



Leveraging Our Resourcefulness: A Framework for Success

Bridge Littleton, Mayor Town of Middleburg



Loudoun: A great place to live, work, play

Our Strengths

- ▶ Incredibly diverse County
- ▶ Balanced quality of life
 - ▶ Live, work, play
- ▶ Vibrant suburban and digital economy sectors
- ▶ Communities of excellence in our suburban areas
- ▶ Unique Towns and Historic Villages adding to the Loudoun Experience
- ▶ Natural and rural landscape and open space, robust farming community
- ▶ World class tourism destination
- ▶ Center for global travel with Dulles Airport

Our Challenges

- ▶ Infrastructure needs from 5% annual growth over the last 20 years
 - ▶ Our population doubled, twice
 - ▶ CNA: Parks, trails, amenities
- ▶ Extreme rise of land pricing putting pressure on County needs
 - ▶ Affordable/Attainable housing
 - ▶ School sites, industrial flex, etc.
- ▶ Loss of rural west, farming land, agro-tourism
- ▶ Threats to open space, farms, villages by cluster development
- ▶ Water and power to meet expected demand & cost of deployment

The Digital Economy in Loudoun

Advantage and Challenges



Advantages of Data Centers to Loudoun

- ▶ Incredible net positive on tax revenues for County budget
- ▶ Low impact on County services
 - ▶ Schools, policing, first responders, etc.
- ▶ Minimal traffic impacts
 - ▶ Low number of employees means less car trips per day
- ▶ Simple construction
 - ▶ Easy for adaptive reuse/replacement in future

WUSA9

VERIFY: Yes, at least 29% of Loudoun County's projected tax revenue is expected to come from data centers

The county is expecting to reap in \$576 million in computer equipment taxes from data centers in fiscal year 2023.



Challenges of Data Centers in Loudoun

- ▶ Visually unappealing
- ▶ Consuming large portions of eastern Loudoun land for single use
- ▶ Encroaching on residential areas
- ▶ Disproportionally raising land values, hurting other economic sectors viability
 - ▶ Affordable housing
 - ▶ Mixed use industrial
 - ▶ Schools
 - ▶ County amenities (parks, libraries, etc.)
- ▶ Large consumers of power and water - environmental concerns

HOME > NEWS > CONSTRUCTION & SITE SELECTION

Vantage Data Centers buys 10 acres in Sterling for \$27 million

Boston Properties sells for \$2.7 million an acre

October 18, 2022 By: Dan Swinhoe [Have your say](#)



Vantage has acquired a plot of land in Sterling, Virginia.

[BizJournal](#) reports that the company has acquired nearly 10 acres in Loudoun County from Boston Properties Inc. for \$27 million.

Local county property records show that the Boston-based real estate investment company last month sold the two adjacent undeveloped parcels located on the south side of Pacific Boulevard at Dresden Street to Vantage Data Centers.

Boston Properties had controlled the property for 20-plus years. Boston Properties acquired one parcel, totaling 3.99 acres, for \$5.4 million in 1998, according to public records. It bought the second, 5.8-acre piece in 2000 for an un-

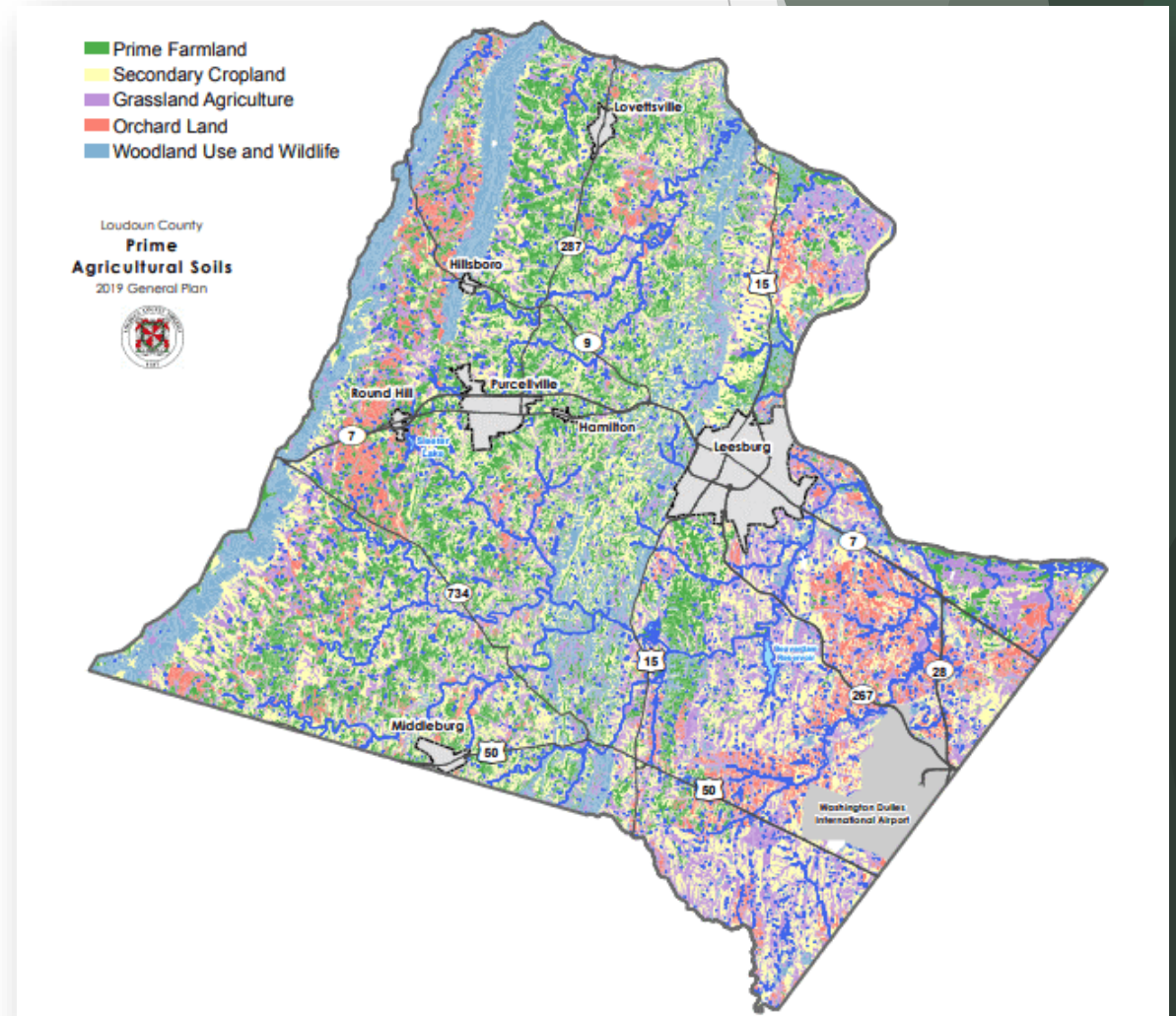


Rural Loudoun:

Advantages and Threats



Farming, Agro-Tourism, and Development Threats



Our Farms Contribute to Sustainable Economy

- ▶ Over \$500m in agro-tourism
- ▶ Supporting over 20,000 jobs
- ▶ Loudon's thriving tourism and farming economy are critically dependent on prime ag-soils
- ▶ While western Loudoun is rural in nature, only 35% of its acreage is the prime agricultural soil
- ▶ 80,000 acres out of 227,000 in total
- ▶ These 80,000 acres have the best combination of physical and chemical characteristics for sustained high yields of all varieties of crops
- ▶ Directly tied to economic output and food resilience

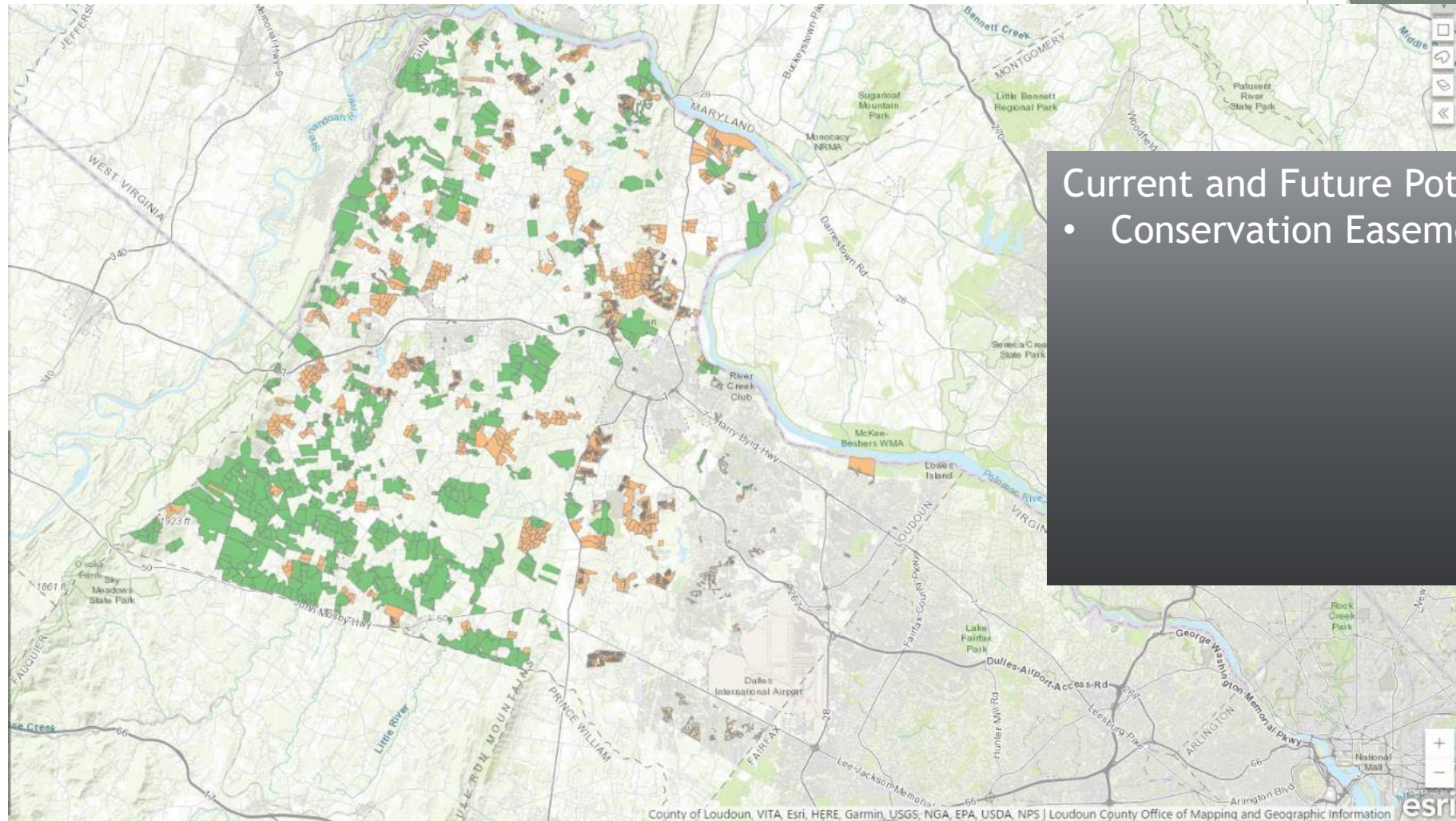


Farming, Agro-Tourism, and Cluster Development

- ▶ Cluster Development in RPA
- ▶ By-right use for most of western Loudoun (AR-North, AR-South)
- ▶ AR North - 20-acre minimum lot size, if clustered, 1 per 5 acres
- ▶ AR South - 40-acre minimum lot size, if clustered, 1 per 15 acres
- ▶ The number of units, & more importantly the coverage of acres that poses the real threat
- ▶ Once developed, farmland is lost forever

