## Access to Experiences - Not Acres Measuring the Public Realm

Energized Public Spaces (EPS) Plan
Park Rx America Program







Speakers: Cristina Sassaki, AICP, LEED BD+C, EPS Lead Planner/Manager
Christopher McGovern, GIS Manager
John Henderson, AICP, Park Rx America Executive Director

## HOW ARE WE ADDRESSING HEALTH?





**HEALTH** 

PARK RX
PROGRAM
(PROMOTER)





ENERGIZED
PUBLIC SPACES PLAN
(DATA-DRIVEN TOOL)



### WHAT WILL YOU LEARN?

How Park Rx America **promotes the Health Benefits** of Parks and Public Spaces

How the EPS Plan evaluates access to public spaces

Prioritize **where** a Park system should allocate its limited resources

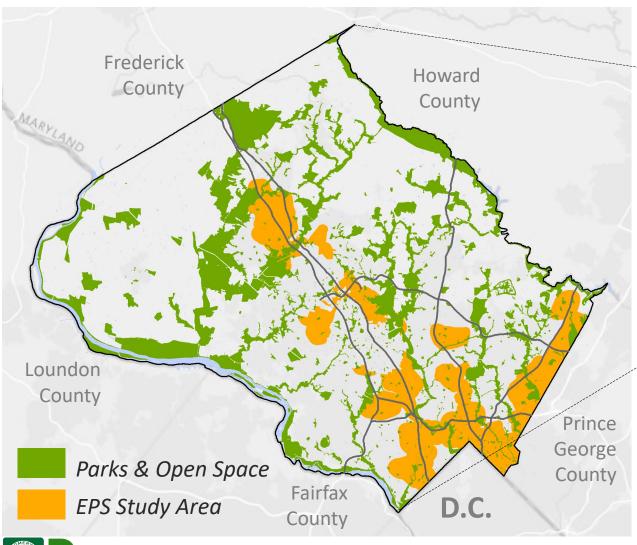


## **OUTLINE**

- 1. Health Overview
- 2. Park Rx Program
- 3. Montgomery Parks' Energized Public Spaces (EPS) Plan Outcomes
- 4. EPS Plan: How we did it?
- 5. Debate/Q&A



## **MONTGOMERY COUNTY**





Most populous county in MD

2017: 1,058,800





1990: 765,500 + 293,300



## MONTGOMERY COUNTY HEALTH OVERVIEW

## **OVERVIEW: MONTGOMERY HEALTH**



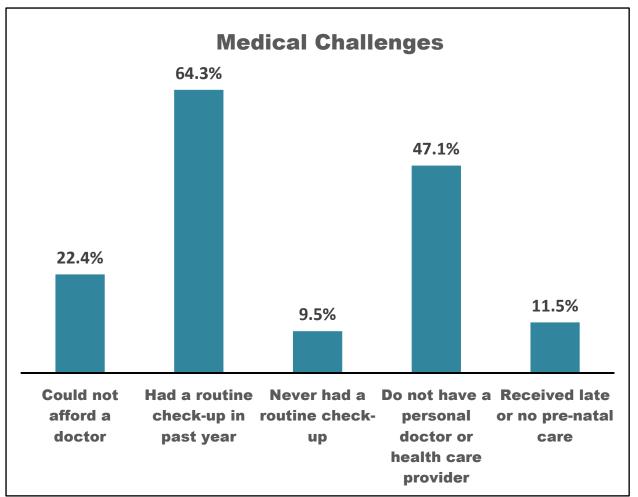


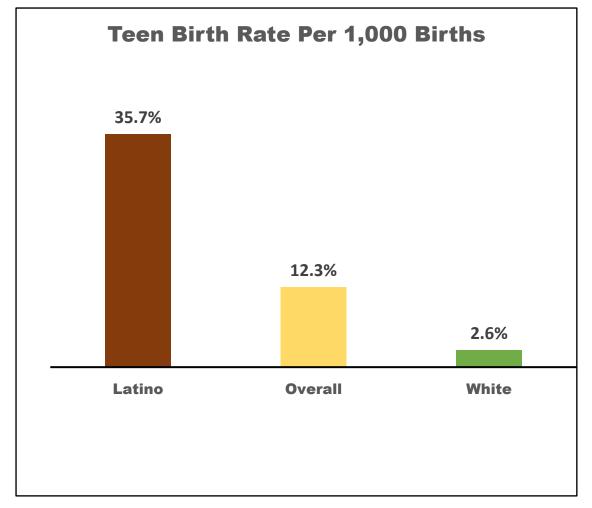
Montgomery County	Top US Performers	MONTGOMERY COUNTY, MD (2018)		
21 %	26%	Adult Obesity	BMI ≥ 30	
16 %	20%	Physical Inactivity	Age ≥ 20 reporting no leisure-time physical activity	
100 %	91%	Access to Exercise Opportunity	% of pop. with access to physical activity locations	
9 %	12%	Children in Poverty	Age ≤ 18	



## **OVERVIEW: MONTGOMERY HEALTH**

#### **LATINO HEALTH**







### EPIDEMIC LEVELS OF CHRONIC DISEASE

### 133 million Americans currently live with chronic disease

- 78 million adults and 12 million children are obese.
- 70 million American adults have high blood pressure.
- 29 million Americans live with diabetes.
- 10 million adults suffer from serious mental illness.

For every dollar spent on healthcare in the U.S., \$0.86 is spent on patients with chronic disease.



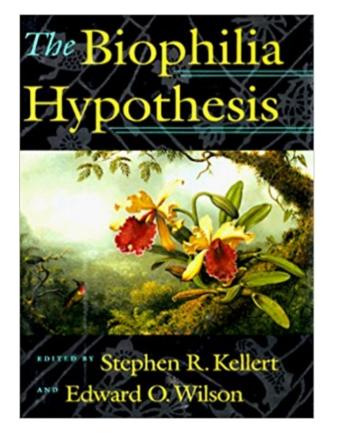
## Humans living in landscapes that lack trees or other natural features undergo patterns of social, psychological and physical breakdown ...

Professor Frances (Ming) Kuo University of Illinois at Urbana-Champaign



Humans have an innate biological connection to nature.

When that connecting is broken, we are more vulnerable to health risks.







## **BURNOUT**

### Caused by chronic stress

### Symptoms include:

- Emotional Exhaustion
- Cynicism
- Feeling Ineffective

Among young people 26 and younger rates of depression, psychological distress, and suicidal thoughts are increasing.



Image Source: the Economist



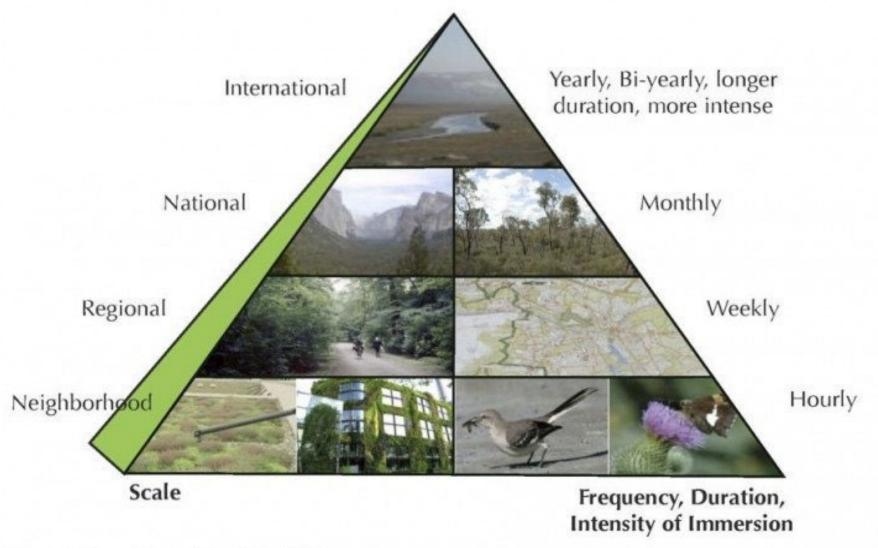
## PHYSICAL INACTIVITY

- 4 leading risk factor for global mortality
- The average American spends 90% of their day indoors and 10 or more hours viewing screens





#### THE NATURE PYRAMID



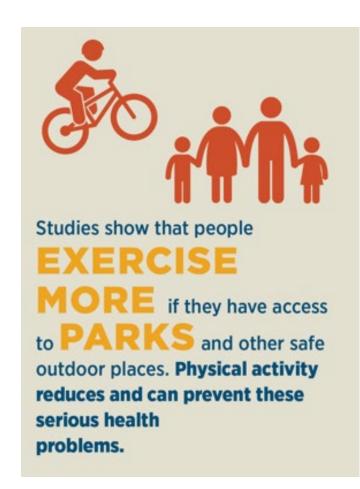
Concept by: Tanya Denckla-Cobb



## **HEALTH AND ACCESS TO PARKS**



Studies have shown that people who have access to parks are more likely to exercise. Exercise reduces anxiety and depression and can help alleviate symptoms of a variety of mental health conditions, including dementia and Alzheimer's.





## PARK RX PROGRAM





**HEALTH** 

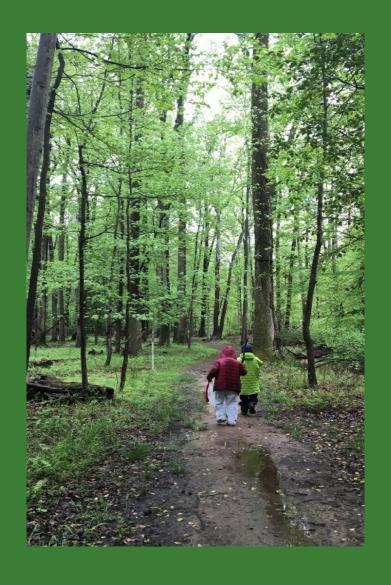
PARK RX
PROGRAM
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ENERGIZED
PUBLIC SPACES PLAN
(DATA-DRIVEN TOOL)

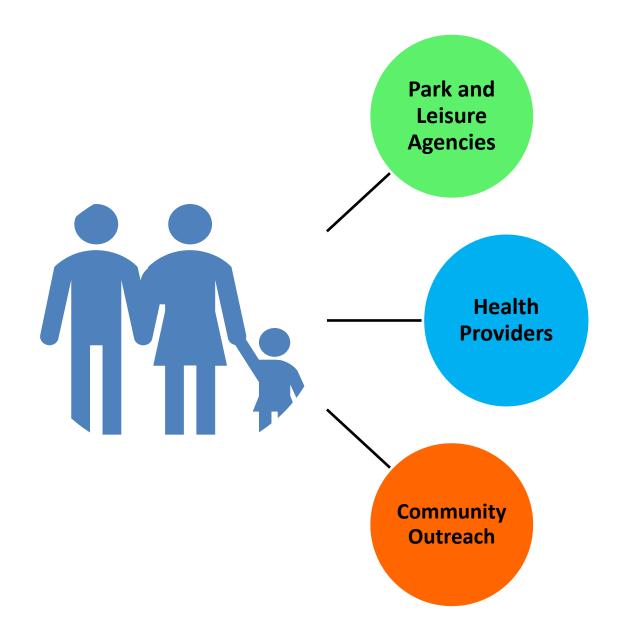




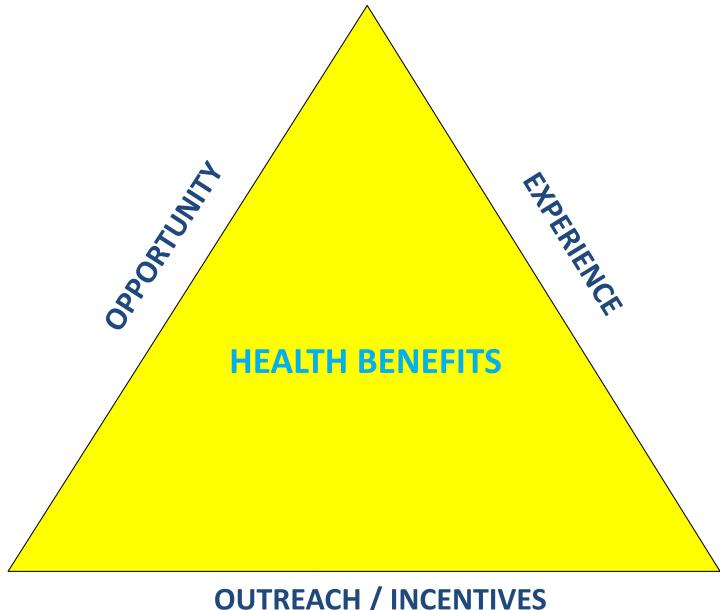
## 

#### A Scalable Park Prescription Model

Our MISSION is to ease the burden of chronic disease, increase health and happiness, and foster environmental stewardship by encouraging doctors to routinely prescribe time in nature to patients.







**OUTREACH / INCENTIVES** 



## **OUTDOOR DANGERS**

- 1. Sun Exposure
- 2. Insect borne diseases
- 3. Contaminated soils
- 4. Predators

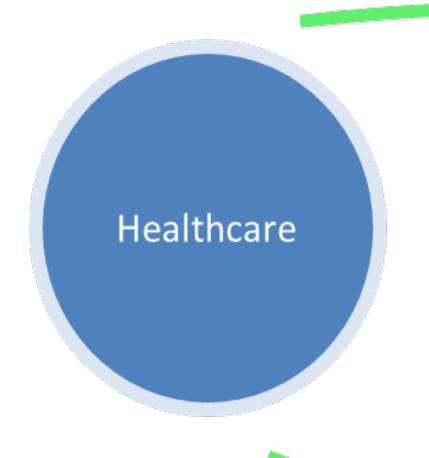


## WHAT IS PARKRX?

An initiative <u>involving a health or social service provider</u> who encourages clients or patients to <u>spend time in nature to improve health</u> and well-being.

ParkRx Program Census 2018
Institute at the Golden Gate
www.ParkRx.org





#### **Physical Activity**

### ParkRx Movement

**Being in Nature** 





## WHAT IS A PARK PRESCRIPTION?



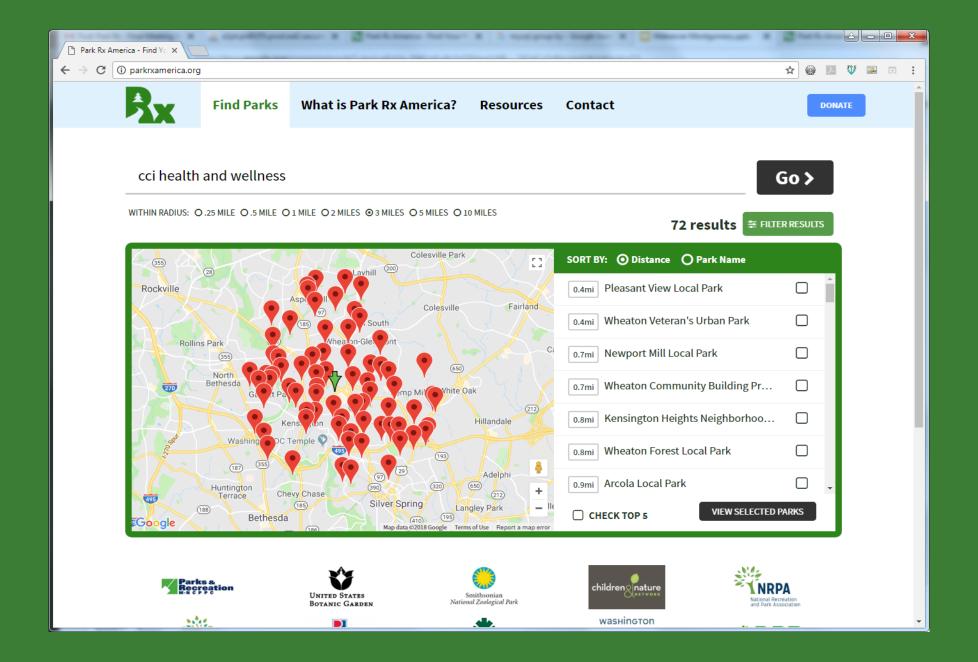
Who:\_\_\_\_

 $R_{X}$ :

#### PRESCRIPTION CONTENT:

- Visit Location
- Time of Visit
- Visit Frequency
- Visit Duration
- On-Site Activity

## FIND PARKS



## PARK FILTERS

Narrow down results by choosing activities, amenities, and other park services that interest your patient.

#### 33 results

Sports Facilities/Activities	General Park Amenities			
☐ Recreation/Fitness Center	☐ Playground			
☐ Gymnasium	✓ Water/Spray Fountain			
☐ Baseball/Softball Field	☐ Restrooms			
☐ Football/Soccer Field	☐ Drinking Fountains			
☐ Cricket Field	✓ Seating			
Mixed Use Field	☐ Picnic Tables			
☐ Open Space	☐ Grills			
☐ Trails	☐ Food for Sale			
☐ Athletic Track				
Outdoor Basketball Court	Swimming  Indoor Pool			
Outdoor Fitness Stations	☐ Outdoor Pool			
☐ Tennis Court	- Outdoor Pool			
☐ Outdoor Practice Wall	Pets			
☐ Indoor Racket Sports	☐ Allowed On-Leash			
□ Volleyball	☐ Allowed Off-Leash			
☐ Pickleball	☐ Dog Park			
☐ Four Square Courts	☐ Bags Provided			
☐ Rollerskating	Additional Features			
☐ Ice Skating	☐ Community Gardens			
☐ Inline Hockey	☐ Ornamental Gardens			
☐ Skateboard Park	☐ Visitor Center			
☐ Horse Stables	□ Nature Center			
☐ Equestrian Rings	☐ Historic Site			

## **ONE-PAGE PARK** SUMMARIES



11710 Orebaugh Avenue, Wheaton, MD 20902





#### GENERAL INFO:

Park Type: Regional Park

Overall Size: Larger than a football field

#### GETTING THERE:

Parking Instructions: From I



Sports Facilities/Activities: Trails

General Park Amenities: Drinking Fountains, Picnic Tables, Playground

Trail Surface: Paved & Unpaved

Trail Layout: Loop & Linear (network)

Staffing & Safety: Police Patrol





Capital Park and Planning

#### GENERAL INFO:

Park Type: Neighborhood Park

Overall Size: Larger than a

Special Features/Comments Fields require a Permit for Organized Play

#### **GETTING THERE:**

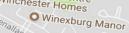
Parking Instructions: From 1 Head North on Georgia Ave toward Bonnywood En/Filton Dr. Slight right of Layhill Rd, Turn right, Turn left; Park Entrance is on the right.

#### Saddlebrook Local Park 12751 Layhill Road, Silver Spring, MD 20906











#### SPORTS:

Sports Facilities/Activities: Football/Soccer Field, Gymnasium, Outdoor Basketball Court

#### AMENITIES:

General Park Amenities: Drinking Fountains,

Additional Features: Gift Shop

Staffing & Safety: Police Patrol, Employee/Ranger Present



#### YOU ARE PRESCRIBING THE FOLLOWING PARKS:

#### **Marion Park**

Generate Prescription Text?

NAME: [FD84VX] Park Rx America - Marion Park

TAKE: Play at Playground

FREQUENCY: Q M, W, F

DURATION: 30-60 min

Send by Text

Send by Email

Patient Mobile Number

2025501740

**Send to Patient** 



## Welcome to your Park Prescription!

You've been prescribed the following parks:



Van Dyck Park

Yes, I went to this park



#### Reports

PRX Code Lookup

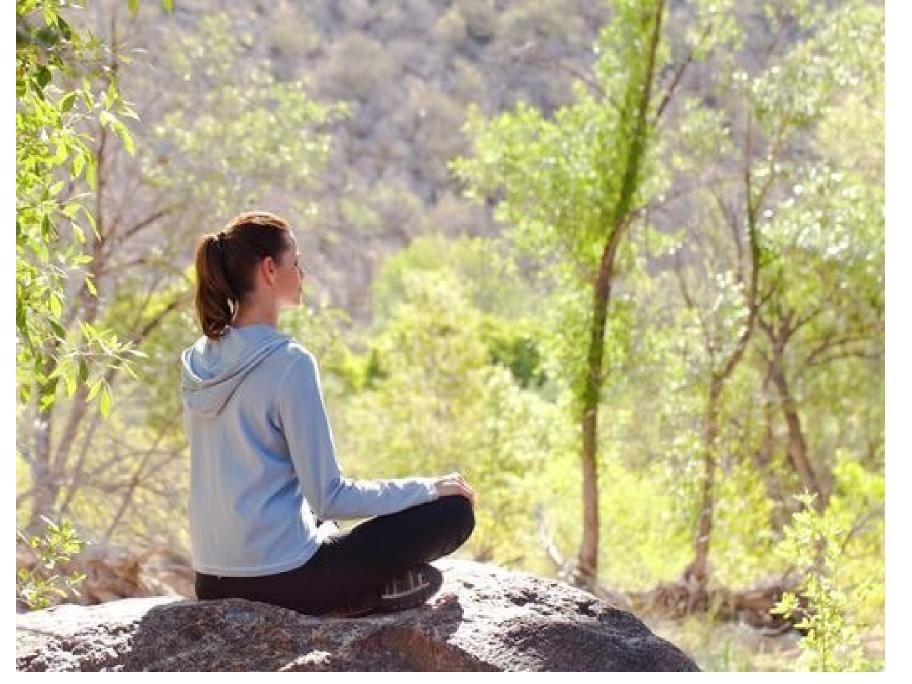
export to CSV

		W. L D. J. D	B	December 1981			
P	roviders Prescribing:	Unique Parks Prescribed:	Prescriptions Made:	Prescriptions Filled:		Response Rate:	
	59	186	392	82		<b>20.9</b> 9	
State:	All Date Rang	ge: All				Show: • All	O Only Filled
STATE 0	LOCALE	PARK	• PRESCRIBER	Ф Р	RX CODE •	PRESCRIBED •	FILLED •
DC	Washington	Stanton Park	38.140.166.66	Z	IMMWE	Dec 7, 2017 @ 1:32 pm	
DC	Washington	Stanton Park	38.140.166.66	1	KDXJK	Dec 7, 2017 @ 1:33 pm	Dec 8, 2017 @ 7:09 am
DC	Washington	Ludlow-Taylor Elementary School	38.140.166.66	0	IPVBE	Dec 7, 2017 @ 1:33 pm	Dec 7, 2017 @ 4:15 pm
DC	Washington	Langdon Park	Unity Health Care	Upper Cardozo 1	IW6LO	Dec 11, 2017 @ 11:12 am	Dec 11, 2017 @ 1:14 pm
DC	Washington	Langdon Park	Unity Health Care	Upper Cardozo 1	OHRWJ	Dec 11, 2017 @ 11:12 am	-
DC	Washington	Langdon Elementary School	Unity Health Care	Upper Cardozo 1	TX78N	Dec 12, 2017 @ 9:11 am	
DC	Washington	Loomis Park	38.140.166.66	2	SSPDYG	Dec 19, 2017 @ 8:30 pm	Dec 19, 2017 @ 10:30 pm
DC	Washington	Loomis Park	38.140.166.66	1	V82LZ	Dec 19, 2017	



- ikigai
- reason d'etre
- life satisfaction
- cambios profundos en tu vida











# FUNCTIONAL MASTER PLAN (EPS PLAN)





**HEALTH** 

PARK RX
PROGRAM
(PROMOTER)

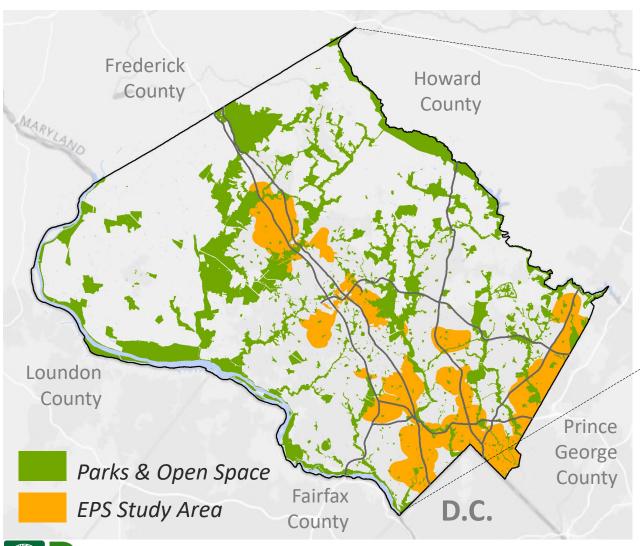




ENERGIZED
PUBLIC SPACES PLAN
(DATA-DRIVEN TOOL)



## **MONTGOMERY COUNTY**





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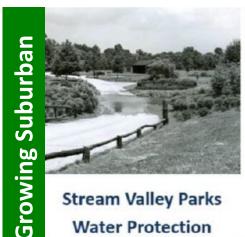


1990: 765,500 + 293,300



## Urban Growing

### FROM SUBURBAN TO URBAN



Stream Valley Parks **Water Protection** 1930-1940s



Regional Parks & **Athletic Fields** 1950-1960s



**Neighborhood Parks** 



Environmental **Awareness** 

1960-1970s



1970s





DOWNTOWN SILVER SPRING



GERMANTOWN



WHEATON



**Urban Parks** Shortage

## VISION: ENERGIZED PUBLIC SPACES

In the EPS Study Area, everyone can

walk to a public space.

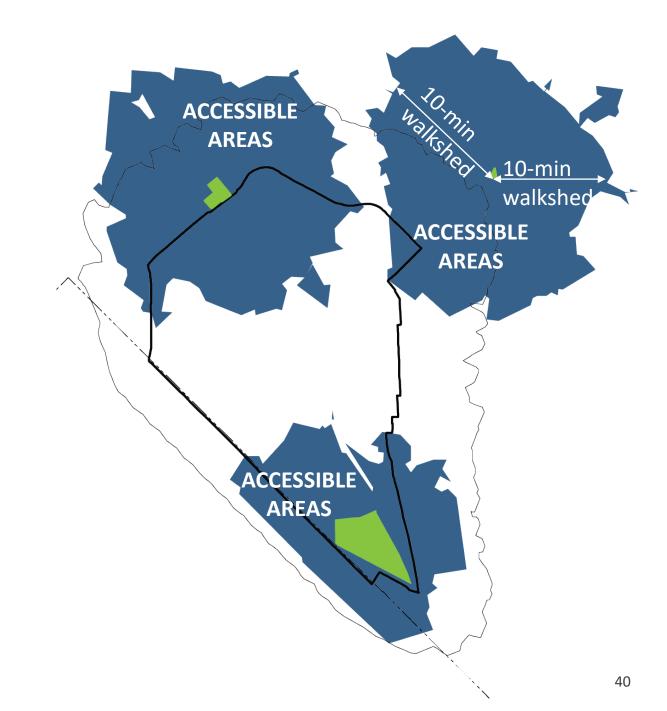




## WALK TO PARKLAND

Q: How do we measure access to parks and public spaces?

People covered by walkshed = served



## WALK TO PARKLAND

Q: How do we measure access to parks and public spaces?

Pilot Area = no gaps...





## ALL PARKS/PUBLIC SPACES ARE NOT EQUAL.

All park experiences (supply) are not created equal for everyone (demand).

### ACCESS TO LAND VS. AMENITIES

#### Acorn Urban Park



Woodside Urban Park



**Conservation Park** 



**Amenities: 13** 

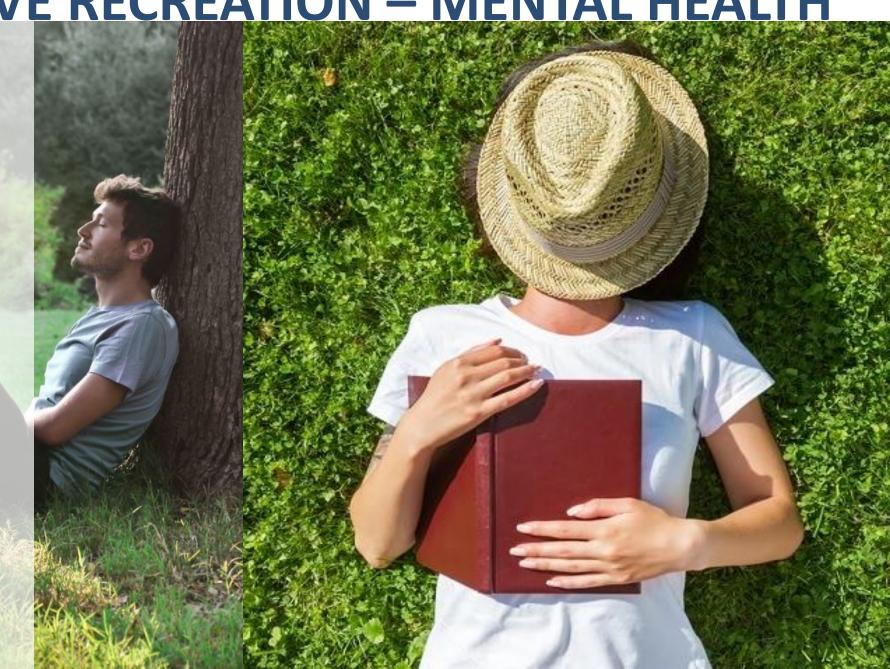
CONTEMPLATIVE RECREATION – MENTAL HEALTH

#### What to do - Experiences:

- Enjoy Nature
- Relax, Meditate, Reflect
- Escape Chaos

#### Where - Facilities:

- Natural Areas
- Historic Sites
- Benches
- Trees for Shade
- Community Open Space
- Gardens
- Small Green Spaces
- Trails



**ACTIVE RECREATION - PHYSICAL HEALTH** 

#### What to do - Experiences:

- Kick a Ball
- Run/Walk
- Play Games
- Exercise

#### Where - Facilities:

- Field: Open space/Grass
- Trails
- Hard Courts & Surfaces
- Nature-inspired Interactive Elements (climbing)
- Playgrounds



SOCIAL GATHERING -SOCIAL HEALTH

#### What to Do - Experiences:

- Community Festivals
- Farmer's Market
- Lunch Places
- Concert, Parades
- Outdoor Movies
- Historic Sites

#### Where - Facilities:

- Plazas with Seating
- Stages/Amphitheaters
- Cluster of Picnic Tables
- Community Open Spaces
- Dog Parks



**EPS PLAN** We measure access to experiences, not acres.



## INTEGRATED PUBLIC SPACES SYSTEM

#### independent of ownership





ENERGIZED PUBLIC SPACES NETWORK







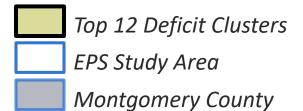




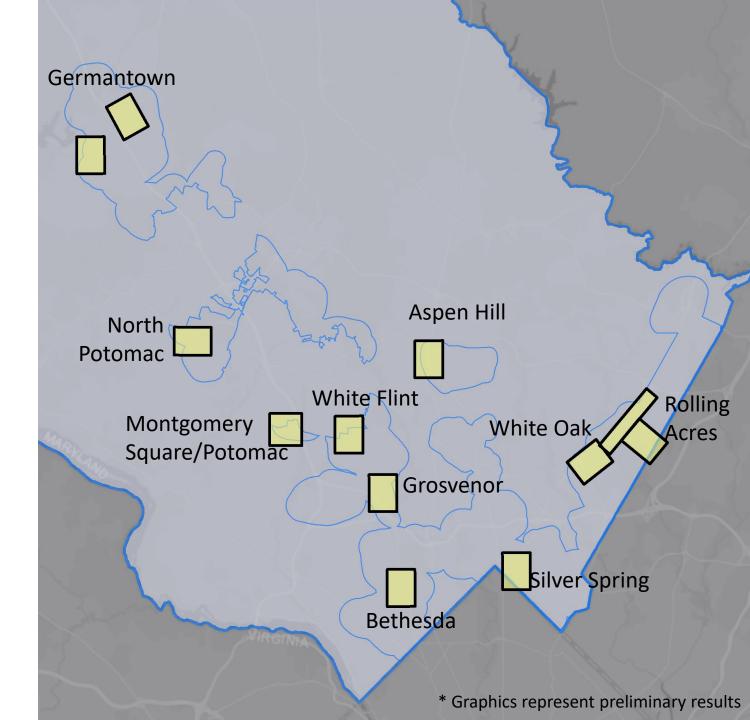


## EPS STUDY AREA PRELIMINARY RESULTS

## EPS PLAN TOP 12 DEFICIT CLUSTERS



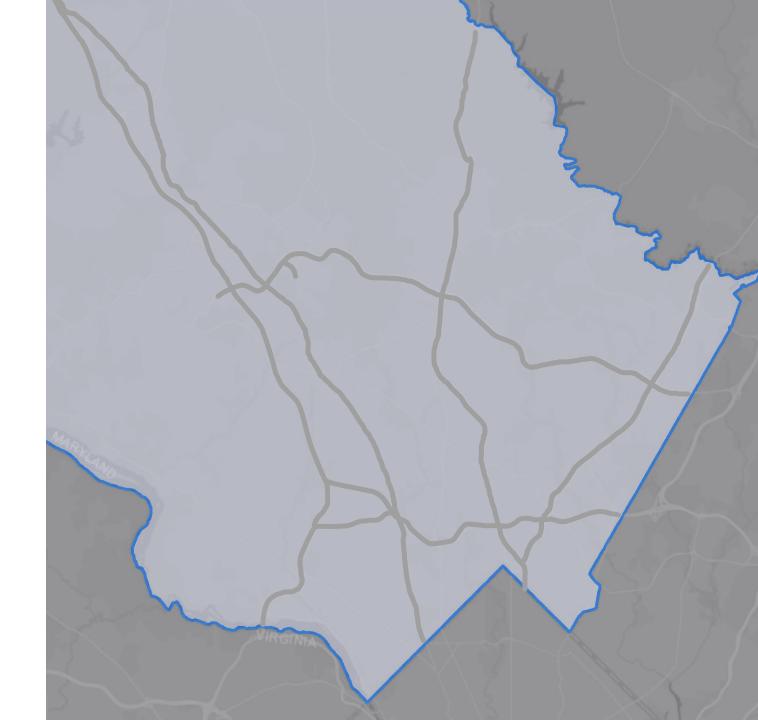




## EPS PLAN COUNTY



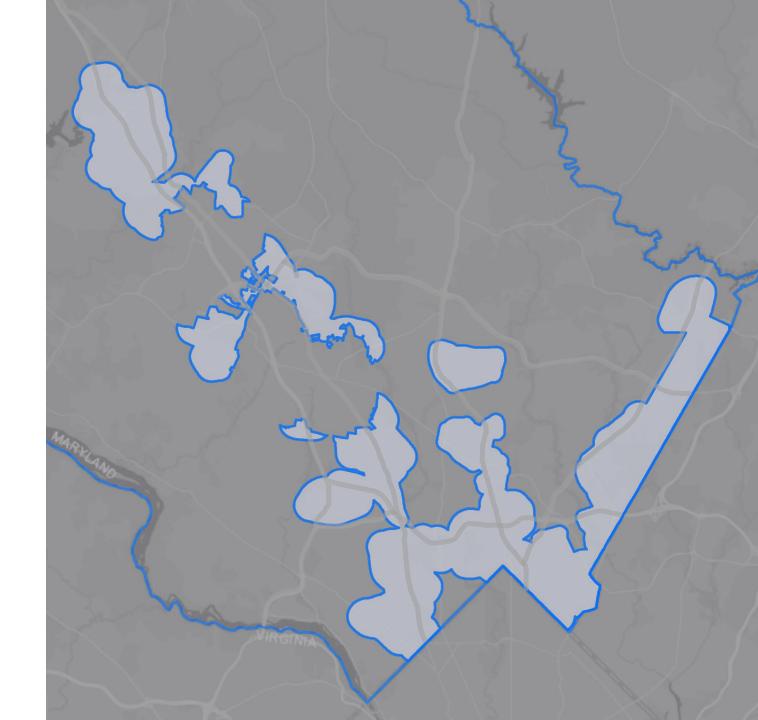




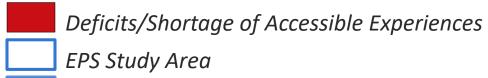
## EPS PLAN STUDY AREA





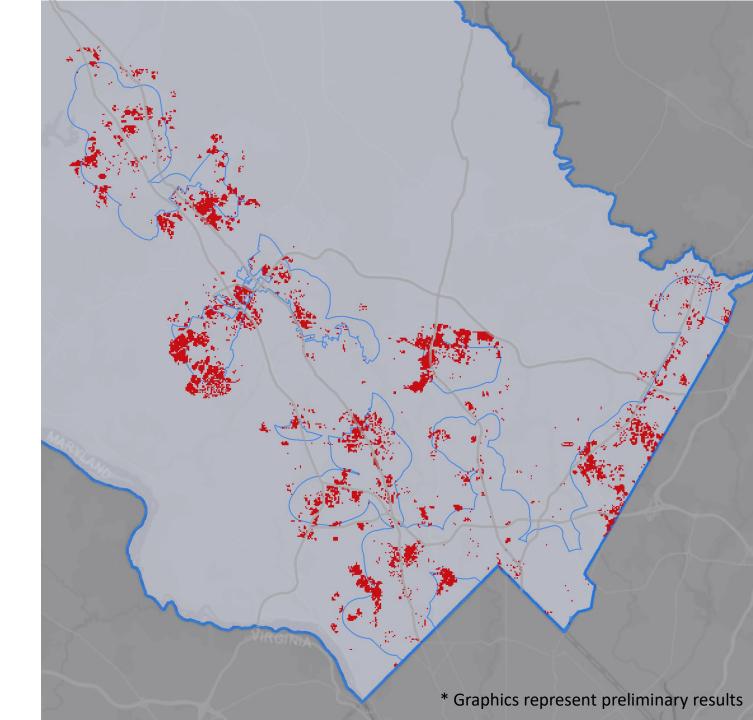


## EPS PLAN<br/>DEFICITS



Montgomery County





## EPS PLAN 40 CLUSTERS

Pppt layer that showcase the top 12

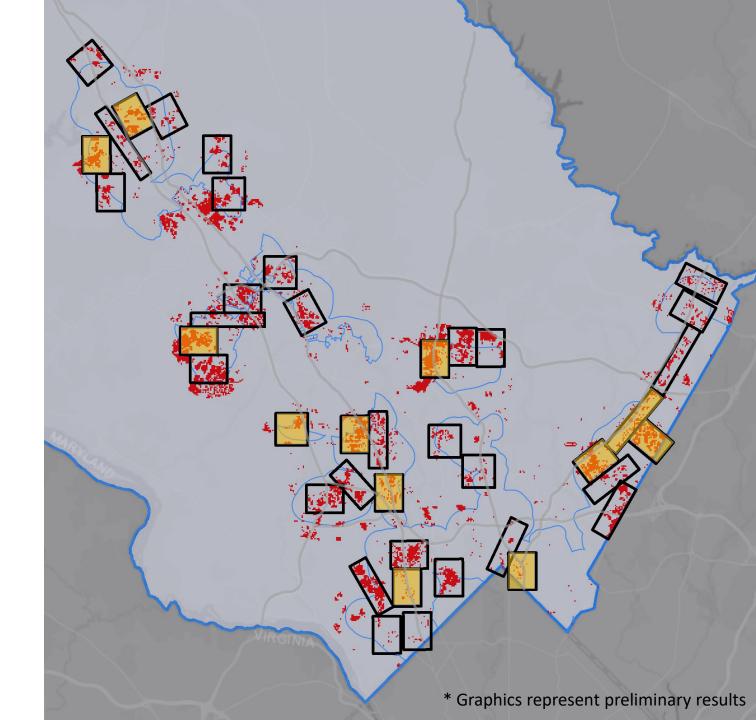
Development Clusters (1 square-mile)

Deficits/Shortage of Accessible Experiences

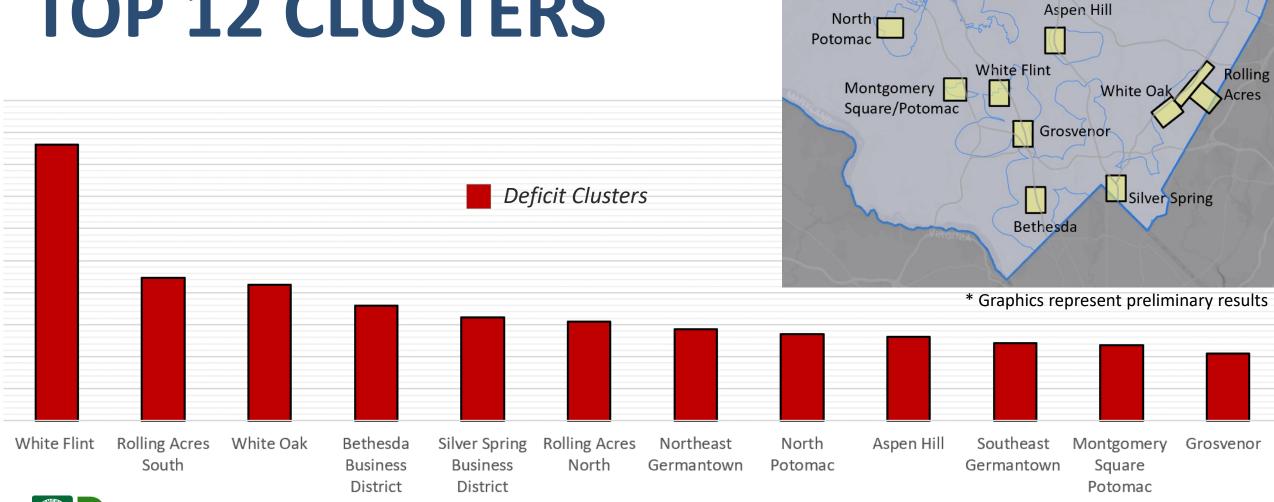
EPS Study Area

Montgomery County





## EPS PLAN TOP 12 CLUSTERS

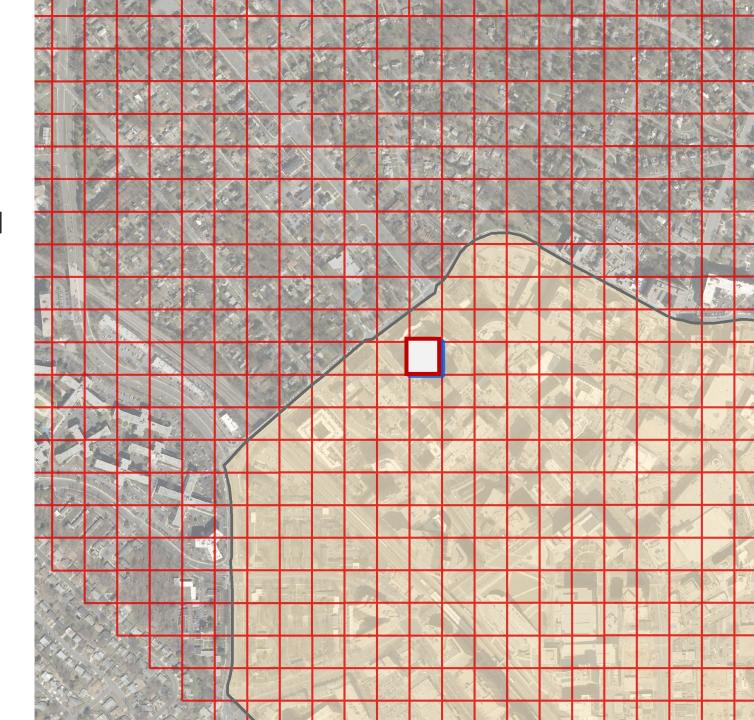


Germantown

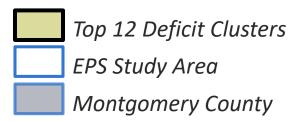


#### THE GRID

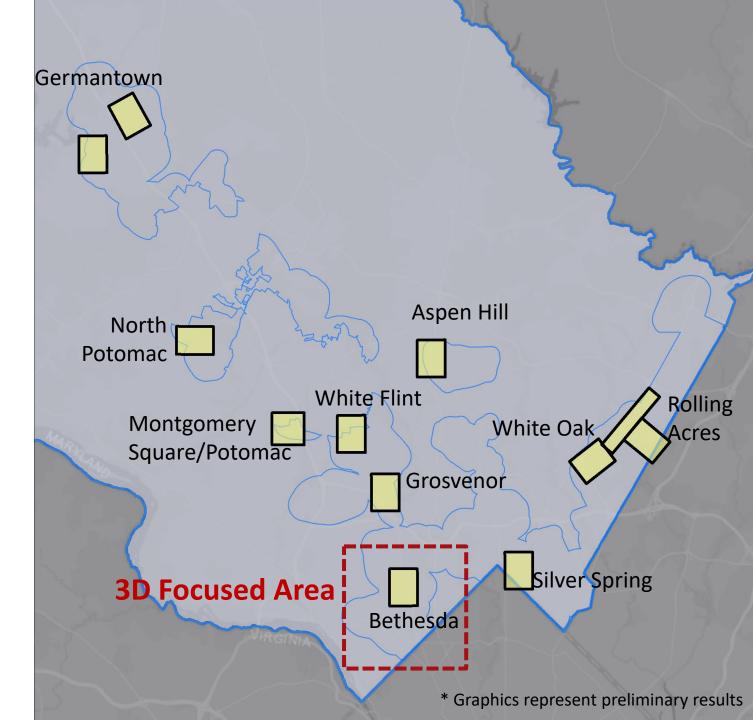
- Regular grid system
- Each grid has a supply and demand associated to it
- Grids with these attributes can be viewed and analyzed in many ways



# EPS PLAN TOP 12 DEFICIT CLUSTERS







## **DEMAND** RESIDENTIAL





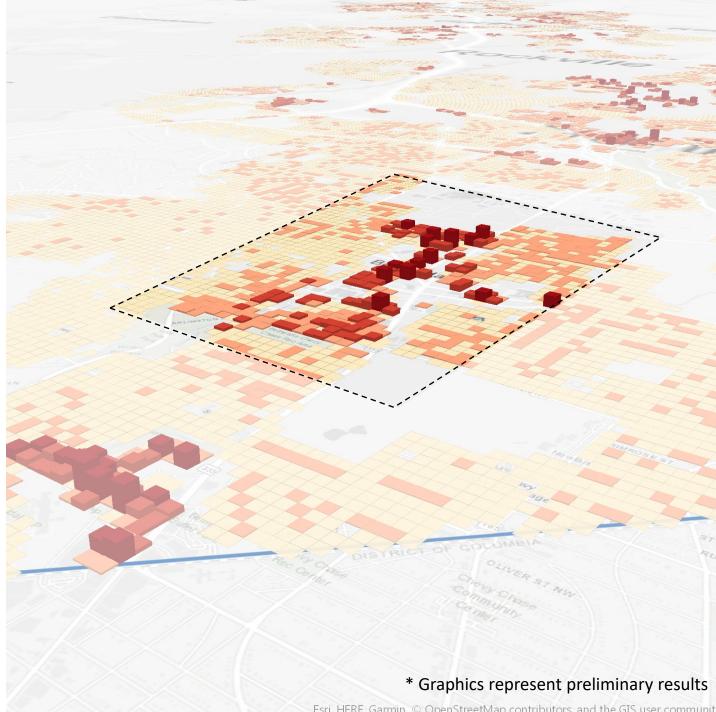
< 200 (Garden)

< 1,384 (High Rise)

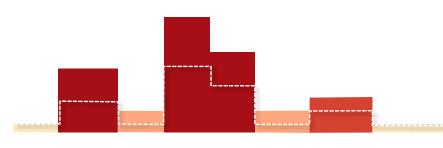
Development Cluster (1 square-mile)

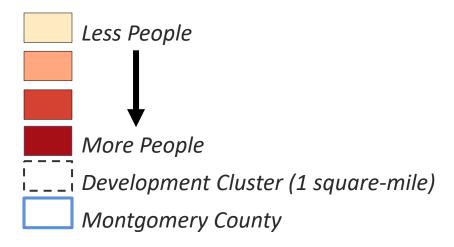
Montgomery County

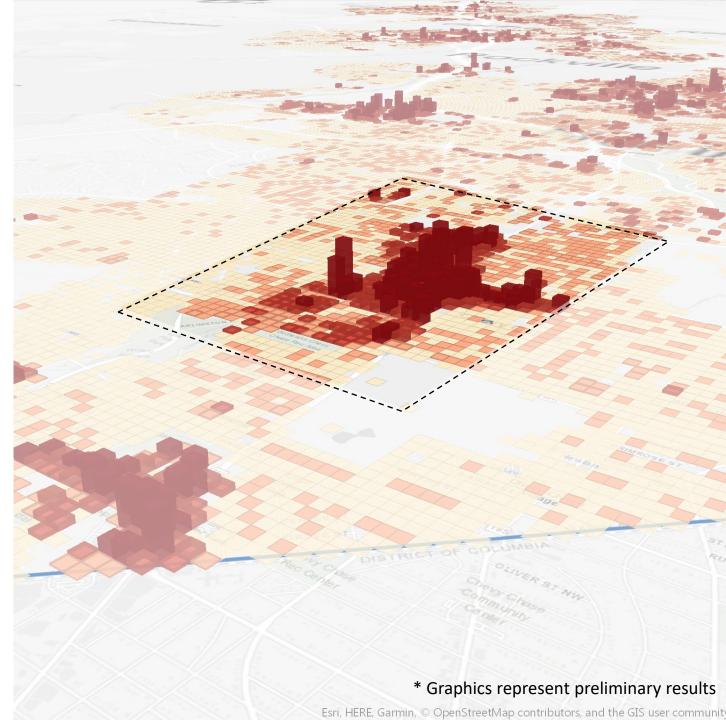




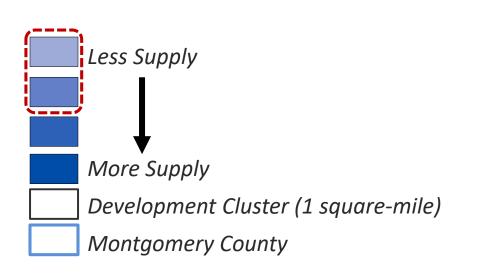
## DEMAND RESID.+ COMM.

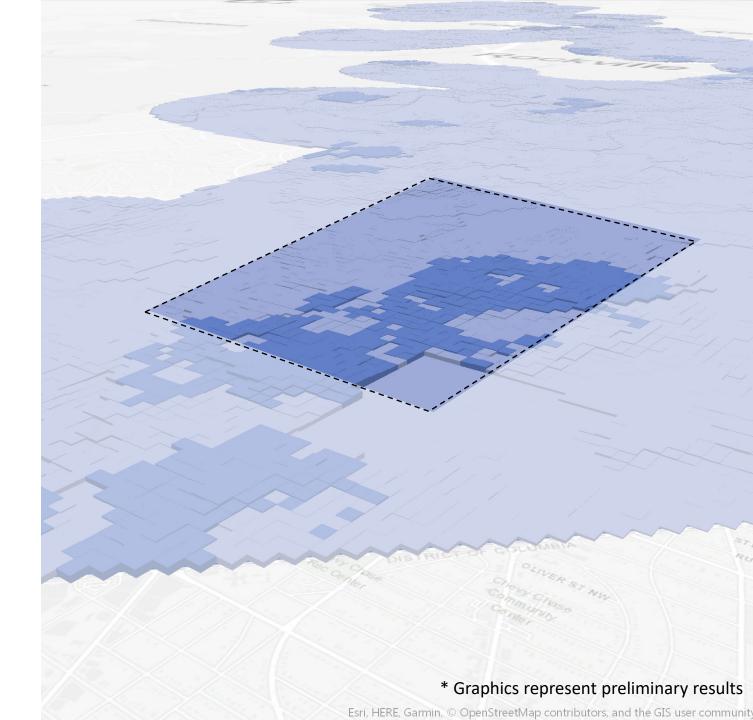




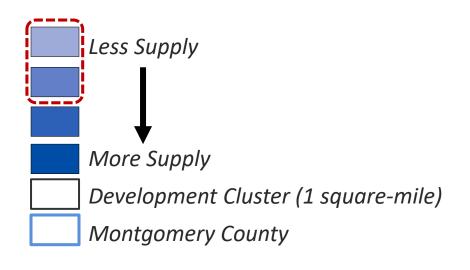


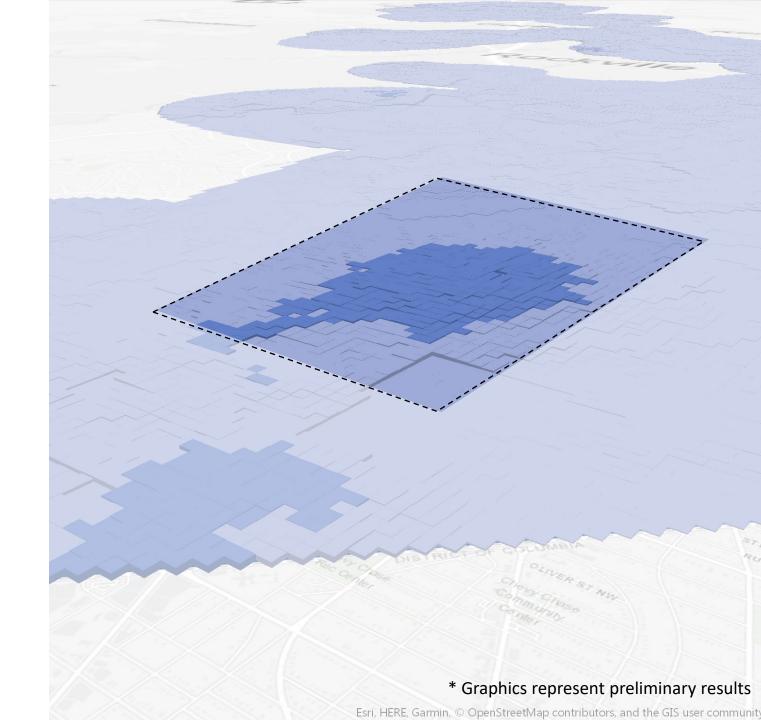
## SUPPLY ACTIVE





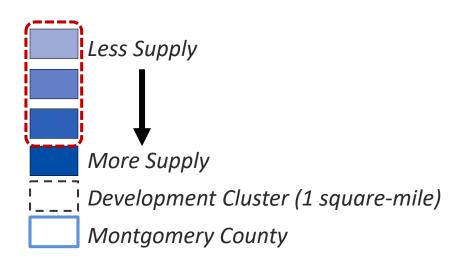
## SUPPLY CONTEMPLATIVE

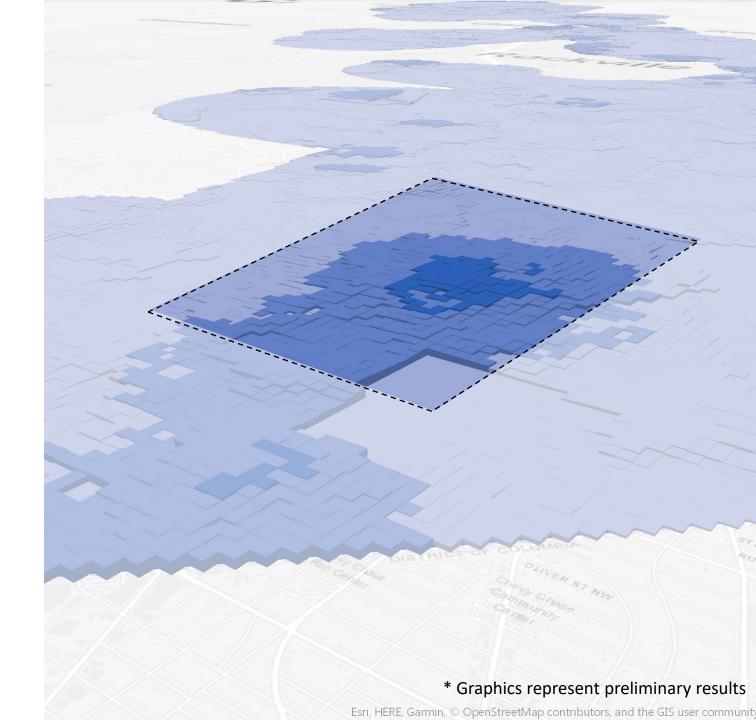




## SUPPLY<br/>SOCIAL GATHERING

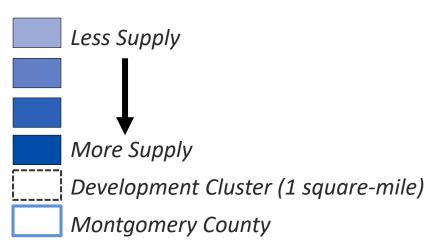




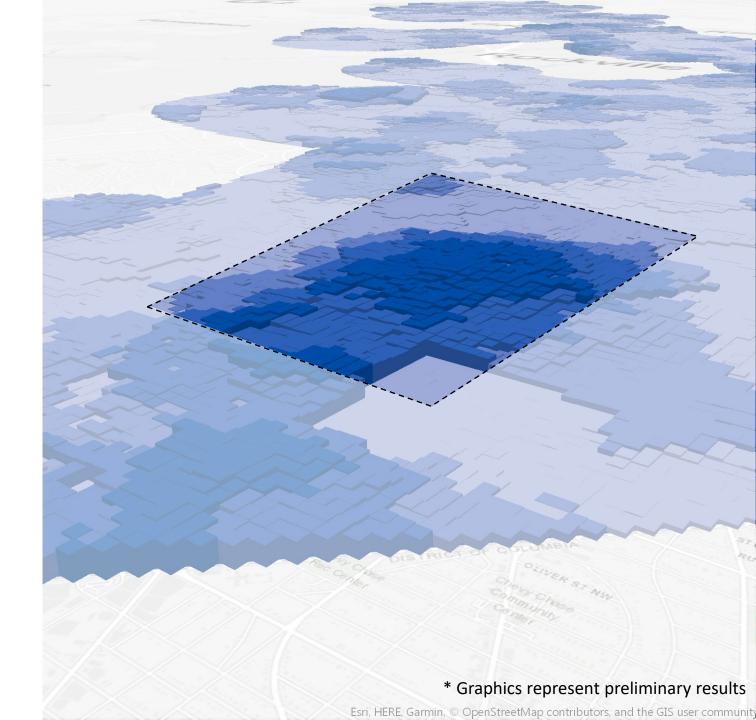


## **SUPPLY TOTAL**

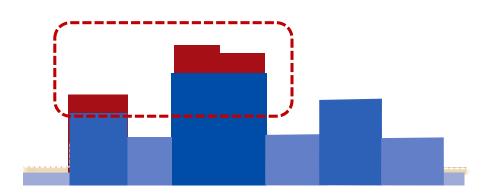






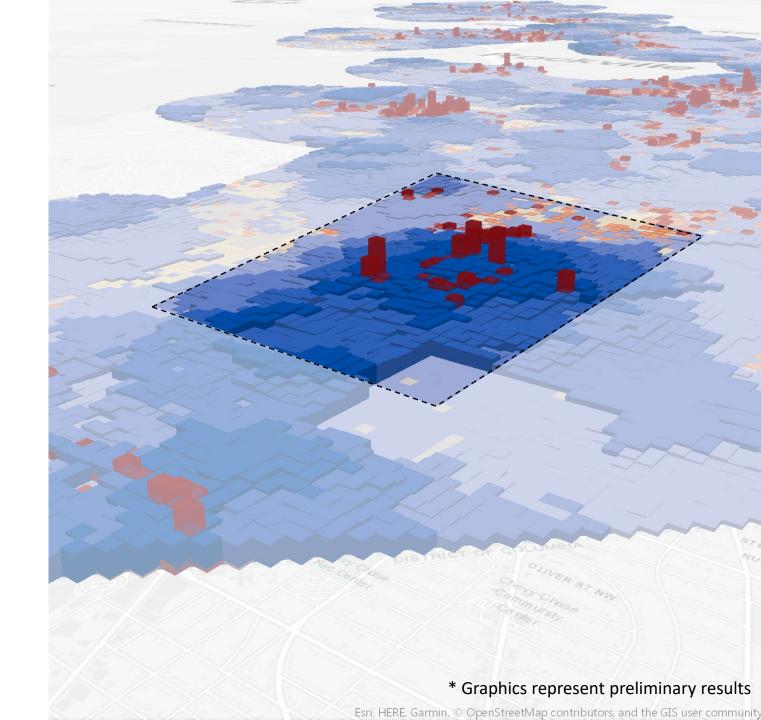


## OVERLAY SUPPLY + DEMAND



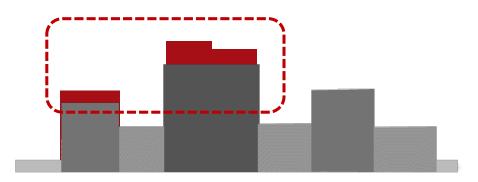






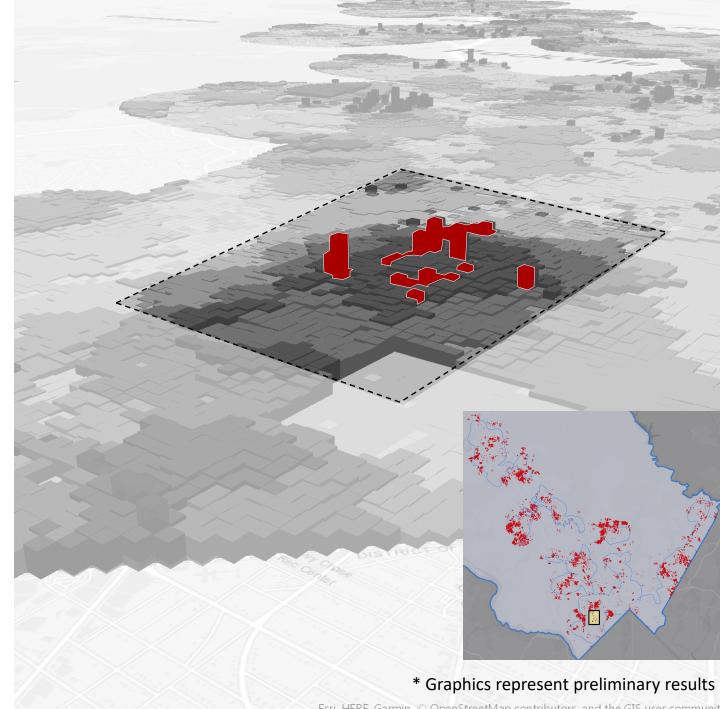
## **DEFICITS/**

#### < LEVEL OF SERVICE

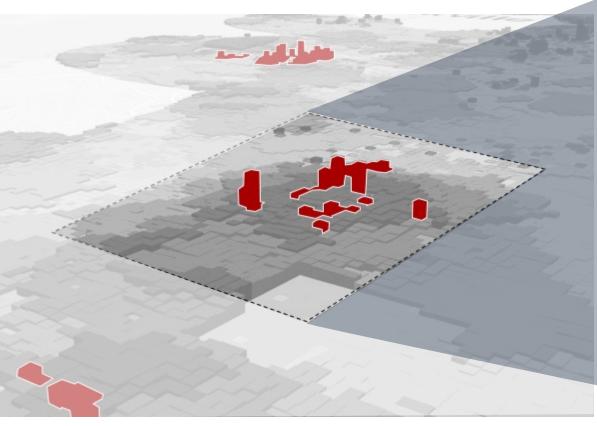








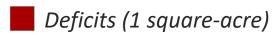
## **DEFICITS**

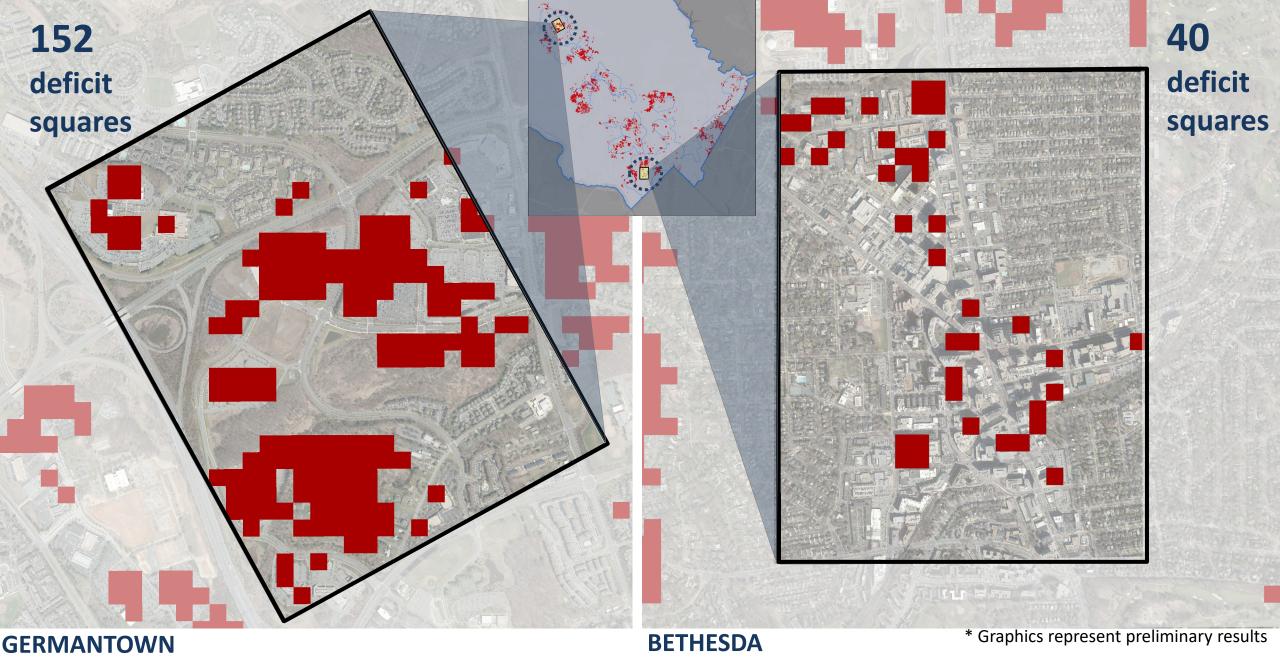


40 deficit squares





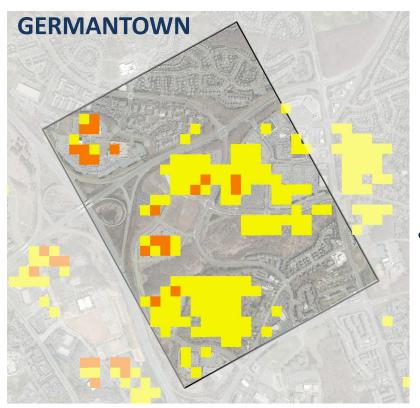




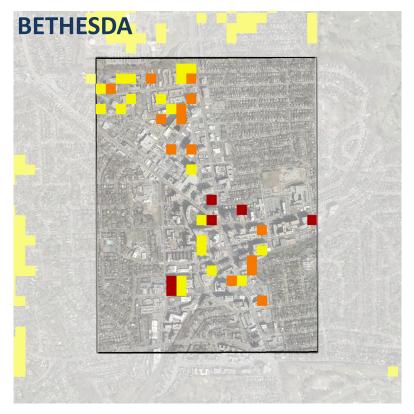
Deficits (1 square-acre)

Development Cluster (1 square-mile) 67

## DEFICITS HAVE DIFFERENT WEIGHT



**152** deficit squares < demand < supply **L**connection



40 deficit squares > demand < supply **A**connection

DEFICIT = 5,732

DEFICIT = 7,203





## NOT ALL DEFICITS WILL BE TREATED THE SAME

The EPS Plan establishes five major strategies to improve the mapped deficits.

### **EPS STRATEGIES**





## CREATE & DEVELOP – PARKS DEPT. New Park



## **CREATE WITH PARTNERS**



**Building Roof** 

**POPS** (privately-owned public spaces)

**Parking Garage Roof** 



## REPURPOSE



**BEFORE: Underutilized courtyard** 



**AFTER: Popular dog park** 

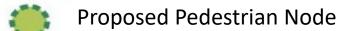


#### **CONNECT**

# Improvements to cross busy avenue & connect to larger park





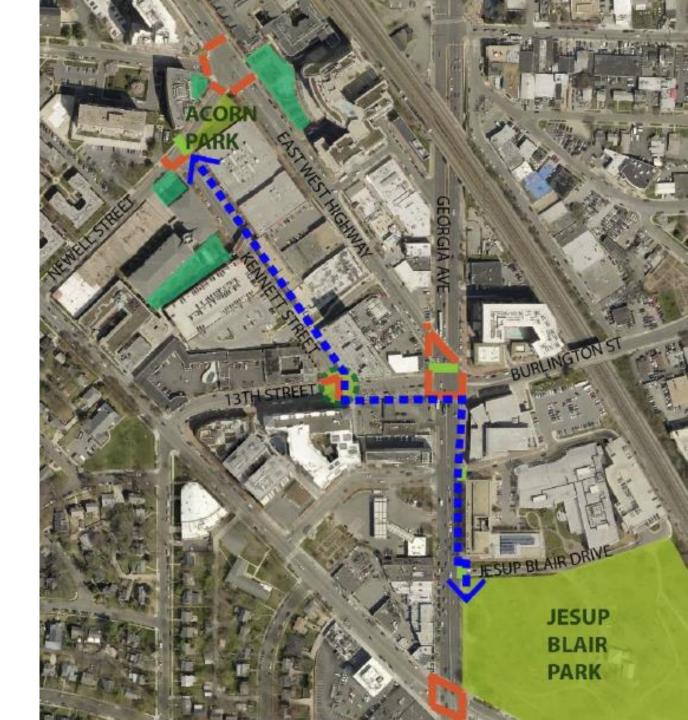


Existing Crosswalk

Proposed Crosswalk/Pedestrian
Improvement

Proposed Park Pedestrian Connection





## **ACTIVATE**



#### **White Flint Placemaking Festival**



### **ACTIVATE**



**Climbing Trees** 



**Pump Track** 



**Yappy Hour: Partners** 

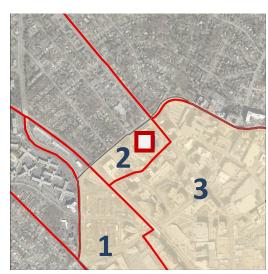




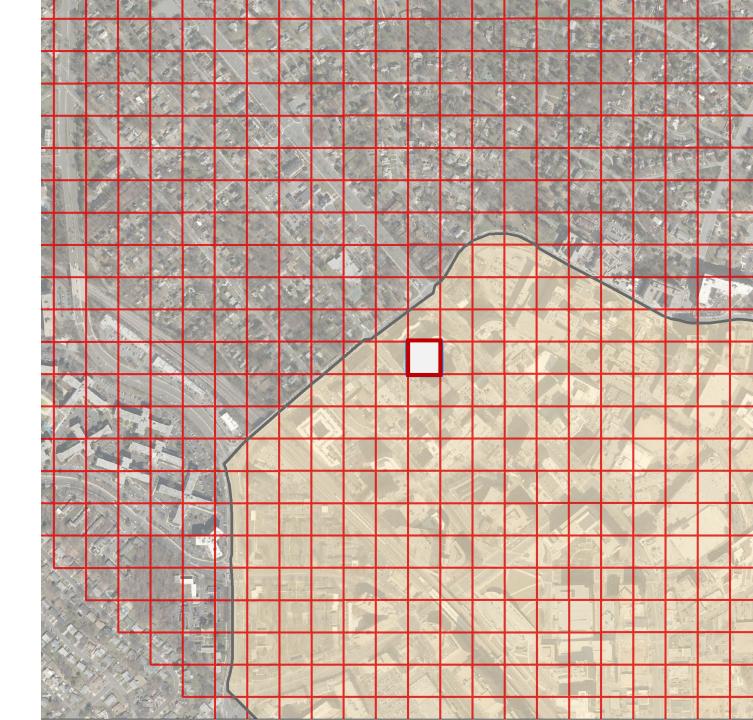
# METHODOLOGY: HOW WE DID IT

#### THE GRID

- Divide area into 1-acre grid
- 300k+ acre grids
- Regular grid getting supply and demand in each grid
- Compare equally
- More precise than census tract



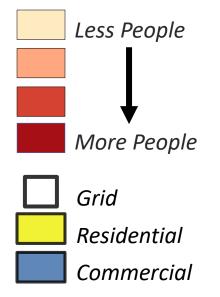


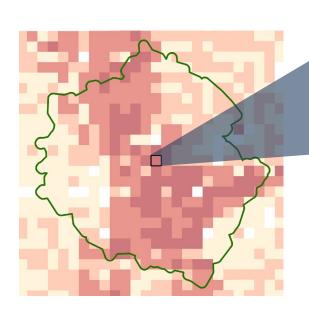


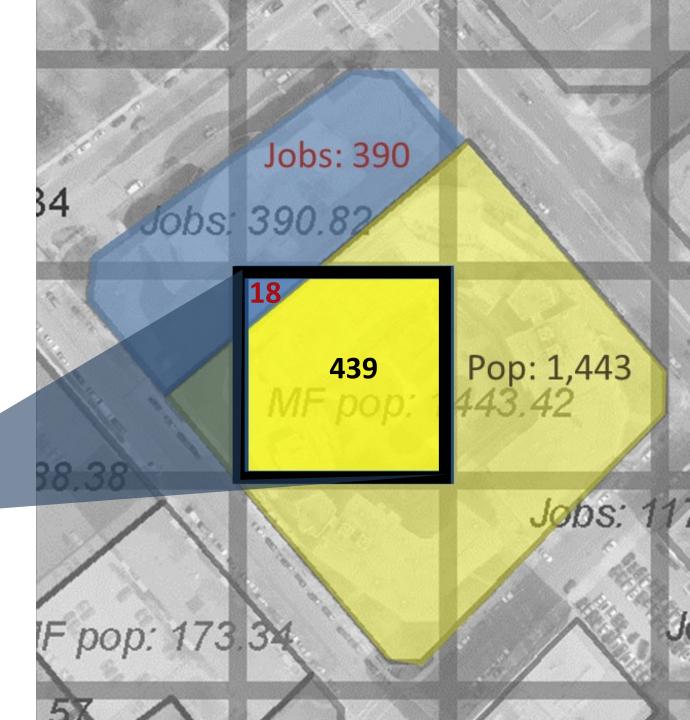
#### **DEMAND**

#### Demand:

- Population of Residents + Workers
- Sample demand for one square







### **DEMAND: CONSOLIDATE LARGE SITES**



**6 PARCELS** 

Only 1 parcel contains total info





1 PARCEL

Consolidation of parcels



#### **DEMAND BY GRID**

Distribution of demand on buildings only

## **SUPPLY - GRID**

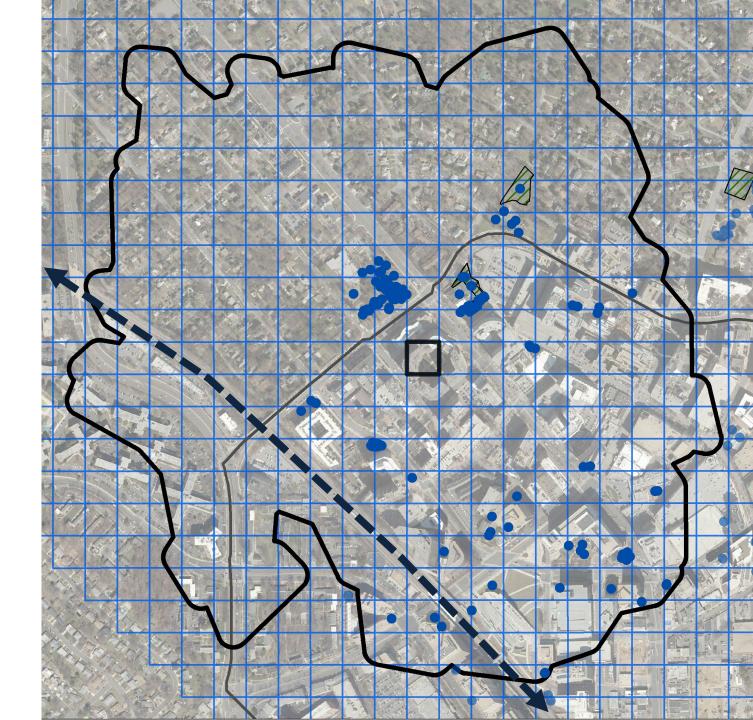
1-acre focus area

supply of Amenities within the walkshed

woods

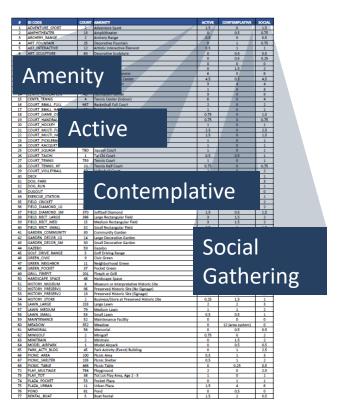
10-min walkshed

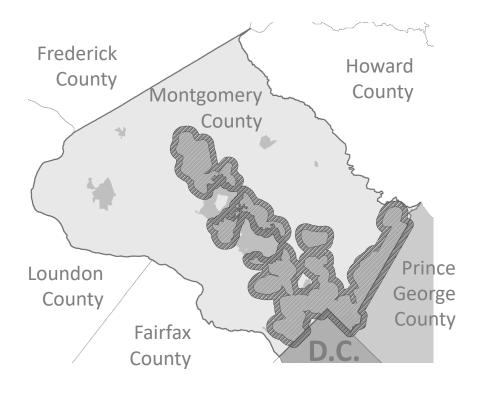
**←→** barrier





#### **COLLECTING AND SCORING**

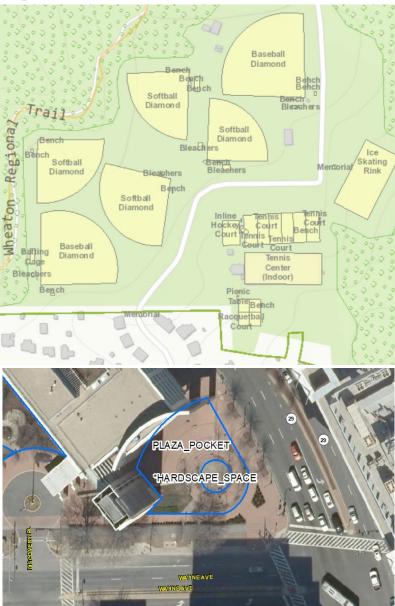




90+ categories

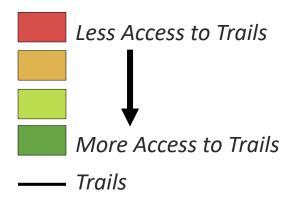
500+ 14k+ locations amenities



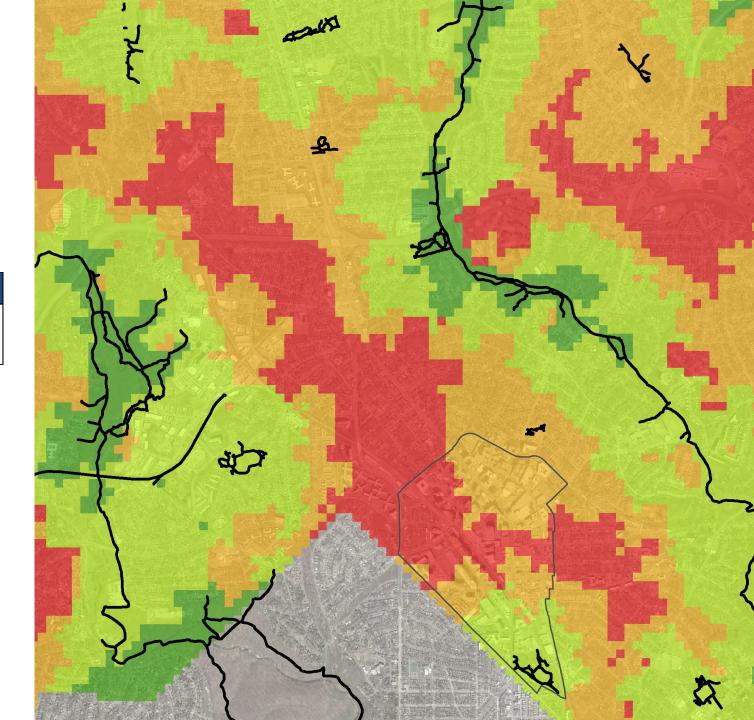


# TRAILS SCORING

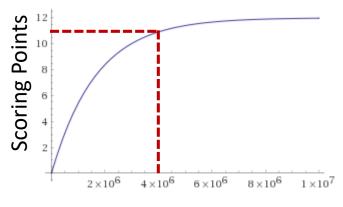
	ACTIVE	CONTEMPLATIVE	SOCIAL
TRAIL	6/10/14	6/10/14	2/2.5/3



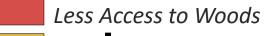




# WOODS **SCORING**



Size (amount of woods)



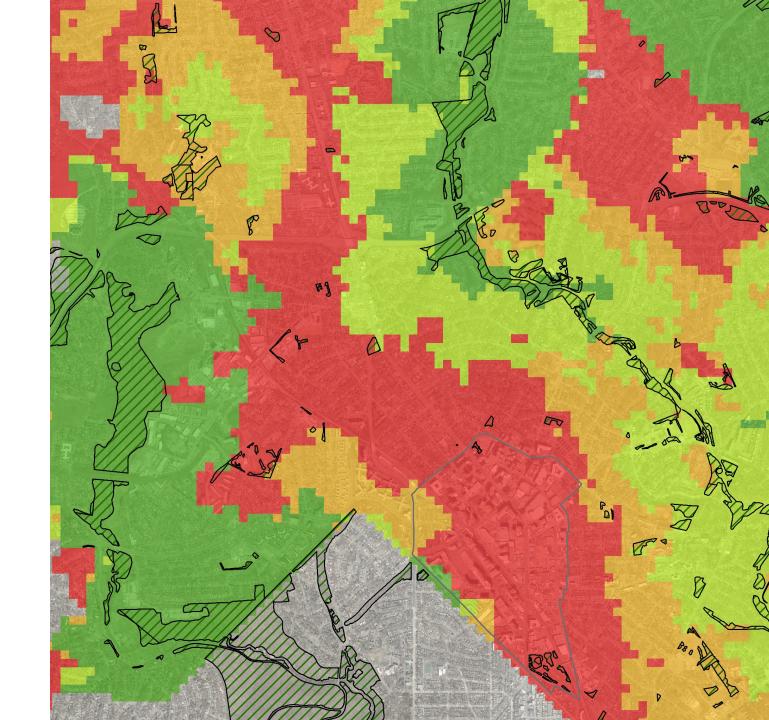


More Access to Woods



Woods





## WALKABLE NETWORK

#### **Create Walk Links:**

- Neighborhood roads
- Trail systems
- Park, school, and private retail walkways
- Any road with a sidewalk

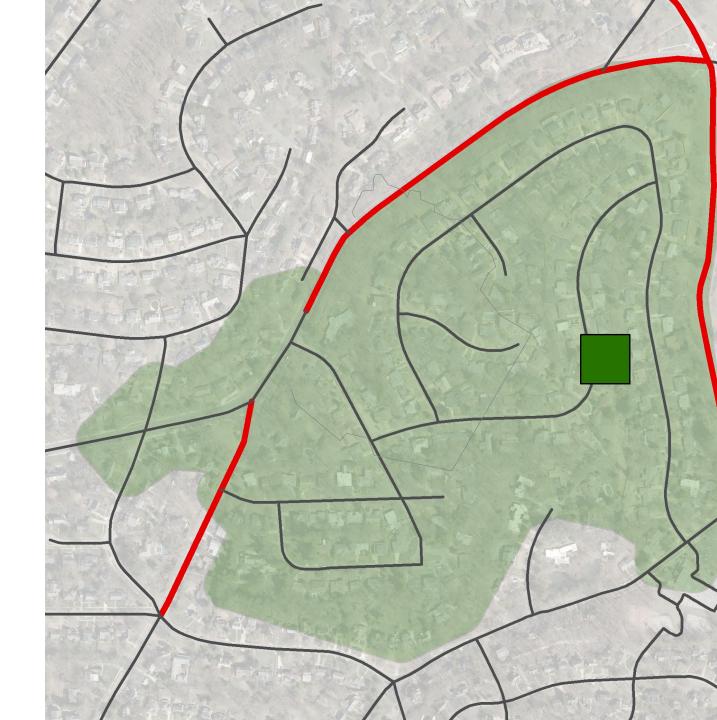


Walkshed

— Walkable Network

Non-Walkable Network



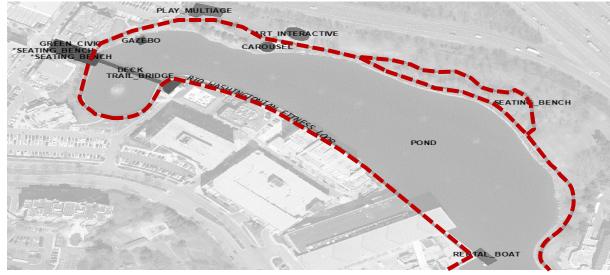


#### WALKABLE NETWORK

#### Montgomery Park-owned pathway/trail

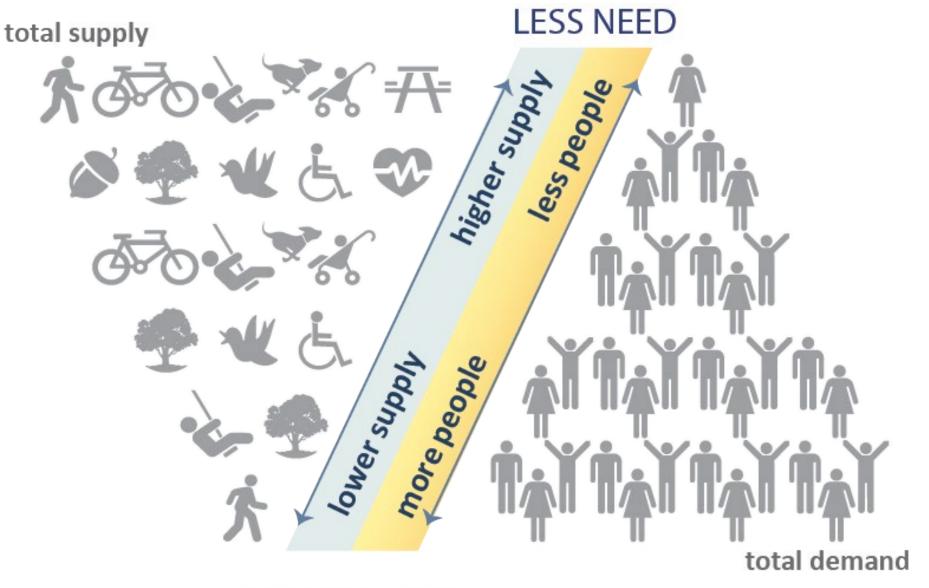


#### Private-owned public pathway/trail





# THANK YOU



GREATER NEED

Lower Level of Service



#### **RECAP**

How Park Rx America promotes the Health Benefits of Parks and Public Spaces

How the EPS Plan evaluates access to public spaces

Prioritize where a Park system should allocate its limited resources





## Questions?

www.montgomeryparks.org

Cristina.Sassaki@montgomeryparks.org Christopher.McGovern@montgomeryplanning.org

https://parkrxamerica.org/

John@parkrxamerica.org



