to other firms or the final consumer. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data Center | | | | | | | | | | | | | | | | | P SE | P SE | | | | | | | P SE | P SE | P SE | P SE | P SE | 4102.6.A |

4. Use Table for Planned Development Districts

TABLE 4101.2: Use Table for Planned Development Districts

✓ = permitted if shown on final development plan/PRC development plan and PRC plan;

✓/SE = permitted if shown on final development plan/PRC development plan and PRC plan, or as special exception if not on plan(s)

SE = special exception; SP = special permit; blank cell = not allowed

A = allowed as accessory use only; A+ = permitted as an associated service use;

AP = allowed with approval of administrative permit

| Use | PDH | | PRC | | | | | PDC | | PRM | | PTC | PCC | | Use-Specific Standards
NOTE: General Standards also apply |
|---|-----------|-----------|-------------|---------------------------------|----------------|-------------|------------------------------|-----------|-----------|-----------|-----------|-----|-----------|-----------|--|
| | Principal | Secondary | Residential | Neighborhood Convenience Center | Village Center | Town Center | Convention/Conference Center | Principal | Secondary | Principal | Secondary | | Principal | Secondary | |
| Industrial Uses | | | | | | | | | | | | | | | |
| Freight Movement, Warehousing, and Wholesale Distribution: uses involving the movement, storage, and distribution of goods. Goods are generally delivered to other firms or the final consumer. | | | | | | | | | | | | | | | |
| Data Center | | | | | | | | SE | | | | SE | | | 4102.6.A |

Revise the data center standards in subsection 4102.6.A as shown below.

6. Industrial Uses

Freight Movement, Warehousing, and Wholesale Distribution

A. Data Center

Standards applicable to all data centers:

- (1)** To provide visual screening and reduce noise levels, any equipment necessary for cooling, ventilating, or otherwise operating the facility, including power generators or other power supply equipment, must be fully enclosed, except where determined by the Director not to be mechanically feasible based on the manufacturer specifications. If the Director determines it is not mechanically feasible to fully enclose the equipment, it must be screened by a wall or similar barrier. In addition, any equipment as referenced above that is located on the ground and any accessory electrical substation must be screened from view from abutting lots and from rights-of-way by a visually solid wall or a building. This standard does not apply to solar panels.
- (2)** In the C-3 and C-4 Districts, the maximum building size is 40,000 square feet of gross floor area. However, this size limit may be exceeded with special exception approval in accordance with subsection 8100.3.
- (3)** In the I-2, I-3, and I-4 Districts, the maximum building size is 80,000 square feet of gross floor area. However, this size limit may be exceeded with special exception approval in accordance with subsection 8100.3.
- (4) Minimum Distance from Residential**
 - (a)** Any data center building must be located at least 200 feet from the lot line of an R district or a property developed with a residential use.
 - (b)** If located on the ground, any equipment for cooling, ventilating, or otherwise operating the facility, including any power generator or other power supply equipment, must be either:
 - 1.** Located at least 300 feet from the lot line of an R district or a property developed with a residential use; or
 - 2.** Separated from the lot line of an R district or a property developed with a residential use by the principal data center building.
 - (c)** Lesser distances may be allowed with special exception approval in accordance with subsection 8100.3.
 - (d)** For the purpose of this provision, an R district does not include an area within a public street right-of-way.
- (5)** A data center building must be located at least one mile from a Metro station entrance. A lesser distance may be allowed with special exception approval in accordance with subsection 8100.3.
- (6)** Prior to site plan approval, a noise study must be submitted demonstrating to the Zoning Administrator's satisfaction that the operation of the data center will comply with the Noise Ordinance, Chapter 108.1 of the County Code. In addition, prior to issuance of a

Nonresidential Use Permit, a post-construction noise study must be submitted demonstrating to the Zoning Administrator's satisfaction that the operation complies with the Noise Ordinance.

Standards when permitted by right:

- (7)** A data center building must include a main entrance feature that is differentiated from the remainder of the building façade by a change in building material, pattern, texture, color, or accent material. The entrance feature must also either project or recess from the adjoining building plane.
- (8)** All building façades must include:
 - (a)** A change in the façade surface for every 150 horizontal feet of at least one of the following: building material, pattern, texture, color, or accent material; and
 - (b)** Windows, doors, or similar fenestration design features such as faux windows, must be distributed horizontally and vertically across the façade and comprise a minimum of 30 percent of the individual façade.

Standards when permitted by development plan or special exception:

- (9)** A data center building must be designed to minimize adverse visual impacts on surrounding development as demonstrated by the submission of elevations, architectural sketches, or sight line studies. The building should have a high-quality design as evidenced by the use of materials, color, and texture. If the building is located less than 200 feet from an R district or a property developed with a residential use, it should include changes in building height or other design techniques to provide variation in building mass as viewed from the nearby residential district.

Add rezoning and special exception submission requirements for a data center. Renumber as needed.

8101. Submission Requirements

2. Zoning Map Amendments (Rezoning)

E. Supporting Reports and Studies

The following additional information must be submitted:

(12) Data Center

For a rezoning to allow a data center, the application requires the following additional information:

- (a)** A noise study demonstrating that the operation of the data center will comply with the Noise Ordinance, Chapter 108.1 of the County Code.
- (b)** Architectural depictions of the proposed building and associated equipment as viewed from all lot lines and street lines.