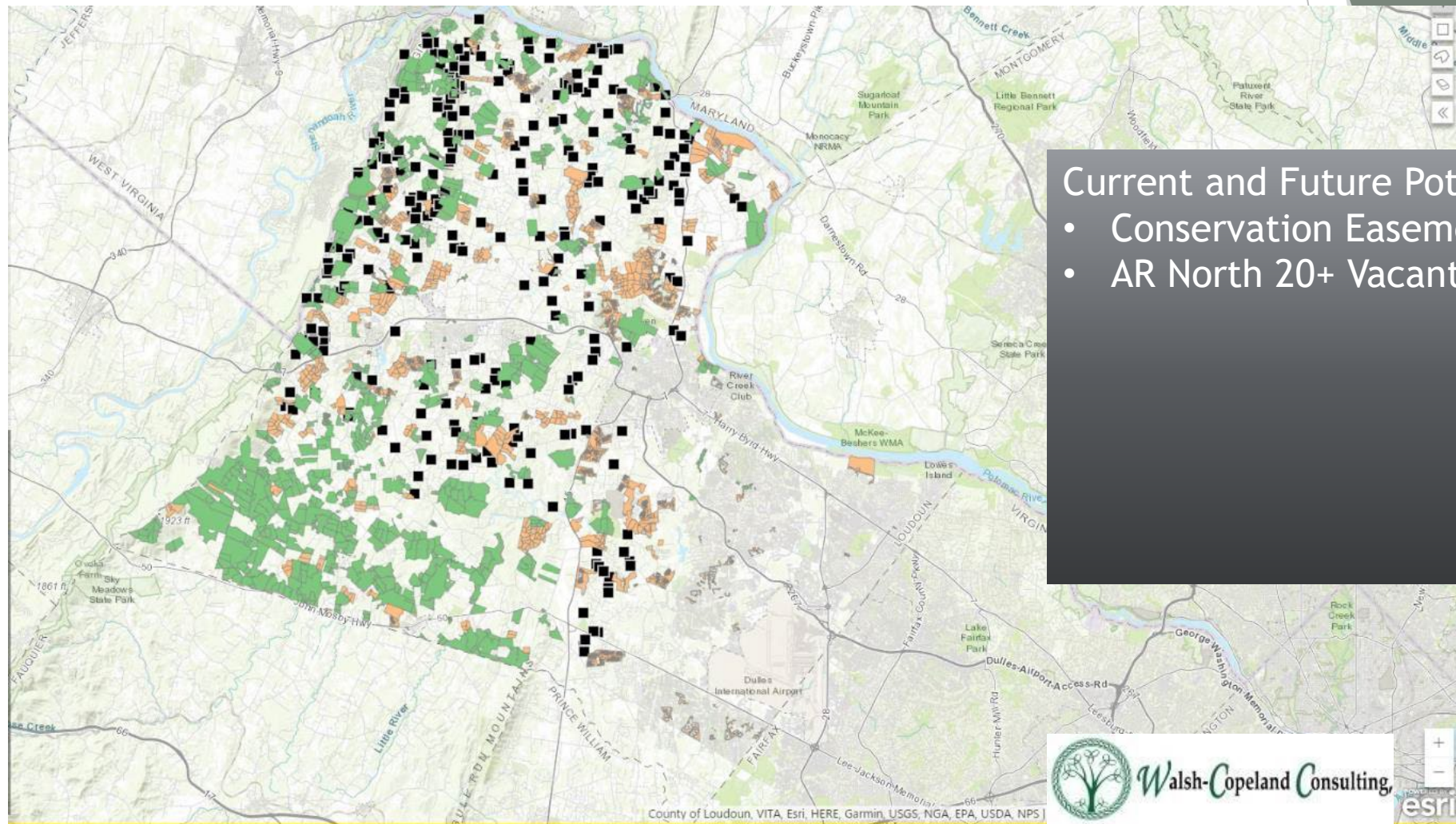


Loudoun: What could the next 50 years look like?



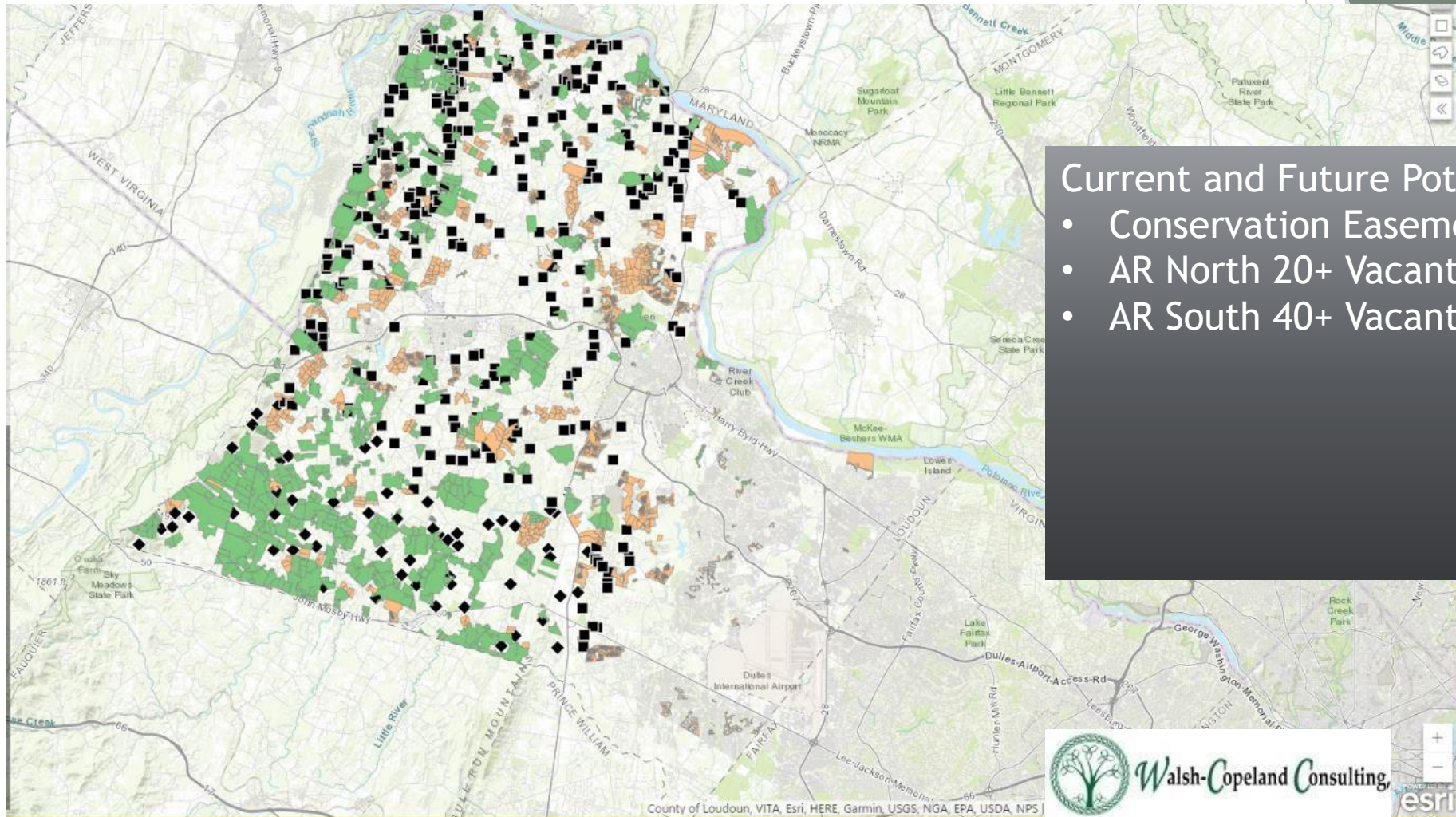
Data Source: Loudoun Mapping GeoHub files, 2022

Loudoun: What could the next 50 years look like?



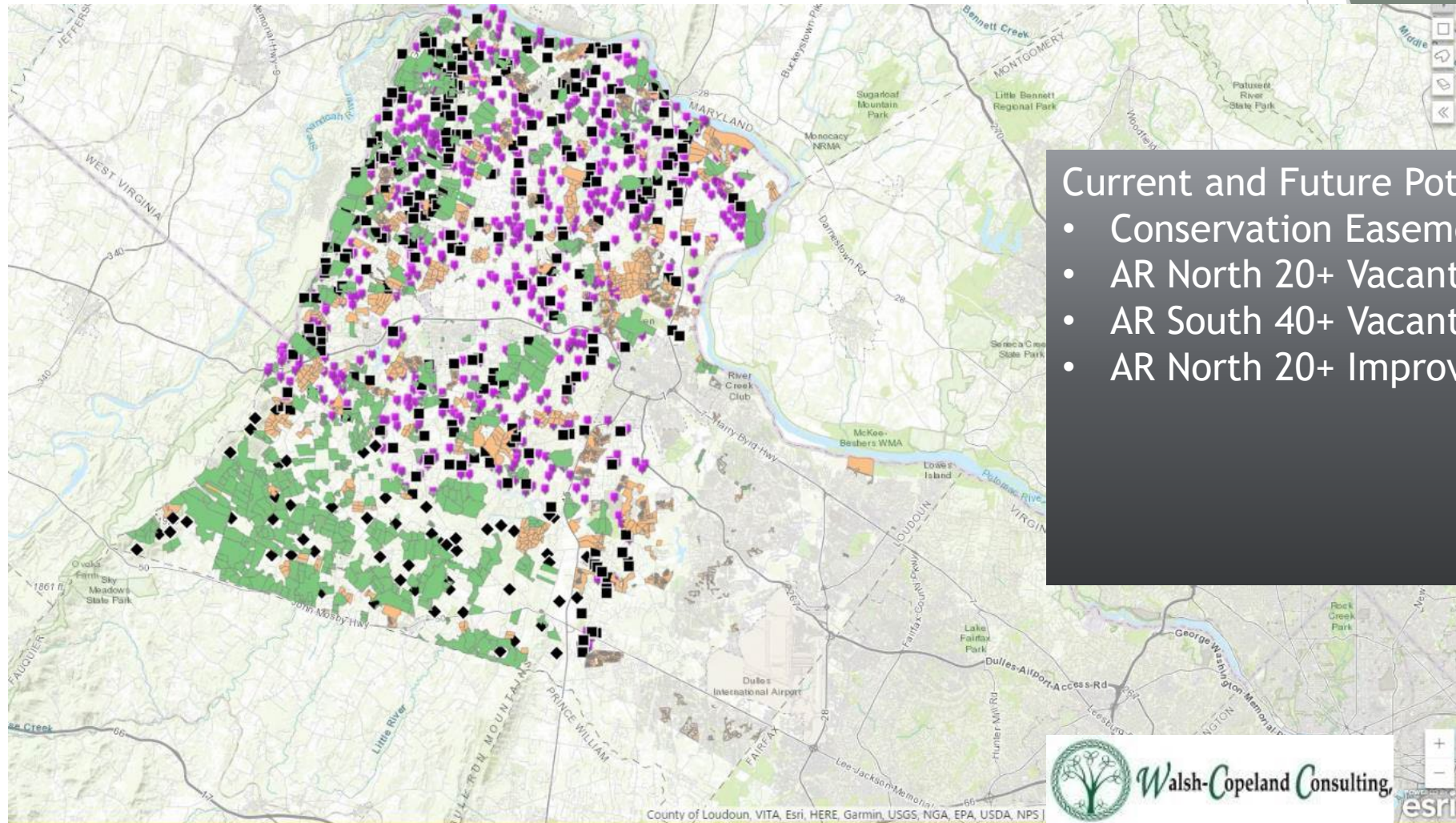
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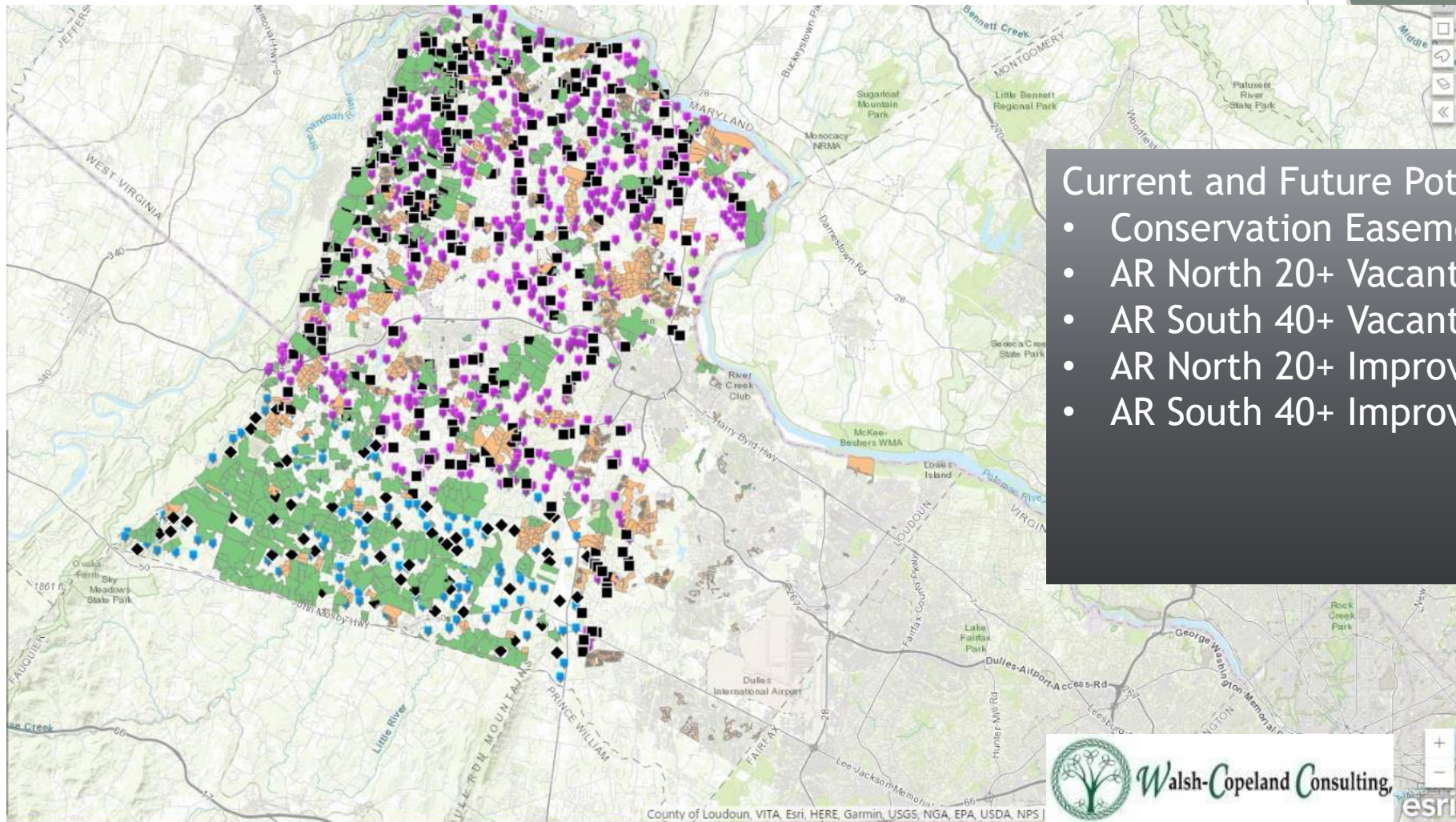
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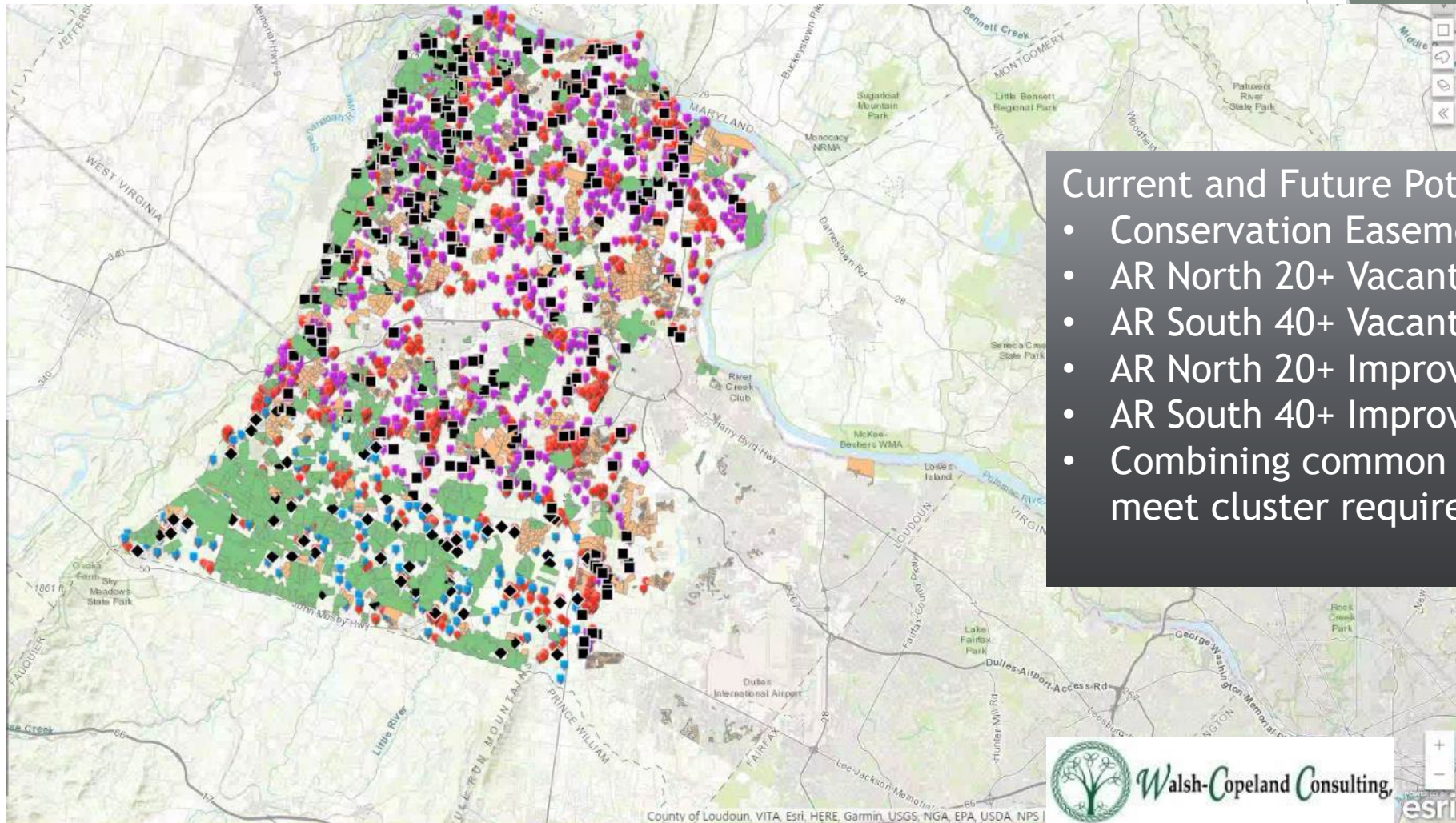
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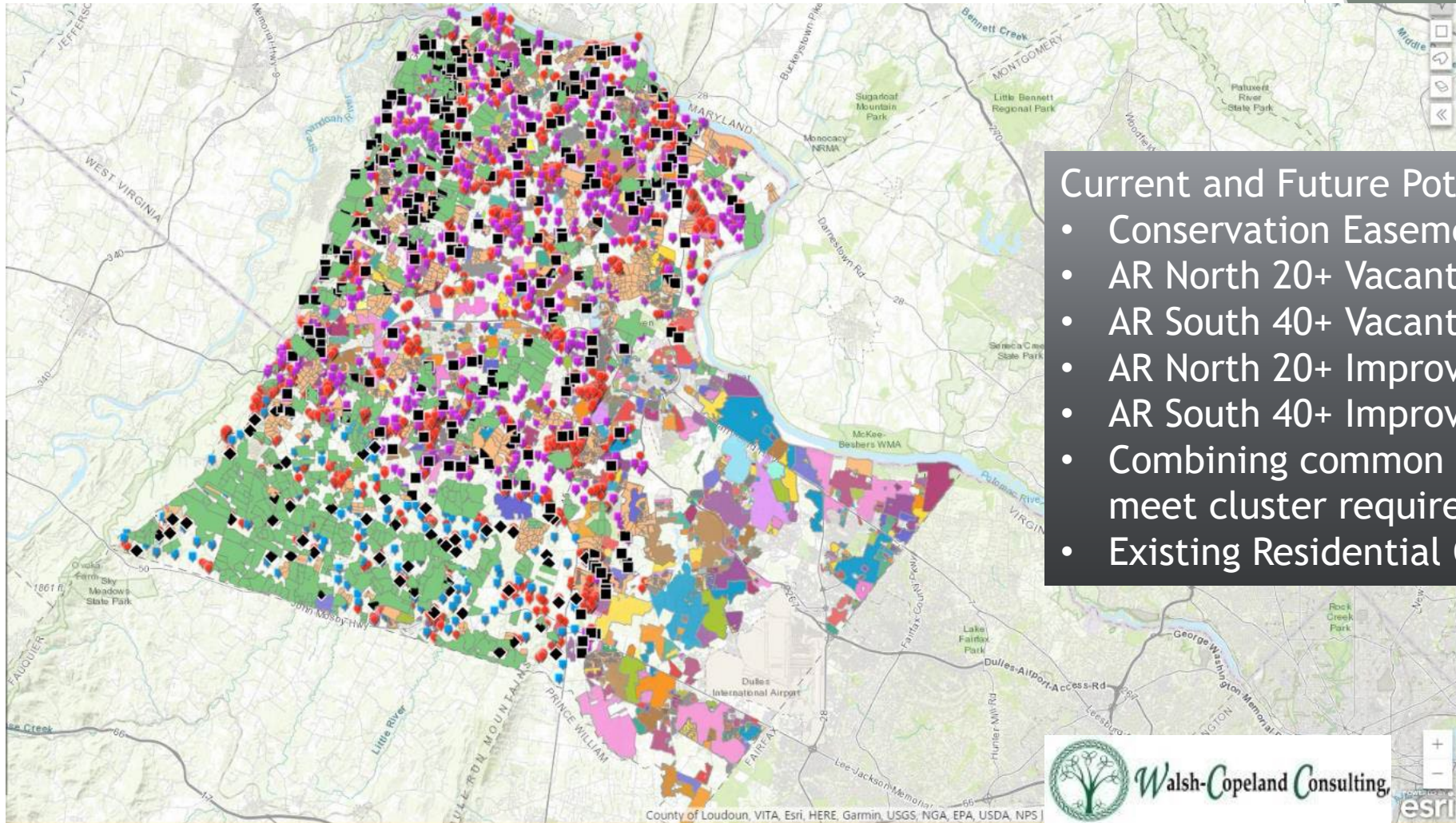
Data Source: Loudoun Mapping GeoHub files, 2022

Loudoun: What could the next 50 years look like?



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Loudoun Mapping GeoHub Story Map

[Potential Development of Prime Farmland Soils within the AR Zoning Districts \(arcgis.com\)](https://arcgis.com)

Potential Development of Prime Farmland Soils (Prime Soils) within the AR Zoning Districts

1 Prime Soils in the AR Zoning Districts

2 Parcels With Development Potential & Environmental Constraints

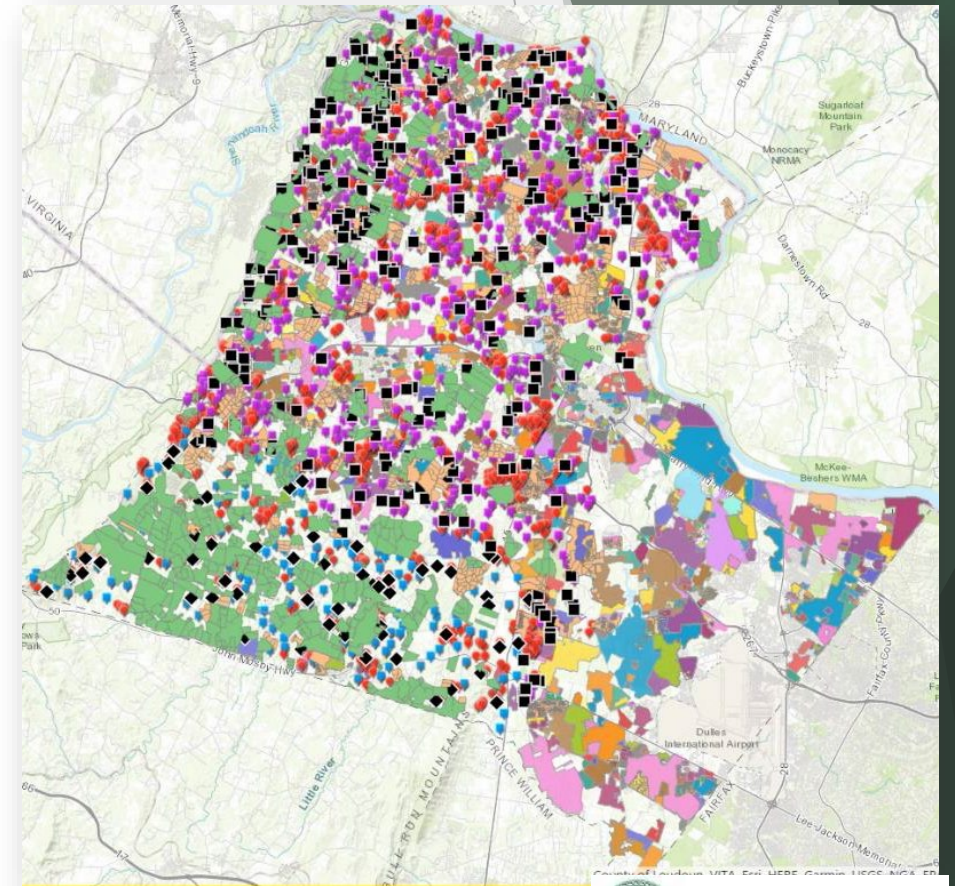
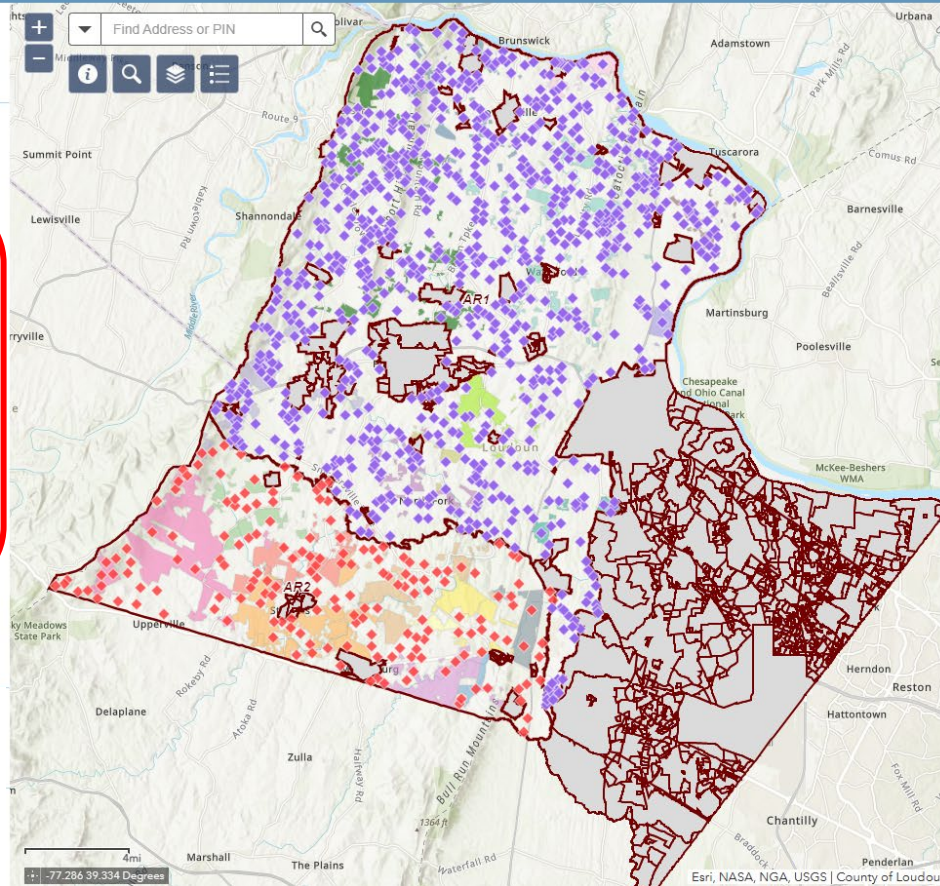
The interactive application in this tab identifies those parcels that are 20 acres and over (AR-1) and 40 acres and over (AR-2) that are outside conservation easements. The parcels outside of conservation easements have development potential due to the lack of permanent protection. The breakdown below indicates the total number of parcels and total acres for each set of parcels:

Rural-20: 893 parcels and 49,669.1 acres

Rural-40: 178 parcels and 20,644.5 acres

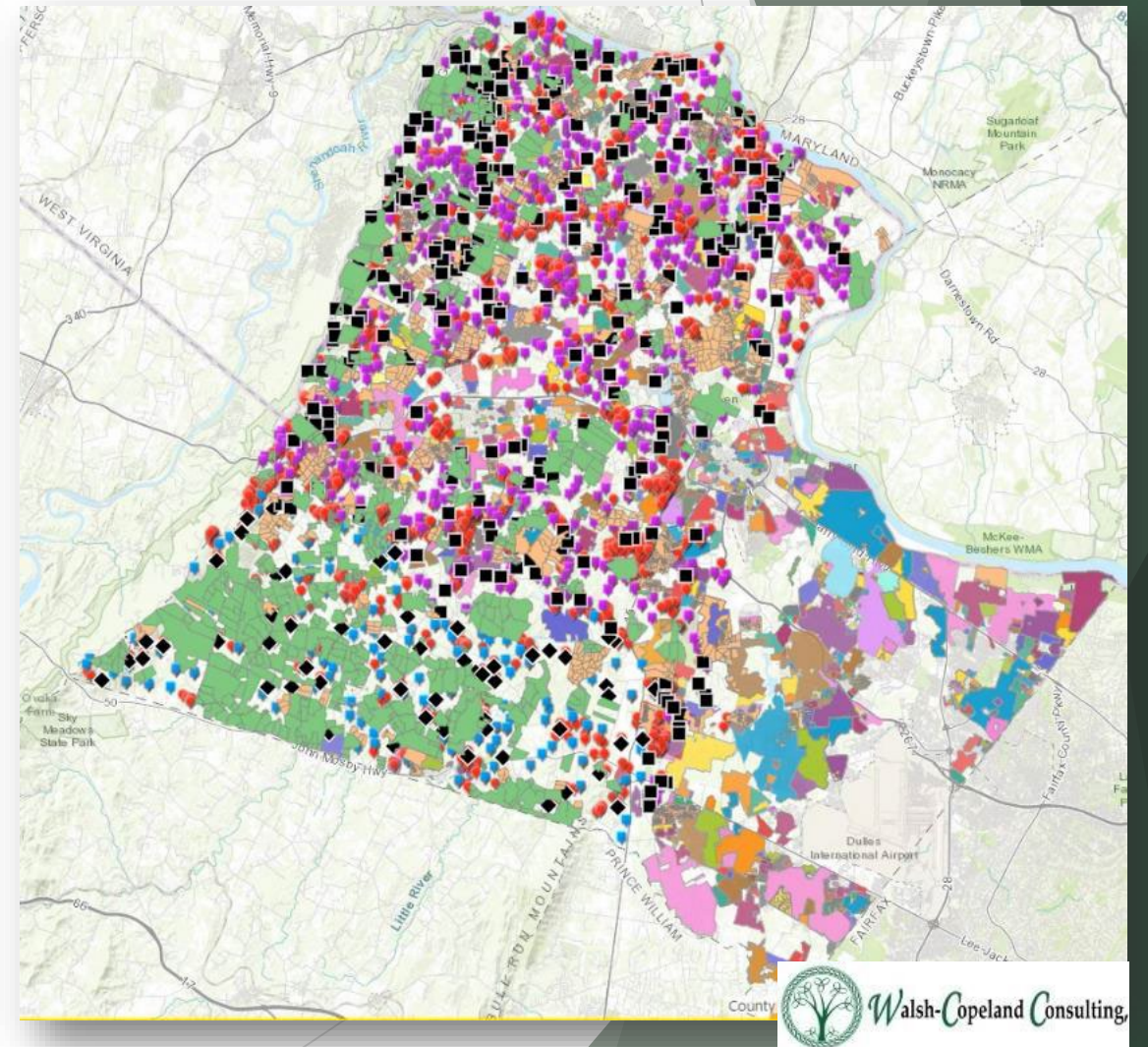
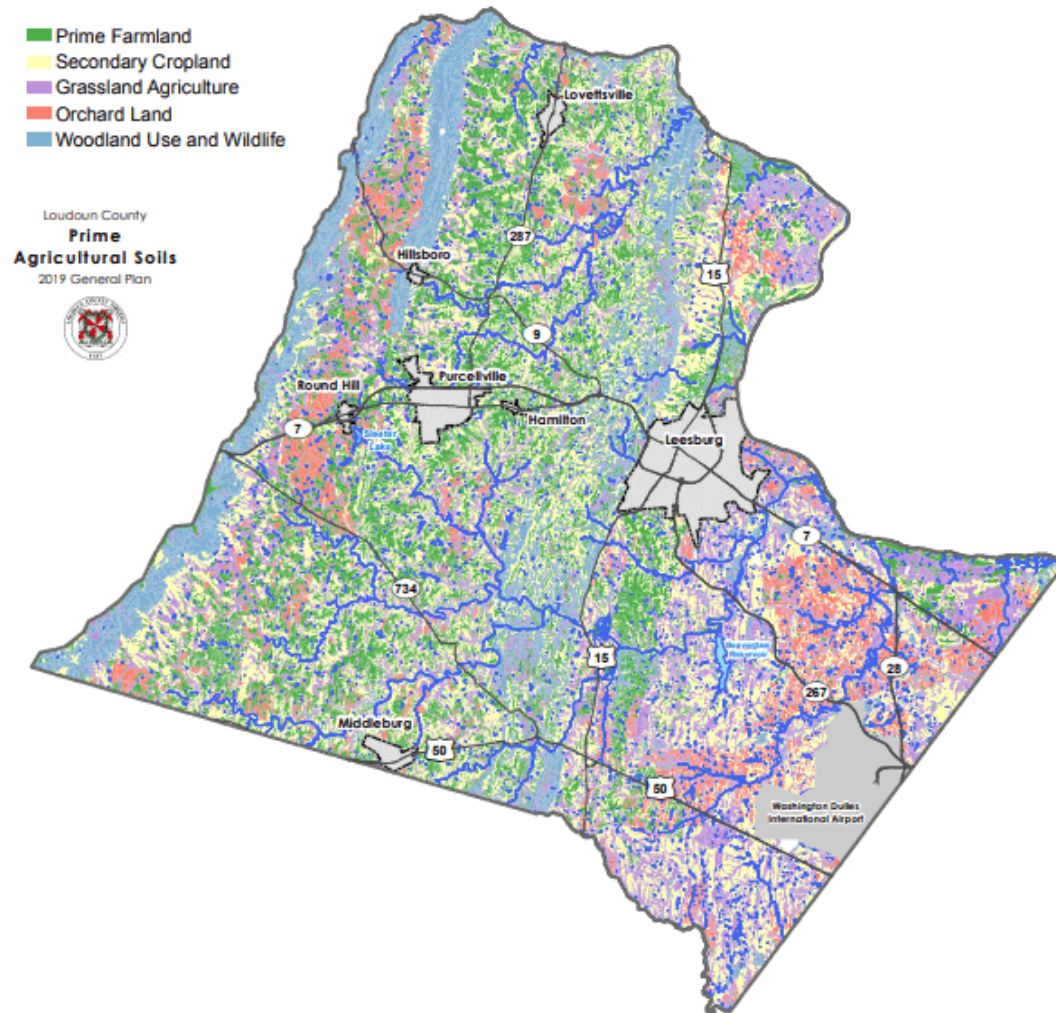
Parcels under 20 or 40 acres within the AR-1 and AR-2 zoning have the potential to be combined for future cluster developments. Therefore, this map also shows adjacent parcels with the same owner for which the total combined acreage is over 20 acres for those AR-1 parcels and over 40 acres for those AR-2 parcels.

In the map on the right, click on the magnifying glass in the upper left to search for an individual Agricultural & Forestal district, conservation easement, and residential project. A pop-up window provides the District's total acres and total prime soil acres.



"The parcels outside of conservation easements have development potential due to the lack of permanent protection. . . .Parcels under 20 or 40 acres within the AR-1 and AR-2 zoning have the potential to be combined for future cluster developments."

Loudoun Mapping Prime Farmland Soils: Development Pressure is Real



Data Centers in Loudoun

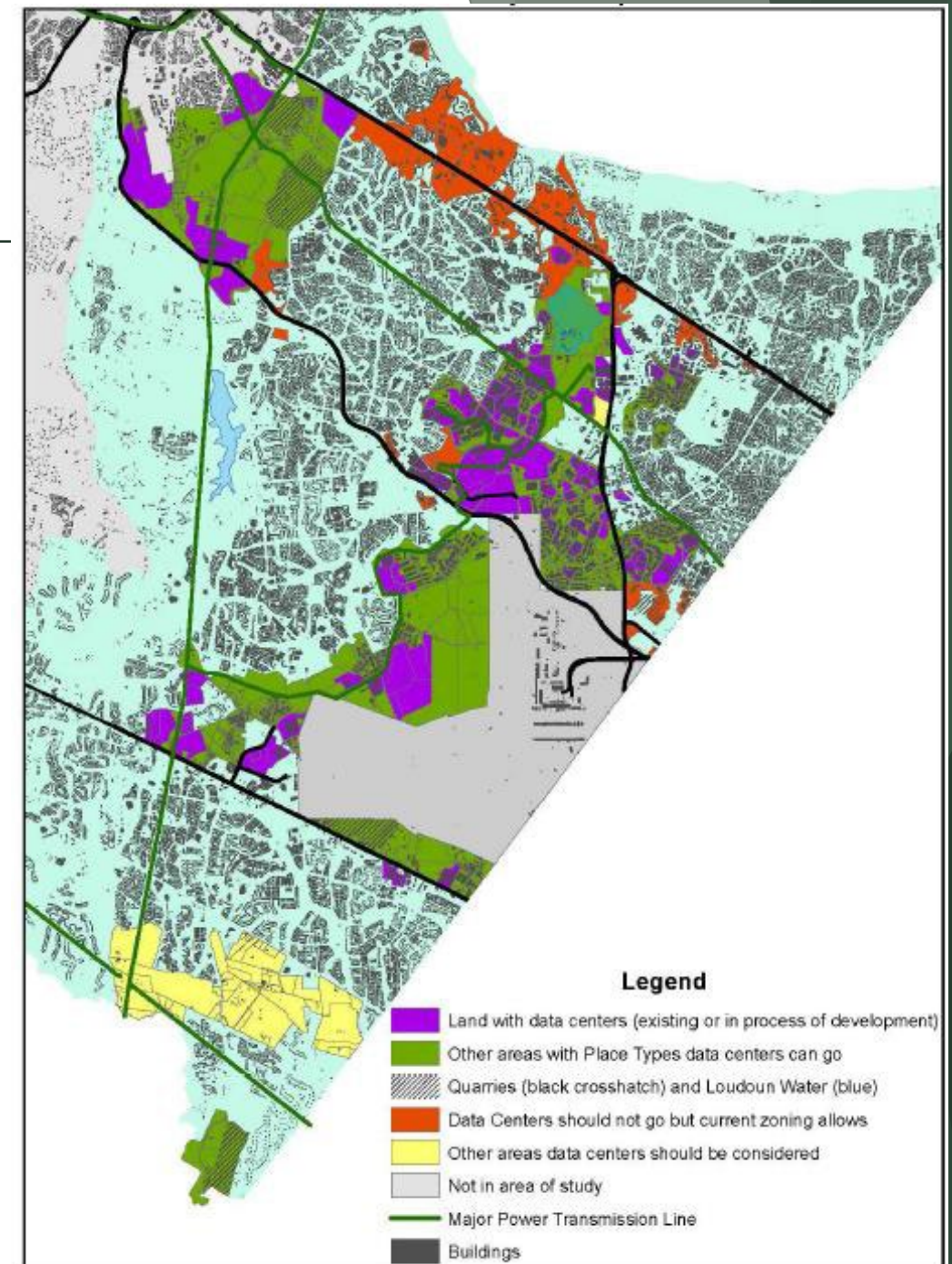
Current State, Future Plans, and
Alternatives



Data in Loudoun: The Numbers

- ▶ Approximately 30 million square feet of data centers in Loudoun County
 - ▶ 26 million built, 4 million under development
- ▶ LCED: 50 million sq.ft is right limit for Loudoun
 - ▶ LCED: We can accommodate 20 million more sq.ft
- ▶ Breakout from LCED in 2022:
 - ▶ Purple: data center, existing or in development
 - ▶ Approx 4,650 acres
 - ▶ Green: data centers can go but haven't yet
 - ▶ Approx 10,500 acres
 - ▶ Red: data centers should not go, but can
 - ▶ Approx 2,500 acres
 - ▶ Yellow: can't go, but should be considered
 - ▶ Approx 2,300

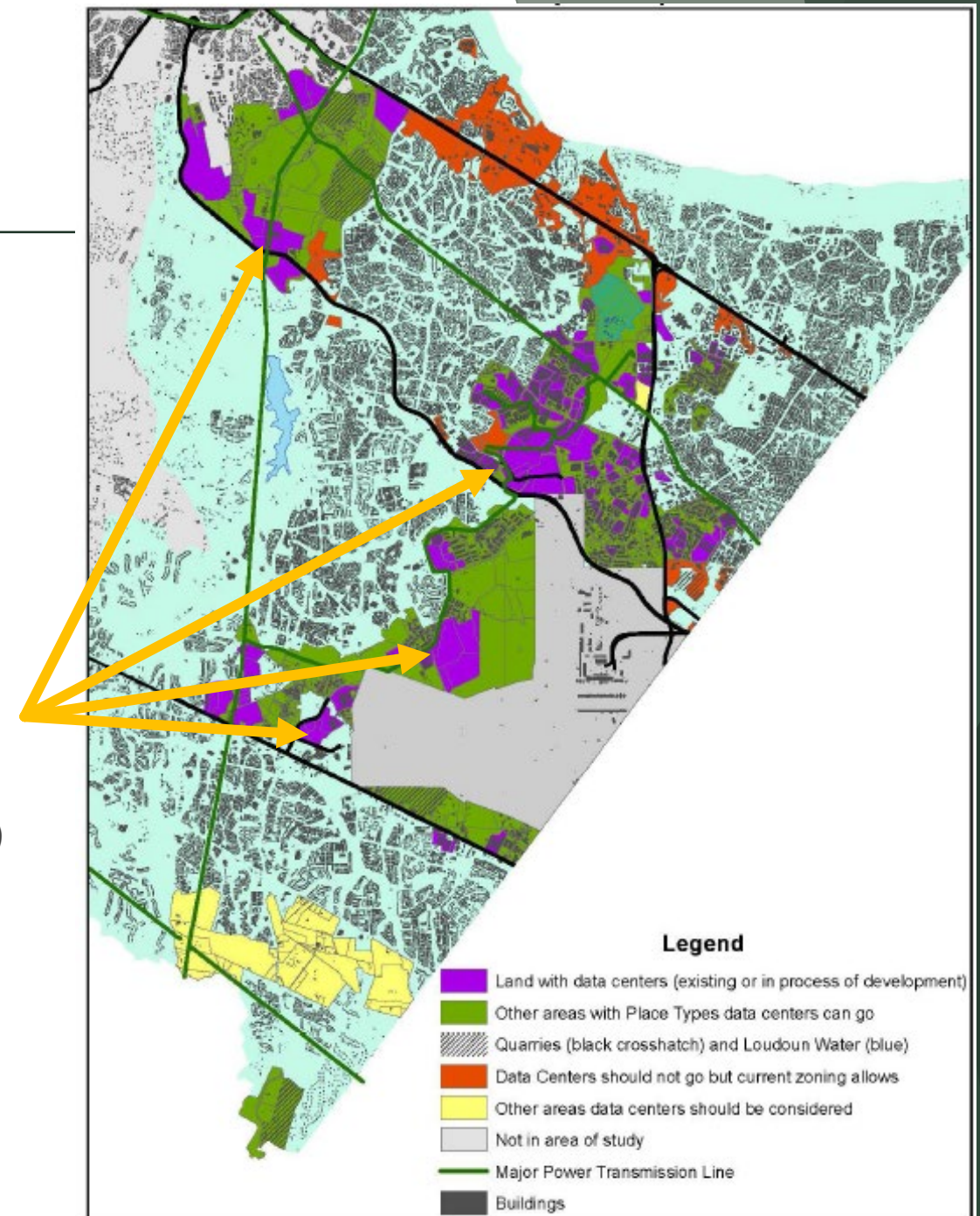
Source: Loudoun County Economic Development (LCED)



Data in Loudoun: The Numbers

- ▶ Purple: data center, existing or in development
 - ▶ To achieve 30 millions sq. ft of data centers, it has taken over 4,650 acres
 - ▶ Averaging 6,500 sq.ft of data center per acre
 - ▶ 1 acre = 43,000 sq.ft
- ▶ Why so little utilization? County zoning restricts how many acres can be covered, and how large the footprint can be
 - ▶ Lot Coverage Ratio (LCR), Floor Area Ration (FAR)
- ▶ PD-IP & PD-OP By Right for Data Centers
 - ▶ Approx .4 LCR allowed by right
 - ▶ Approx .6 FAR allowed by right
 - ▶ Height limited to 60 feet by right

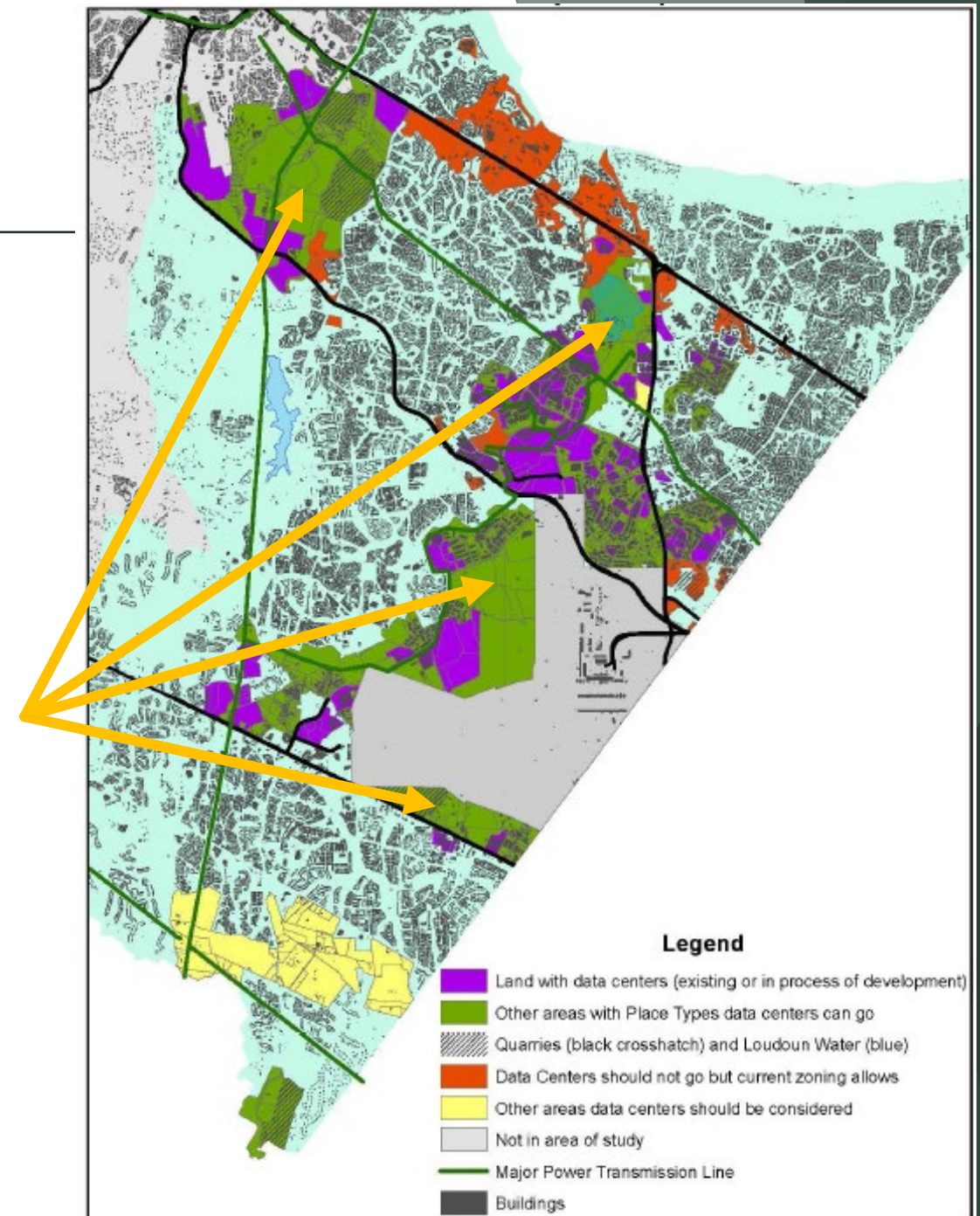
Source: Loudoun County Economic Development (LCED)



Data in Loudoun: The Numbers

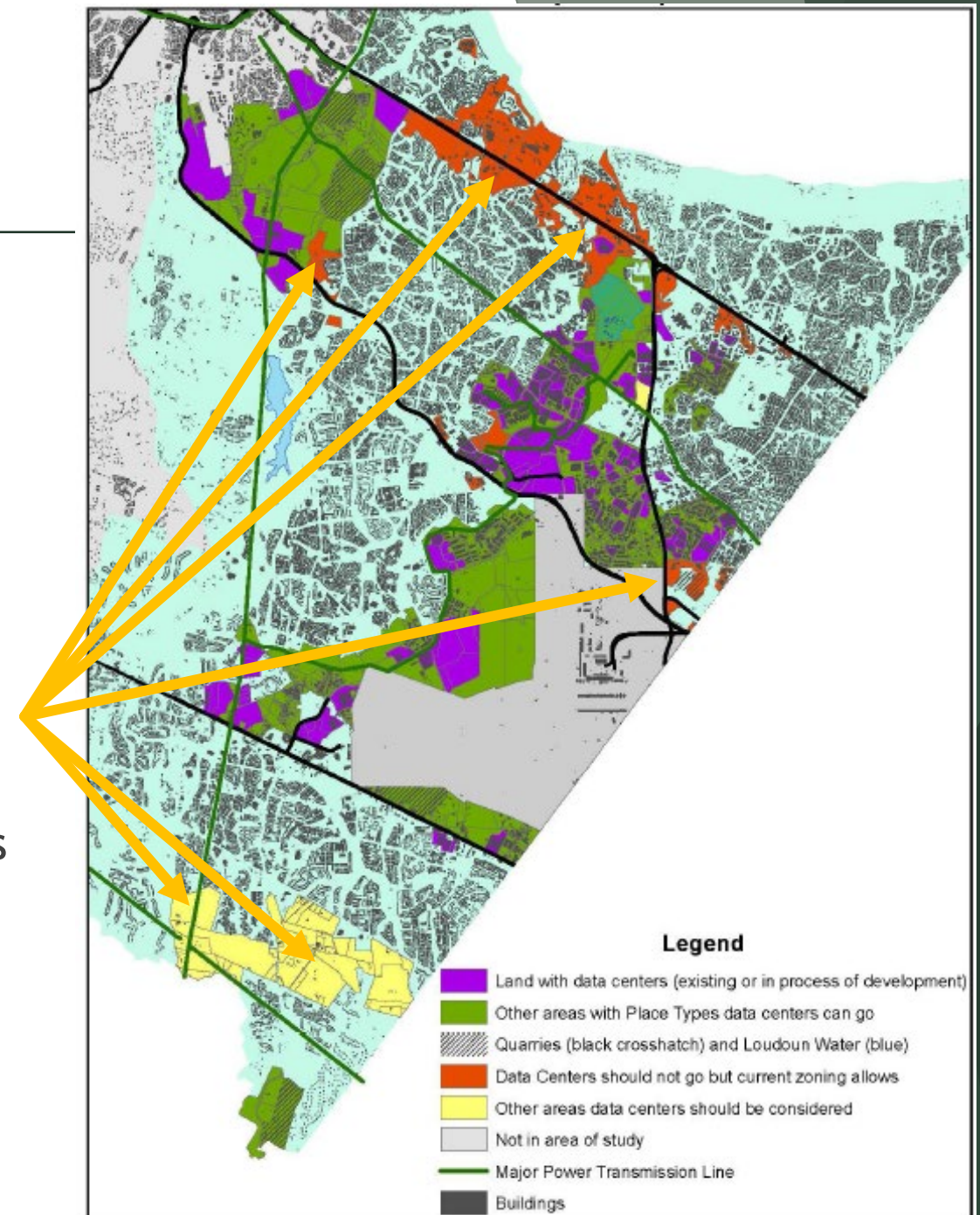
- ▶ Green: data centers can go but haven't yet
 - ▶ Approx 10,500 acres
 - ▶ Note: this does not mean data centers will go in green area, simply allowed by the place type, subject to approval
- ▶ Large areas of prime suburban policy area land
- ▶ Located in industrial areas (good)
- ▶ Also located adjacent to and intermixed with residential areas (not good)
- ▶ Essentially double the existing data center land already developed

Source: Loudoun County Economic Development (LCED)



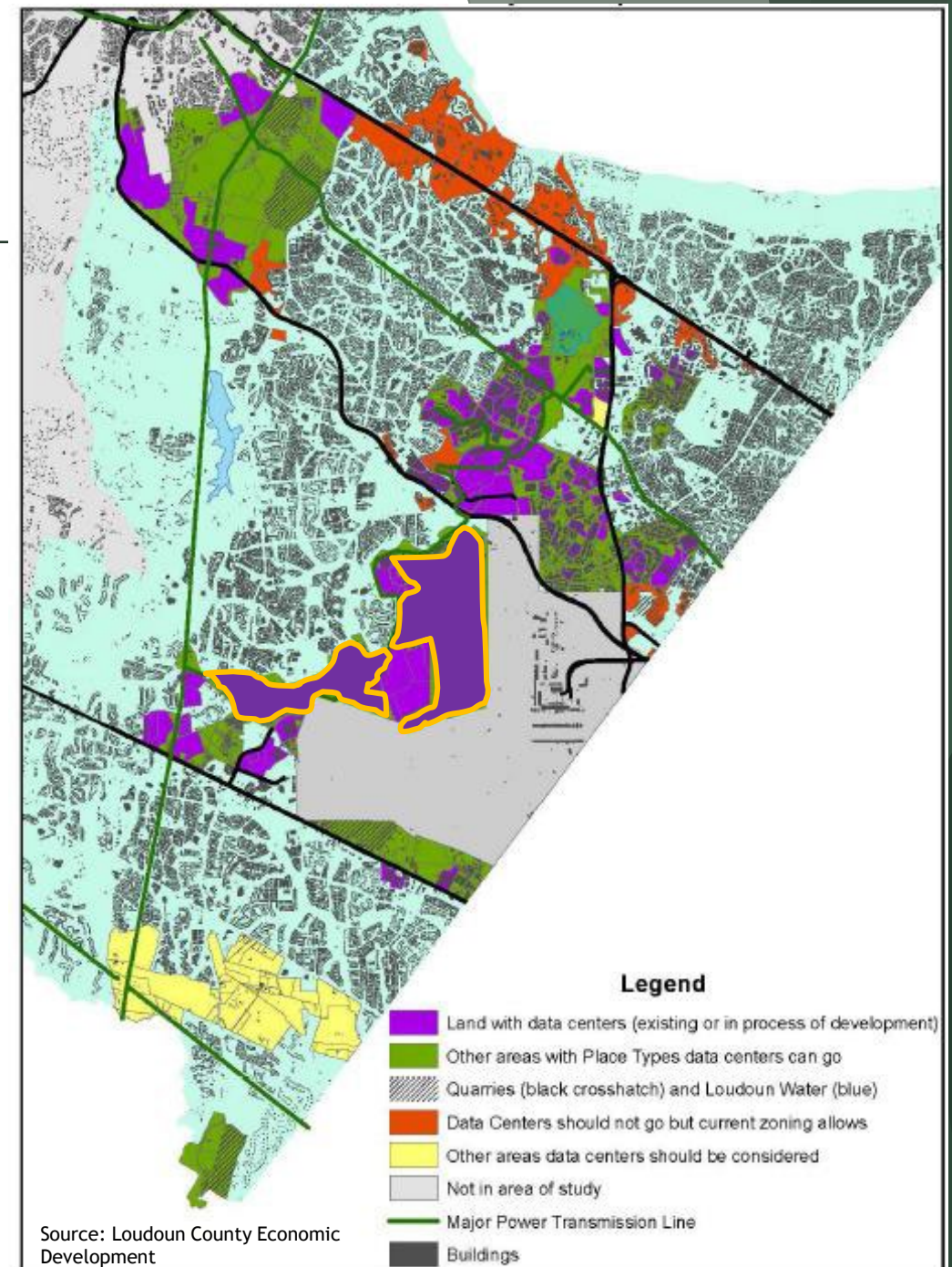
Data in Loudoun: The Numbers

- ▶ Red: data centers can go but shouldn't
 - ▶ Approx 2,500 acres
 - ▶ These areas are zoned for data centers, but should not because of proximity to residential neighborhoods
- ▶ Yellow: data centers can't go, but could be considered
 - ▶ Approx 2,300 acres
 - ▶ In the TPA which does not allow data centers per comprehensive plan
 - ▶ Not approved for data centers, Board of Supervisors not in favor of converting to data center at this time



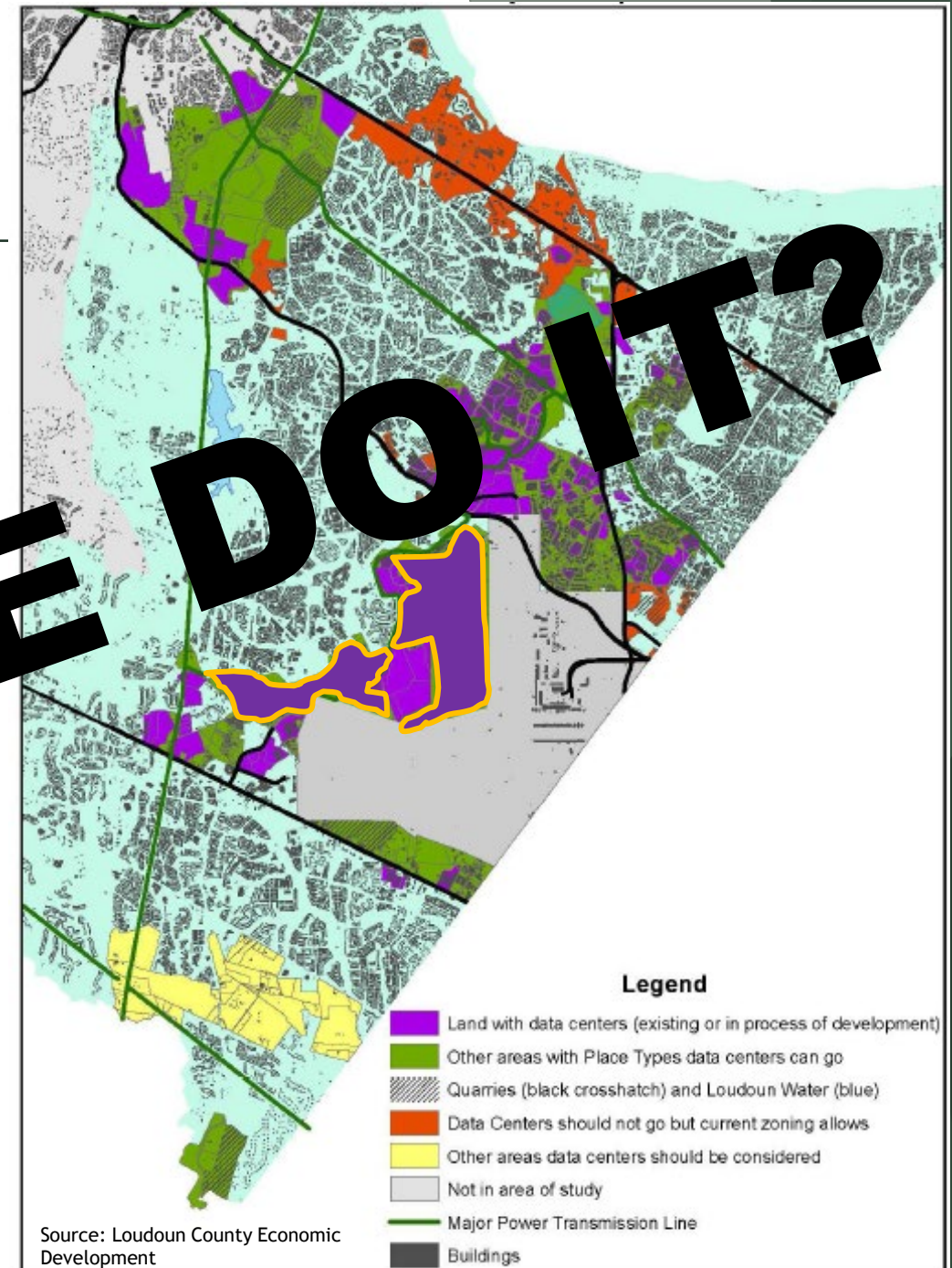
Data in Loudoun

- ▶ If the County wants to achieve 20 million additional sq.ft, how can that be achieved using less land than we have been?
- ▶ Solution: Increase the efficiency of the land used by allowing a higher LCR, FAR and height
- ▶ Result: Less land will be needed to achieve 20 million sq.ft
- ▶ Result: Data centers will be larger, but focused and consigned to strictly industrial areas
 - ▶ Remove proximity to residential and viewshed corridors
- ▶ Result: Limit the need to extend power and water into underserved areas
- ▶ Result: Save land in eastern Loudoun for other, much needed uses (affordable housing, mixed use)



Data in Loudoun

- ▶ If the County wants to achieve 20 million additional sq.ft, how can that be achieved using less land than we have been?
- ▶ The Numbers: Under average utilization, Loudoun will need to develop approx. 3,100 additional acres land to data centers
- ▶ If FAR was increased, we would use less land
- ▶ Result of allowing FAR to increase from .6 to .8
 - ▶ 2,323 acres needed, saving 775 acres
- ▶ Result of allowing FAR to increase from .6 to 1.0
 - ▶ 1,861 acres needed, saving 1,240 acres
- ▶ Result of allowing FAR to increase from .6 to 1.2
 - ▶ 1,550 acres needed, saving 1,550 acres (50%)



Transfer of Development Rights Program

A Win-Win for all of Loudoun



Virginia: Transfer of Development Rights (TDRs)

- ▶ Code of Virginia specifically authorized TDR programs for local governments
- ▶ Typically, it is residential for residential, but.....
- ▶ The Va Code allows residential density to be transferred for industrial and commercial square footage increases
 - ▶ In Loudoun, this is Floor Area Ratio (FAR) and/or lot coverage ratio

2. Planning, Subdivision of Land and Zoning

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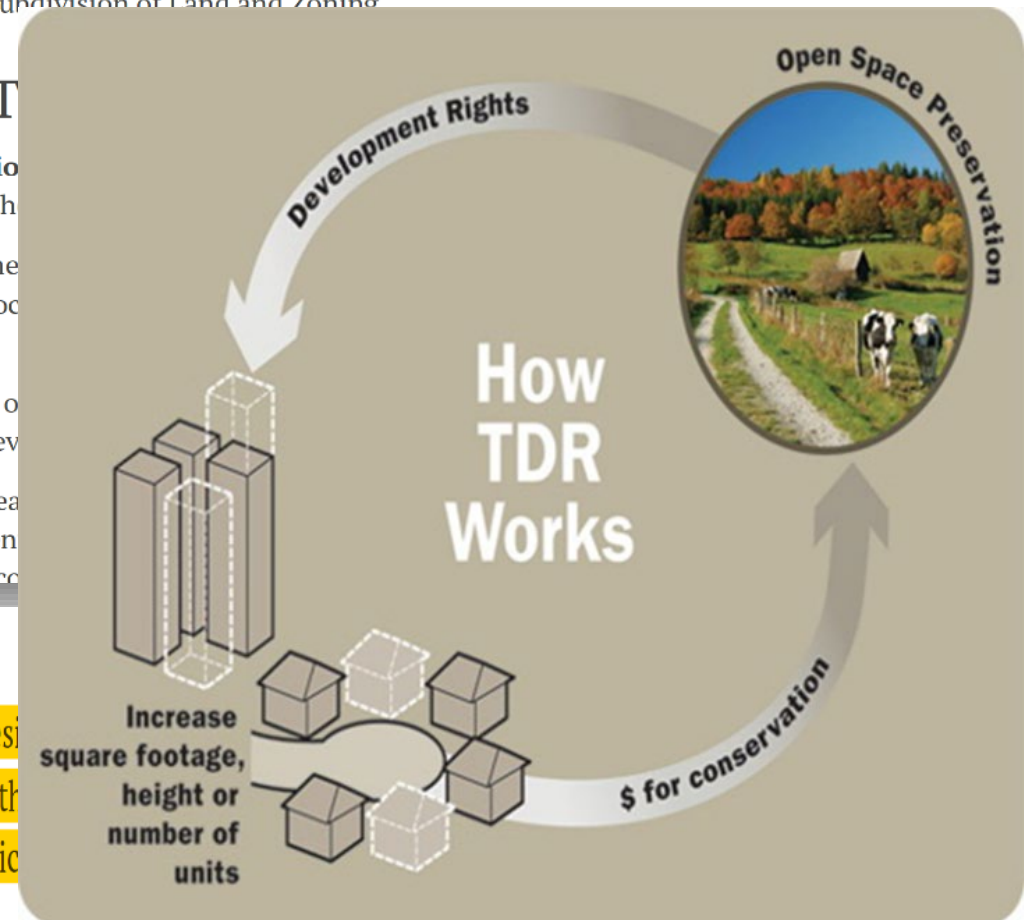
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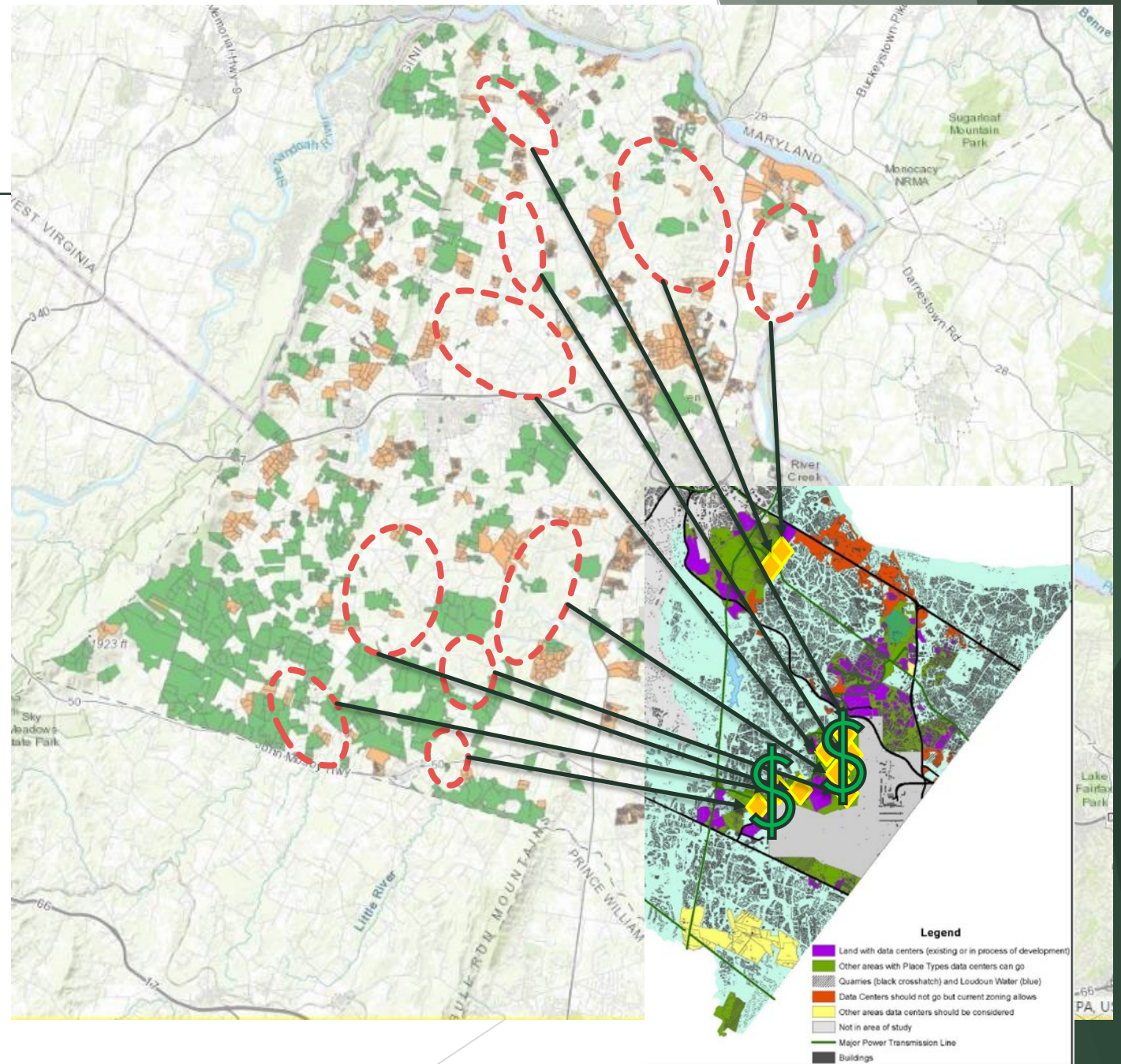
property, whic

ceiving areas to include such urban development areas or similarly defined areas in the locality established pursuan



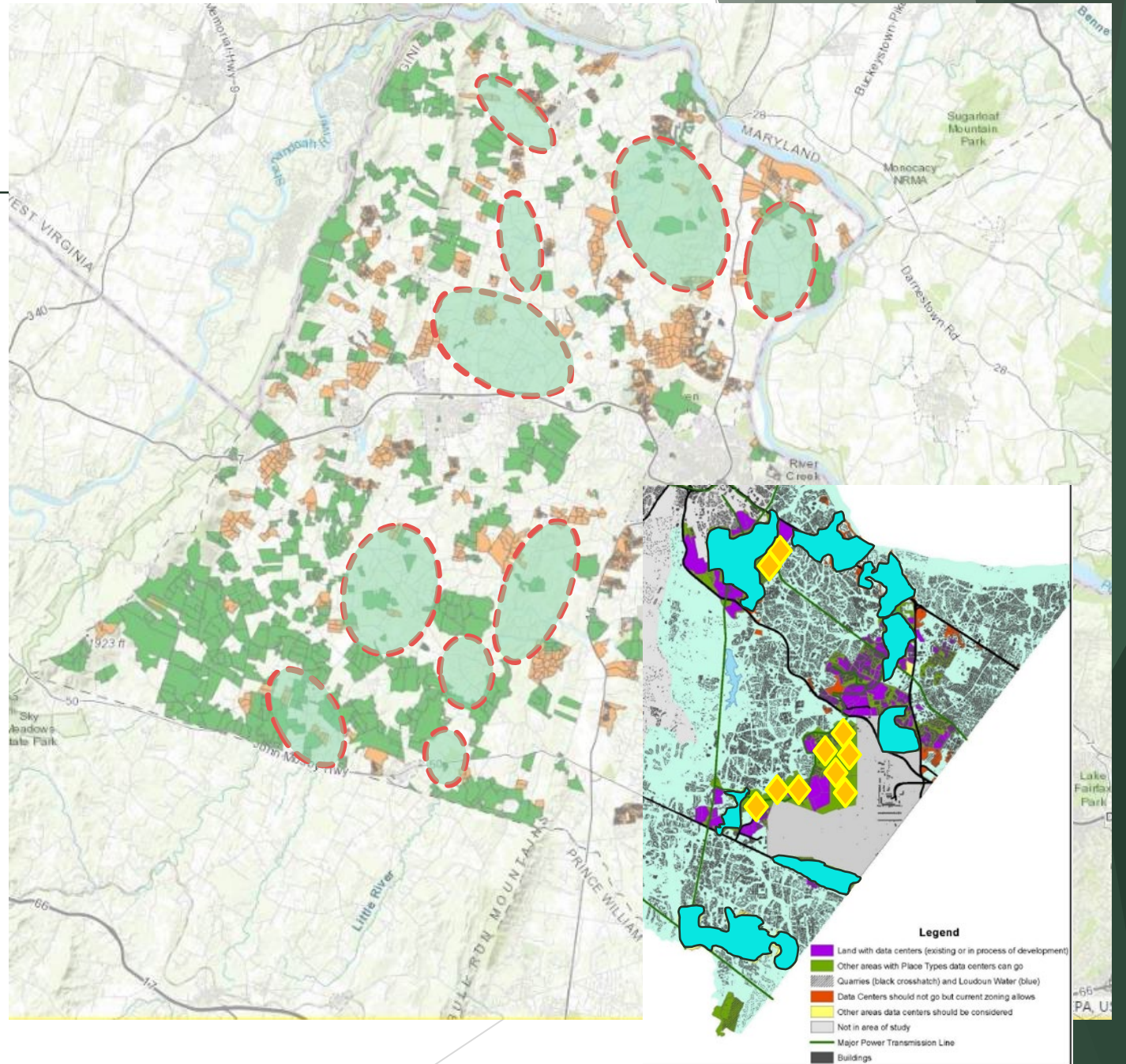
Loudoun's TDR

- ▶ First: Identify the sending areas from western Loudoun
 - ▶ Add Multipliers for urgent areas
- ▶ Second: Identify the receiving areas that would get the FAR/Increase in land use from buying development rights from sending area
 - ▶ Receiving area increases would be by-right if purchased through TDR program (give certainty to DC)
- ▶ Market rates would develop between DC, western landowners
- ▶ Private transaction, no Govt \$



Win-Win for Loudoun

- ▶ Substantial amount of open/farming space, areas surrounding villages, protected from clusters - forever
- ▶ Large areas of eastern Loudoun freed from data center development pressure
 - ▶ Easing land prices, addressing affordable housing, mixed use industrial needs, amenities, etc.
- ▶ Data Centers are concentrated in purely industrial areas
 - ▶ Away from additional residential, and Loudoun viewsheds



How Could the Economics Work?

Floor Area Ratio		0.6	0.8	1.2
Acres needed to reach 20M sq ft of Data Centers		3,101	2,326	1,550
Land Saved (not acquired)			775	1,550
Value of land needed (\$2.5M/acre)		\$ 7,751,937,984	\$ 5,813,953,488	\$ 3,875,968,992
Savings from Land Not Needing to be Acquired			\$ 1,937,984,496	\$ 3,875,968,992
Percentage of Value Saved				
50%	0.5		\$ 968,992,248	\$ 1,937,984,496
			(these amounts go toward purchasing TDRs)	
TDR Value for dev rts per acr	\$ 20,000			
Acres perm. Protected from TDR			48,450	96,899

Total Sq.Ft needed	20,000,000
Per Acre Cost	\$ 2,500,000

What we can achieve....



Questions?