3. Special Exceptions, Special Permits, and Variances

D. Additional or Modified Submission Requirements for Specific Special Exception Applications

The following are additional or modified submission requirements for special exception applications for:

(8) Data Center

- (a) A noise study demonstrating that the operation of the data center will comply with the Noise Ordinance, Chapter 108.1 of the County Code.
- (b) Architectural depictions of the proposed building and associated equipment as viewed from all lot lines and street lines.

Add provisions for the Data Centers Zoning Ordinance Amendment to subsection 2.B of Appendix 1, Provisions Relating to Previous Approvals.

Data Centers

- (a) Any site plan for a data center accepted for review on or before July 16, 2024, will be reviewed based on the provisions of the Zoning Ordinance in effect on July 16, 2024, if:

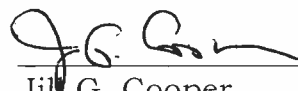
- 1. The site plan is approved by July 16, 2025;
- 2. The approval remains valid; and
- 3. The uses, features, and structures are established or constructed in accordance with approved plans and permits.

An approved plan may be revised notwithstanding this amendment if it does not aggravate conflicts with the amendment. Building permits and other related subsequent plan and permit submissions may be accepted and new approvals may be granted, consistent with the approved site plan. The applicant/owner may elect to have the above applications reviewed in their entirety under the provisions of this amendment.

- (b) For all applications for rezonings and related development plans, special exceptions, site plans, or building permits that include a data center approved on or before July 16, 2024, the applicant/owner may continue under their previous approval. Subsequent plan and permit submissions may be accepted and new approvals may be granted, consistent with those prior approvals. Revisions to such prior approvals may be approved if they do not aggravate conflicts with this amendment.

These amendments shall become effective on September 11, 2024, at 12:01 a.m.

GIVEN under my hand this 10th day of September, 2024.



Jill G. Cooper
Clerk for the Board of Supervisors

Noise Study Requirements
Data Centers Zoning Ordinance Amendment
Fall 2024

Subsection 4102.7.A(6):

- (6) Prior to site plan approval, a noise study must be submitted demonstrating to the Zoning Administrator's satisfaction that the operation of the data center will comply with the Noise Ordinance, Chapter 108.1 of the County Code. In addition, prior to issuance of a Nonresidential Use Permit, a post-construction noise study must be submitted demonstrating to the Zoning Administrator's satisfaction that the operation complies with the Noise Ordinance.
- The noise study needs to include the information necessary to determine compliance with the Noise Ordinance.¹
 - The study must be completed by a licensed professional engineer, specializing in acoustics or an engineer Board Certified by the Institute of Noise Control Engineers, using best practices and predictive acoustical modeling, including, among other factors, sound source location and directivity, and barrier effects of buildings and topography.
 - The study must include all proposed development on a lot or site plan. If the development will be completed in phases, the study must address both the proposed phase and the ultimate buildout at full occupancy of the proposed development.
 - Prior to site plan approval, the study will be submitted to the site plan record in PLUS and routed for review and approval by the Zoning Administrator or designee.
 - Prior to issuance of a Nonresidential Use Permit, a post-construction study must be submitted, including field measurements of the installed equipment to confirm that the built condition at full operational load meets the Noise Ordinance. If future equipment is planned to be installed in the building, the field measurements should be used to calibrate the model, and an analysis should be completed to include the existing and planned equipment.
 - The study must address the expected maximum noise output with all cooling and any other noise-generating equipment operating simultaneously at full operational load.
 - The Noise Ordinance includes an exception for the use of back-up generators during power outages resulting from storms and other emergencies. Therefore, the emergency use of back-up generators during power outages does not need to be addressed in the noise study.
 - The Noise Ordinance also includes an exception for the routine testing and maintenance of back-up generators if the testing: a) occurs between 7 a.m. and 9 p.m.; and b) does not occur for more than two consecutive or nonconsecutive hours in any one day. Such testing and maintenance of the back-up generators does not need to be addressed in the noise study. Any other testing and maintenance (i.e., outside of the hours of 7 a.m. to 9 p.m. or for more than two hours in a day) must be included in the noise study.
 - The noise study will provide the maximum sound levels and assess the impact on affected properties according to the Noise Ordinance standards:

¹ Noise Ordinance: <https://www.fairfaxcounty.gov/planning-development/zoning/noise-ordinance>

| MAXIMUM SOUND LEVELS | | | |
|--|-------------------|------------------------|--------------------|
| Use and Zoning District Classification | Time of Day | Continuous Sound (dBA) | Impulse Sound (dB) |
| Residential Areas (as defined herein) in Residential Districts | 7 a.m. to 10 p.m. | 60 | 100 |
| Residential Areas (as defined herein) in Residential Districts | 10 p.m. to 7 a.m. | 55 | 80 |
| Non-Residential Areas in Residential Districts | All | 60 | 100 |
| Mixed Use Area (as defined herein) | 7 a.m. to 10 p.m. | 65 | 100 |
| Mixed Use Area (as defined herein) | 10 p.m. to 7 a.m. | 60 | 80 |
| Commercial Districts | All | 65 | 100 |
| Industrial Districts | 7 a.m. to 10 p.m. | 72 | 120 |
| Industrial Districts | 10 p.m. to 7 a.m. | 65 | 100 |



Item Cover Page

HARDEE COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM REPORT

DATE: June 4, 2026

SUBMITTED BY: Brandy Crawford, County Manager's Office

ITEM TYPE: County Attorney

AGENDA SECTION: **COUNTY ATTORNEY**

SUBJECT: Procurement Policy Update

SUGGESTED ACTION: