Access to Experiences - Not Acres
Measuring the Public Realm

Energized Public Spaces (EPS) Plan

Park Rx America Program

energized public spaces
functional master plan for parks

Park Rx America

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

Photo: Klyde Warren Park, Dallas Art District. Source: Pinterest.com

HOW ARE WE ADDRESSING HEALTH?

PEOPLE
(CONSUMER)

PARK RX
PROGRAM
(PROMOTER)

HEALTH

PARKS/PUBLIC SPACES
(PROVIDER)

ENERGIZED
PUBLIC SPACES PLAN
(DATA-DRIVEN TOOL)

WHAT WILL YOU LEARN?

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

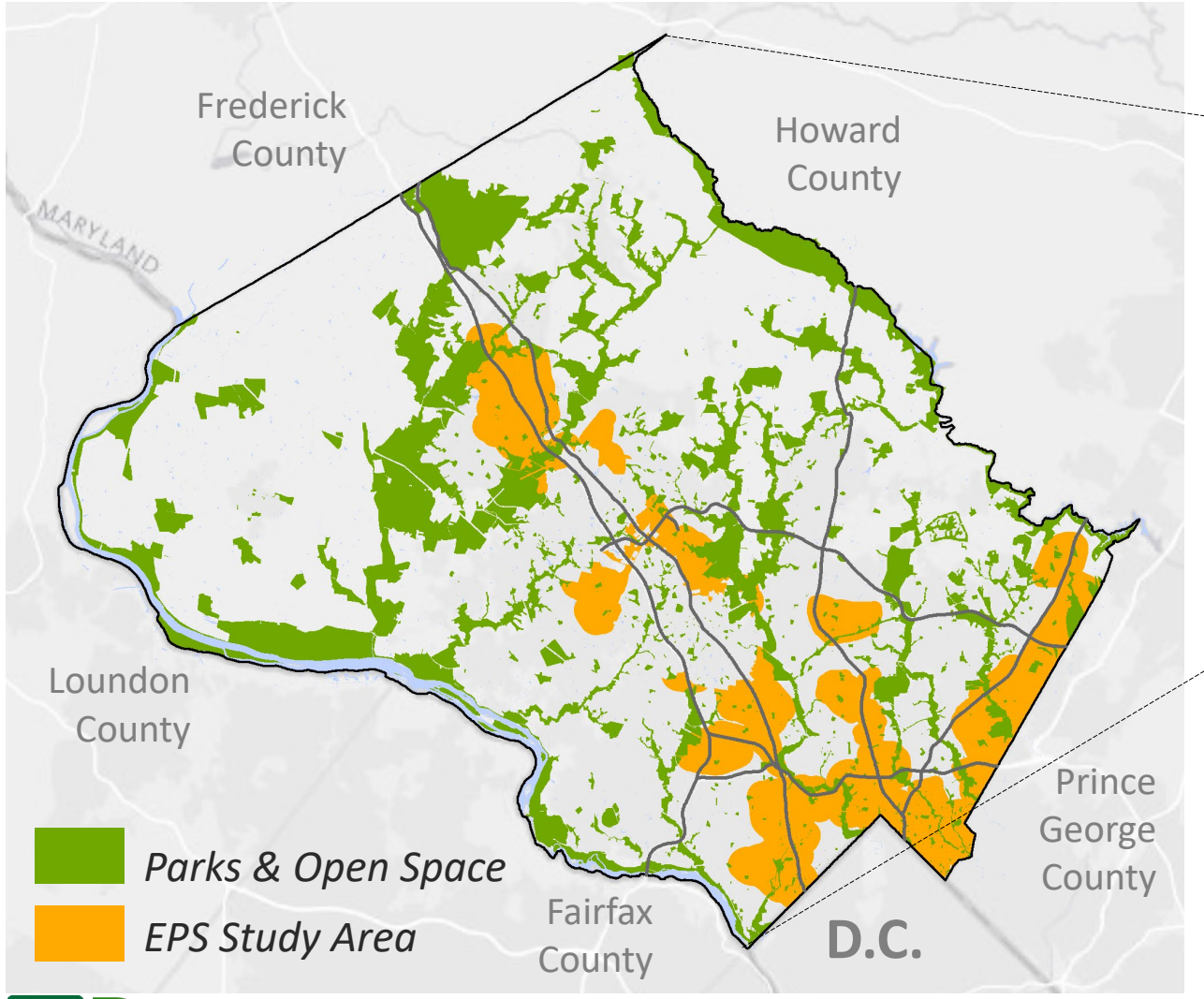
How the EPS Plan **evaluates access** to public spaces

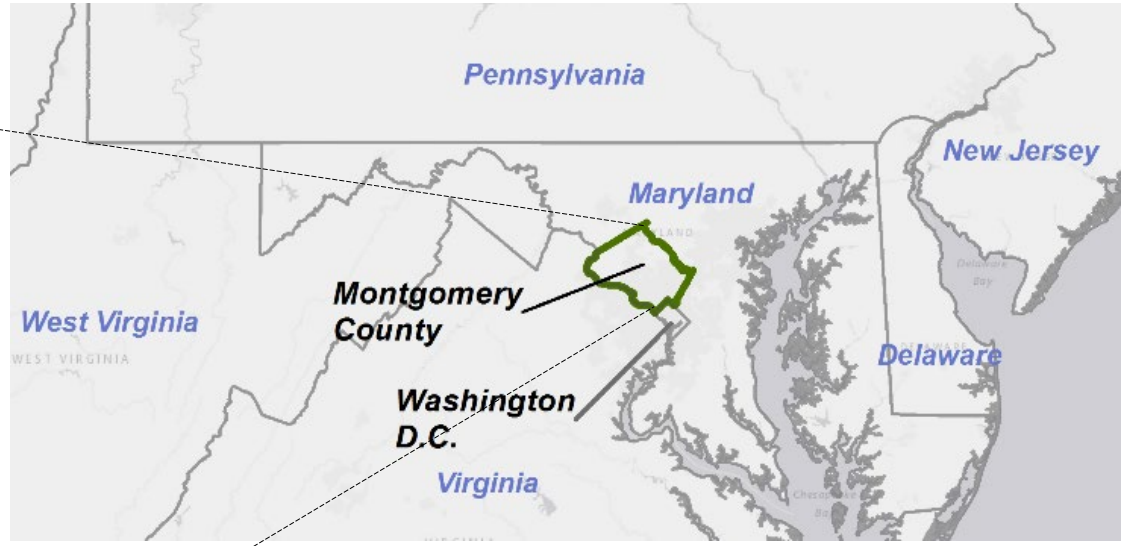
Prioritize **where** a Park system should allocate its limited resources

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

38%

1990: 765,500 **+293,300**

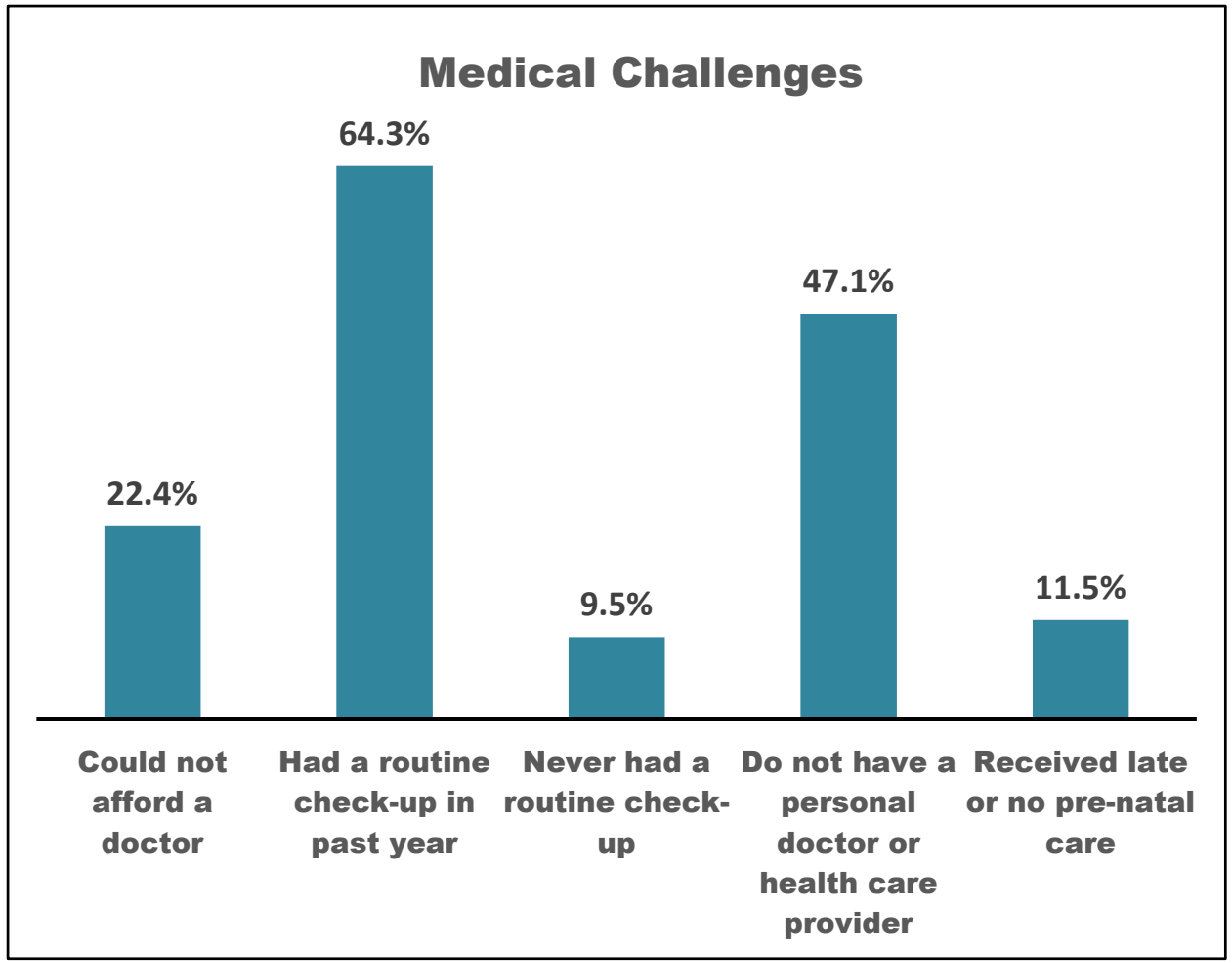
MONTGOMERY COUNTY HEALTH OVERVIEW

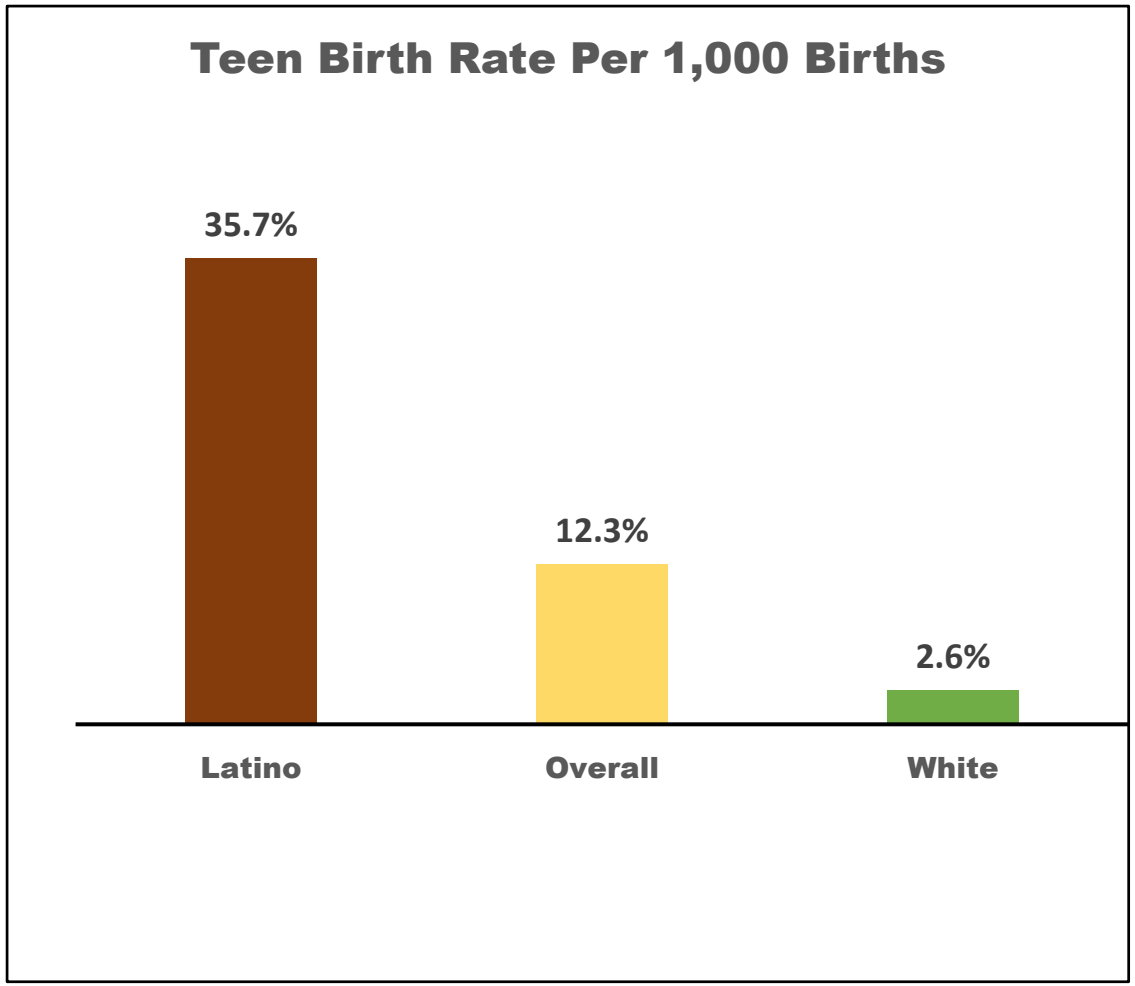
OVERVIEW: MONTGOMERY HEALTH

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 and12 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.

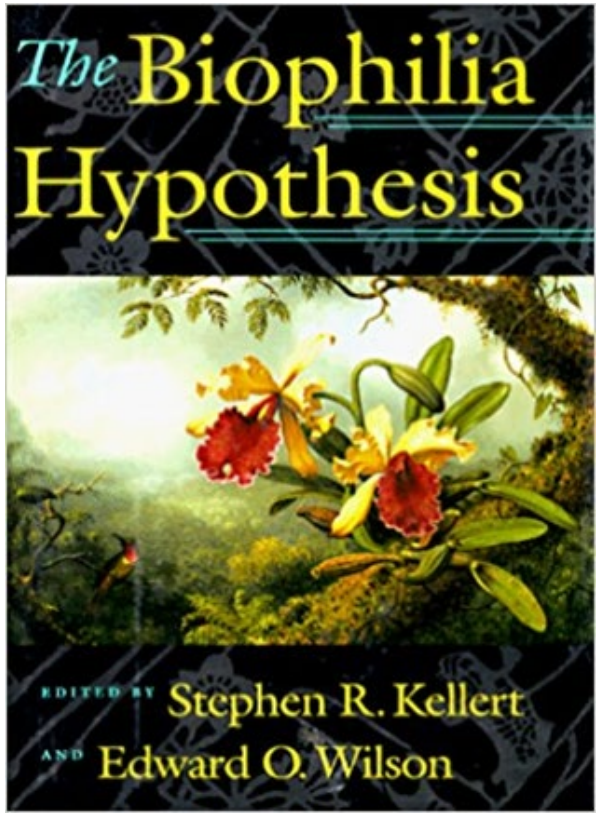
For every dollar spent on healthcare in the U.S., $0.86 is spent on patients with chronic disease.

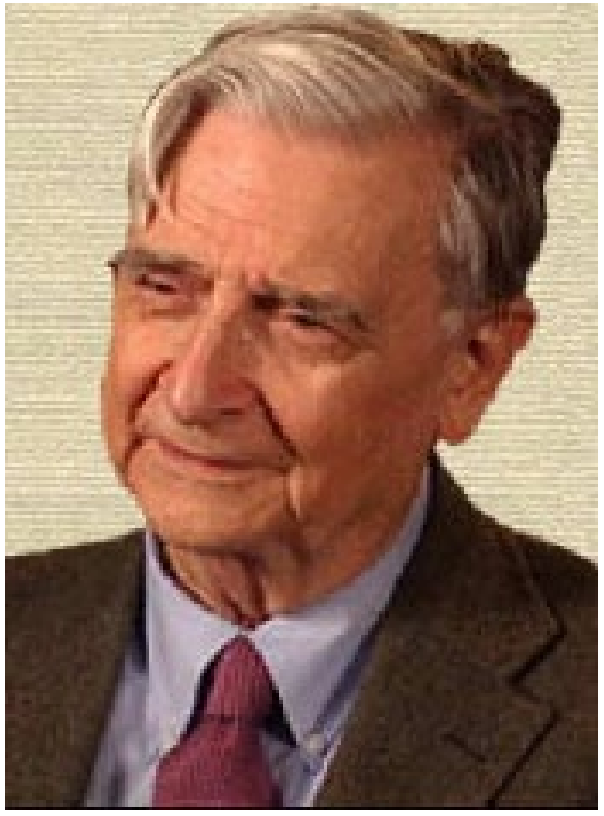
Humans living in landscapes that lack trees or other natural features undergo patterns of social, psychological and physical breakdown …

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

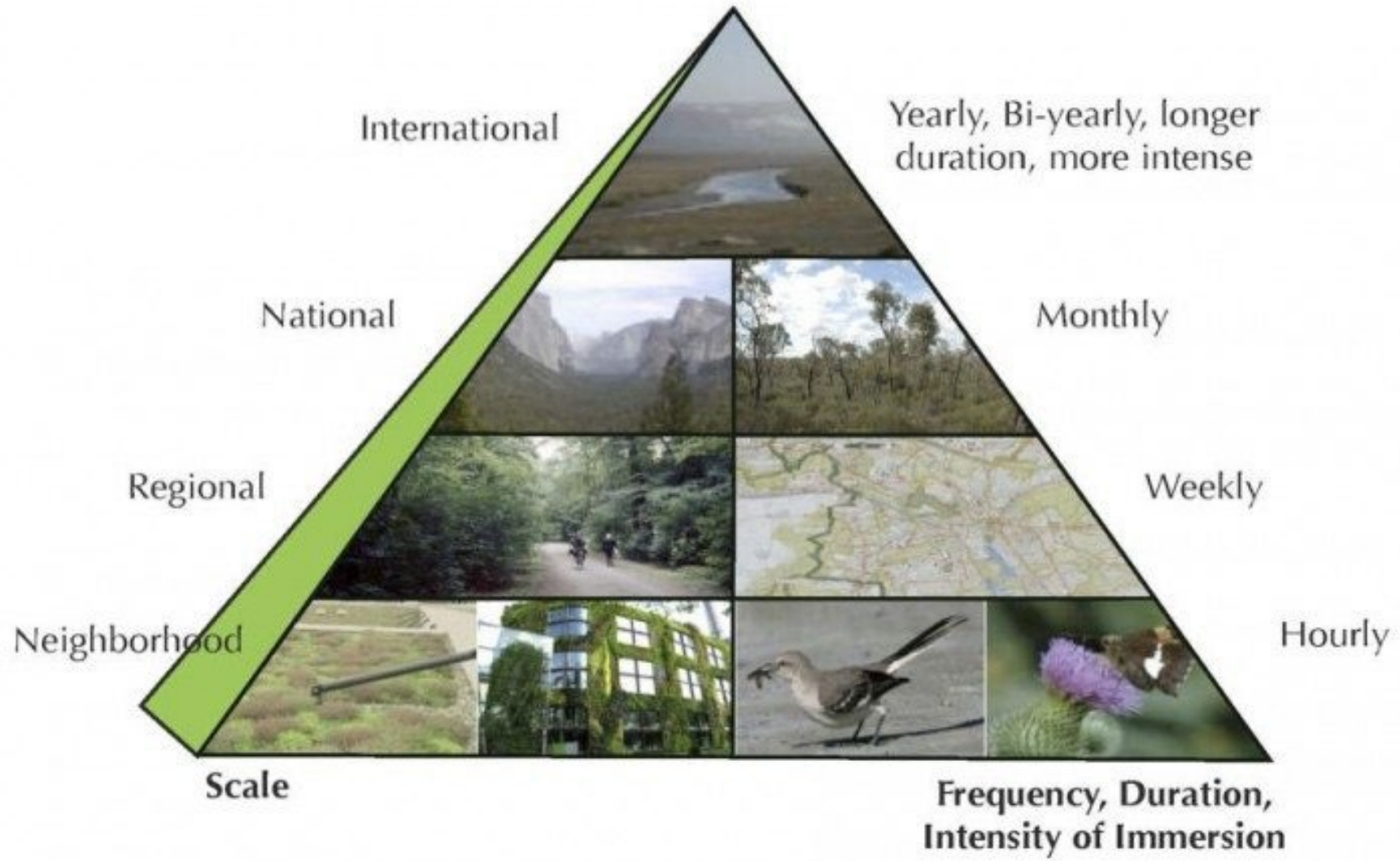
Among young people 26 and younger rates of depression, psychological distress, and suicidal thoughts are increasing.

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.**

Studies show that people **EXERCISE MORE** if they have access to **PARKS** and other safe outdoor places. **Physical activity reduces and can prevent these serious health problems.**

Maintaining a **healthy weight** saves **$1,500** per person in healthcare costs a year.

Parks help to reduce the costs of healthcare.

PARK RX PROGRAM

PEOPLE
(CONSUMER)

PARK RX
PROGRAM
(PROMOTER)

HEALTH

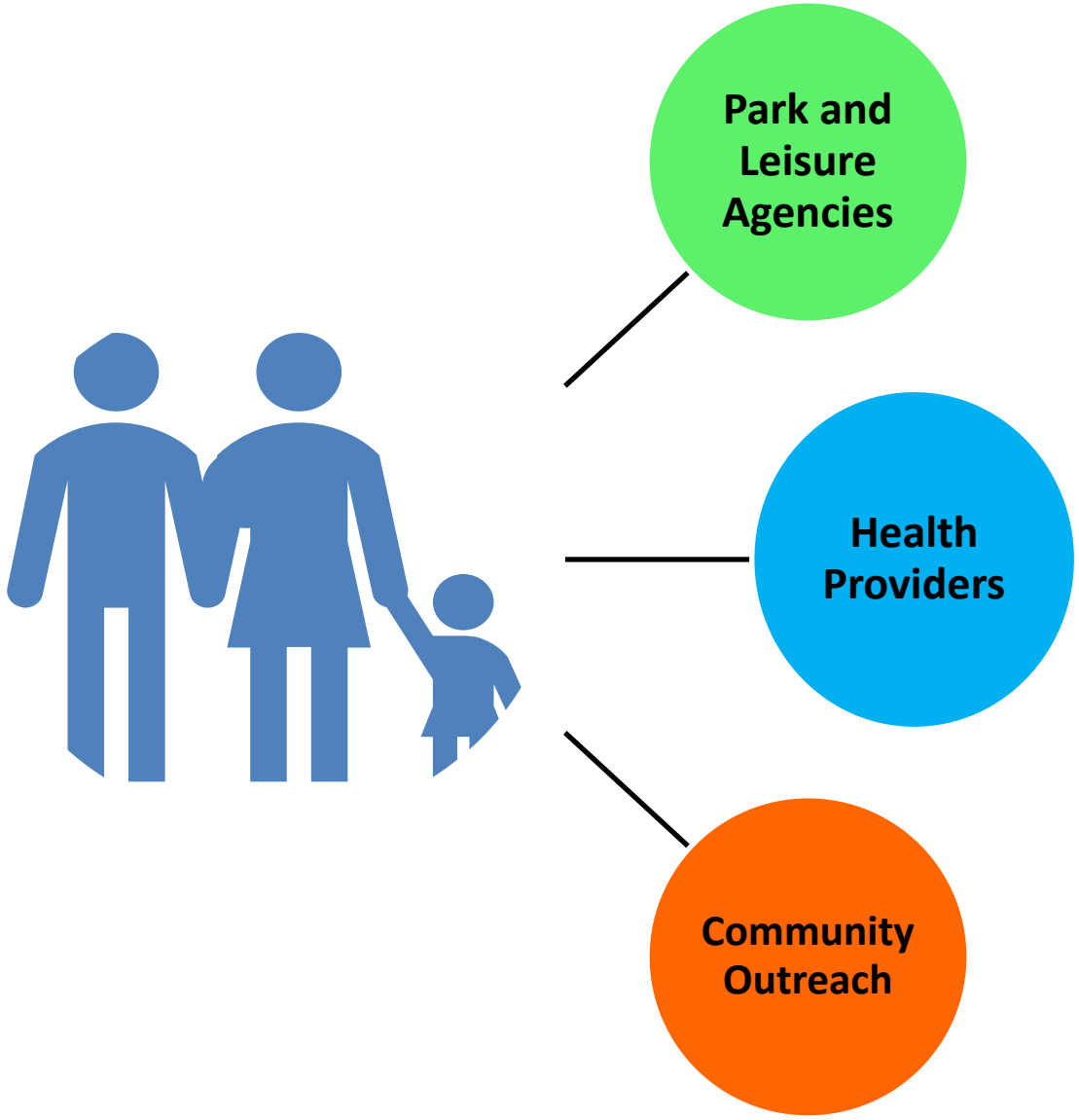
PARKS/PUBLIC SPACES
(PROVIDER)

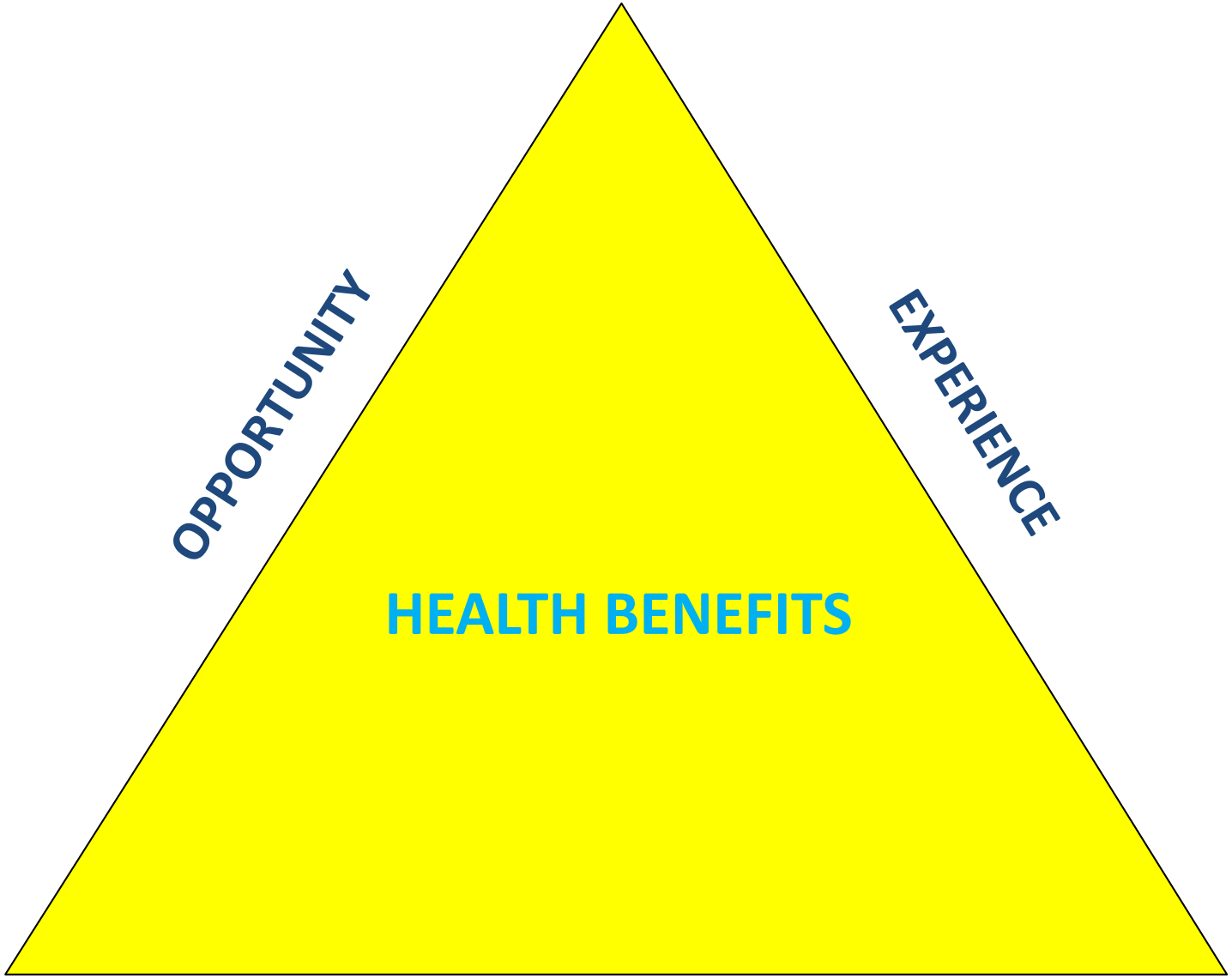
ENERGIZED
PUBLIC SPACES PLAN
(DATA-DRIVEN TOOL)

Park Rx America

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.


Park and Leisure Agencies
Health Providers
Community Outreach


OPPORTUNITY
EXPERIENCE
HEALTH BENEFITS
OUTREACH / INCENTIVES

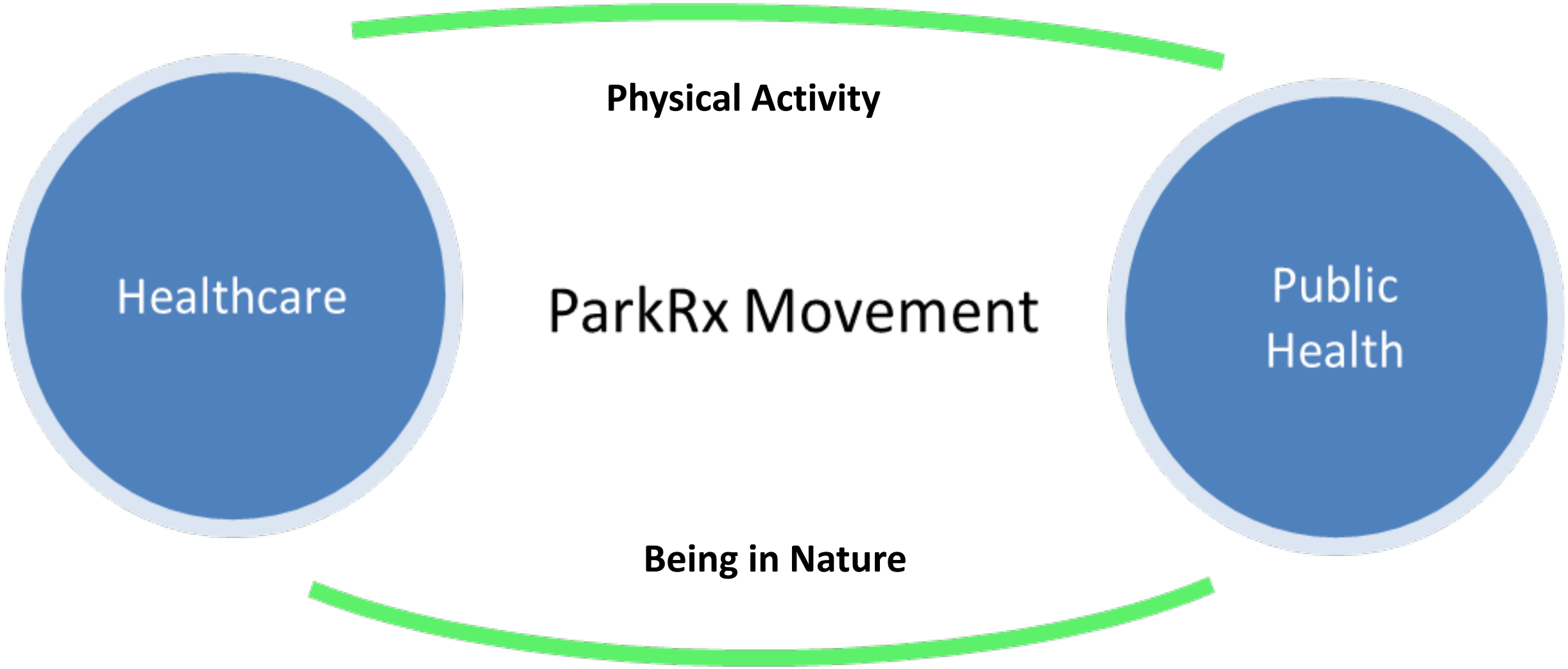
OUTDOOR DANGERS

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

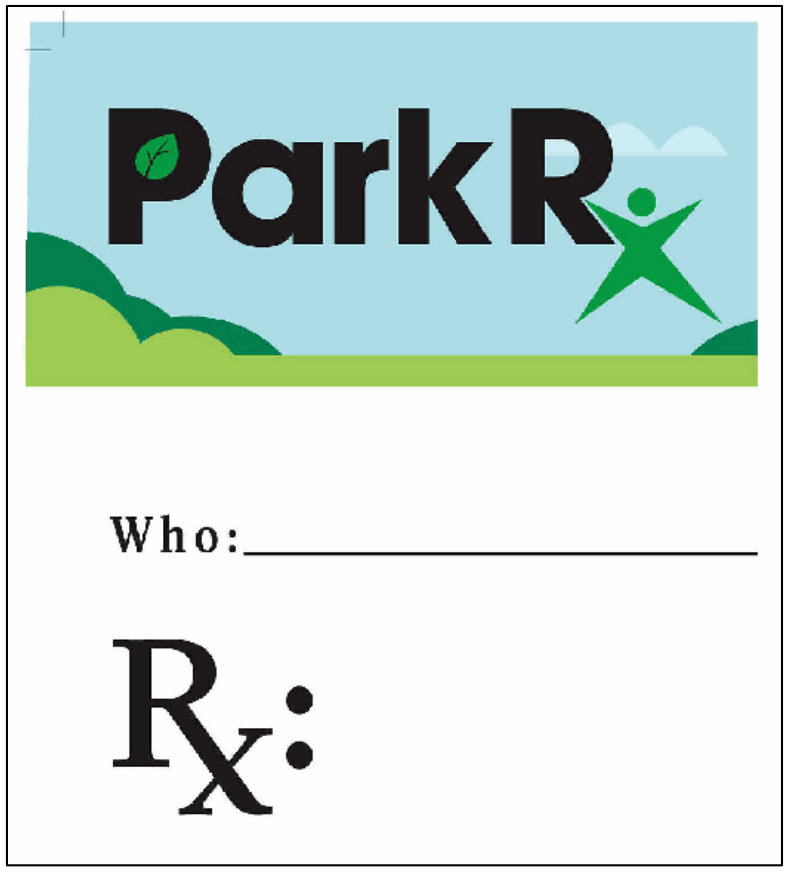
WHAT IS PARKRX?

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

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


Physical Activity
Healthcare
ParkRx Movement
Public Health
Being in Nature

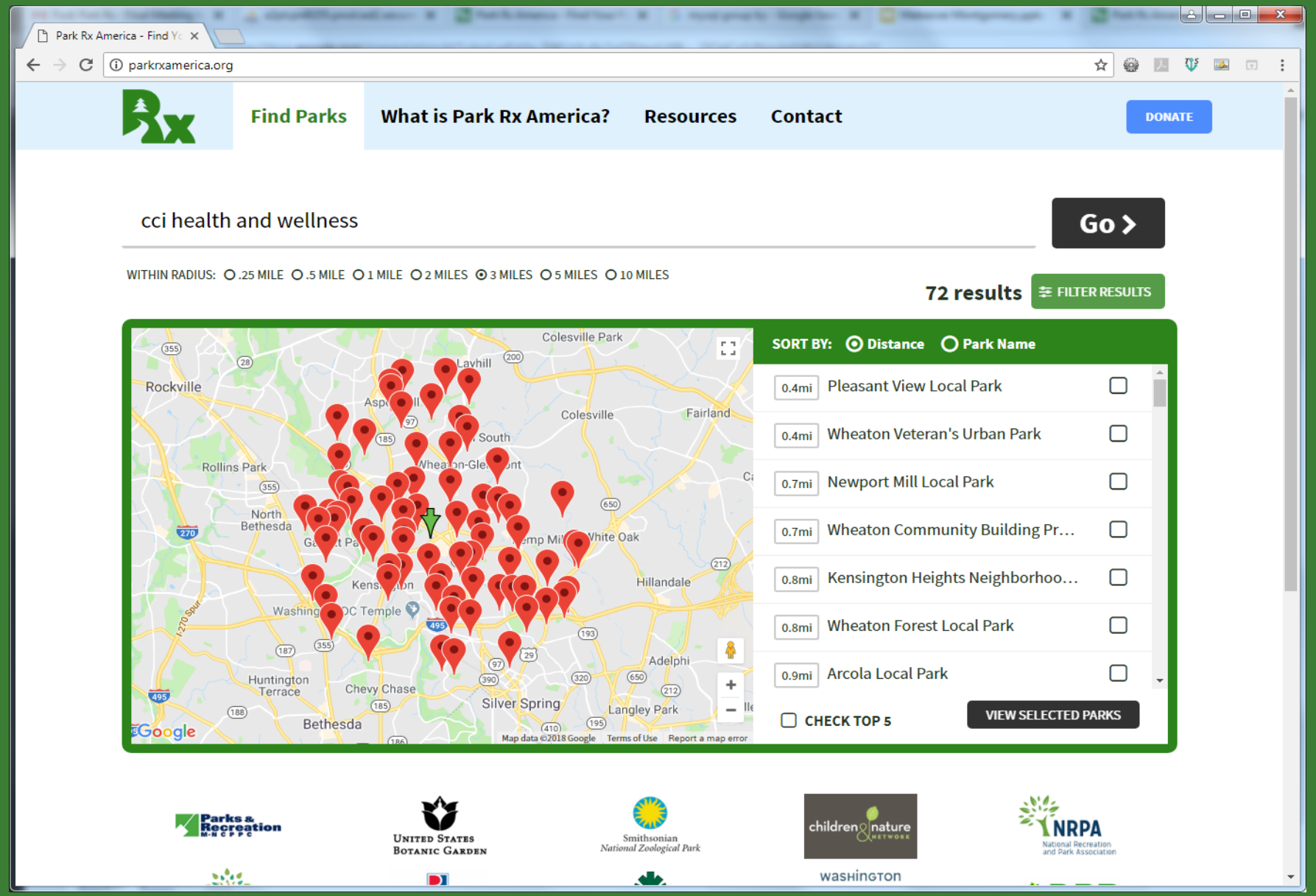
WHAT IS A PARK PRESCRIPTION?



PRESCRIPTION CONTENT:

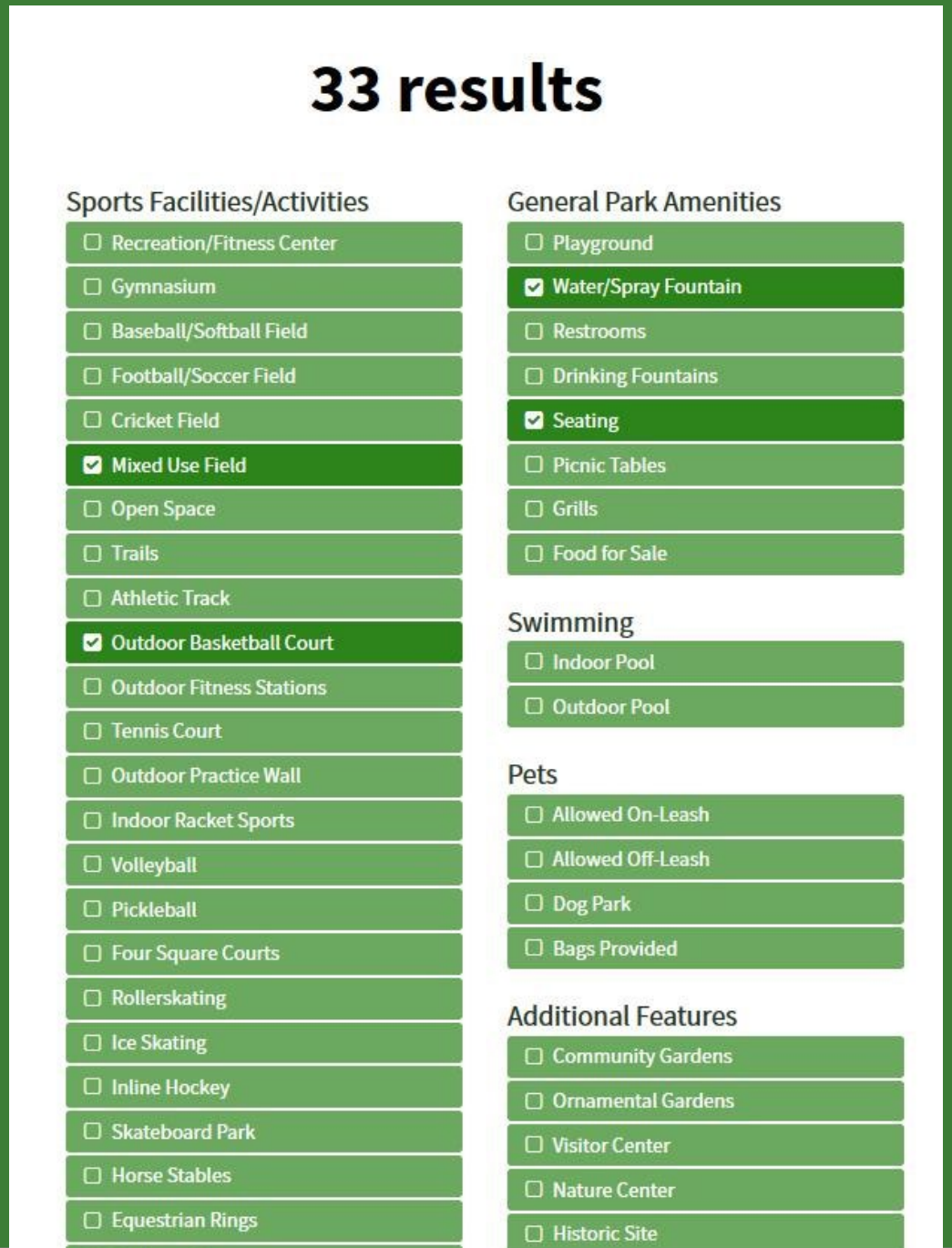
- Visit Location
- Time of Visit
- Visit Frequency
- Visit Duration
- On-Site Activity

FIND PARKS


Park Rx America - Find Yc
parkrxamerica.org
Find Parks
What is Park Rx America?
Resources
Contact
DONATE
cci health and wellness
Go
WITHIN RADIUS: .25 MILE .5 MILE 1 MILE 2 MILES 3 MILES 5 MILES 10 MILES
72 results
FILTER RESULTS
SORT BY: Distance Park Name
0.4mi Pleasant View Local Park
0.4mi Wheaton Veteran's Urban Park
0.7mi Newport Mill Local Park
0.7mi Wheaton Community Building Pr…
0.8mi Kensington Heights Neighborhoo…
0.8mi Wheaton Forest Local Park
0.9mi Arcola Local Park
CHECK TOP 5
VIEW SELECTED PARKS
Rockville
Colesville Park
Colesville
Fairland
Rollins Park
North Bethesda
White Oak
Hillandale
Adelphi
Silver Spring
Langley Park
Takoma Park
Chevy Chase
Huntington Terrace
Bethesda
Google
Map data ©2018 Google
Terms of Use
Report a map error
Parks & Recreation
United States Botanic Garden
Smithsonian National Zoological Park
children & nature network
NRPA
National Recreation and Park Association
washington

PARK FILTERS

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



ONE-PAGE PARK SUMMARIES

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

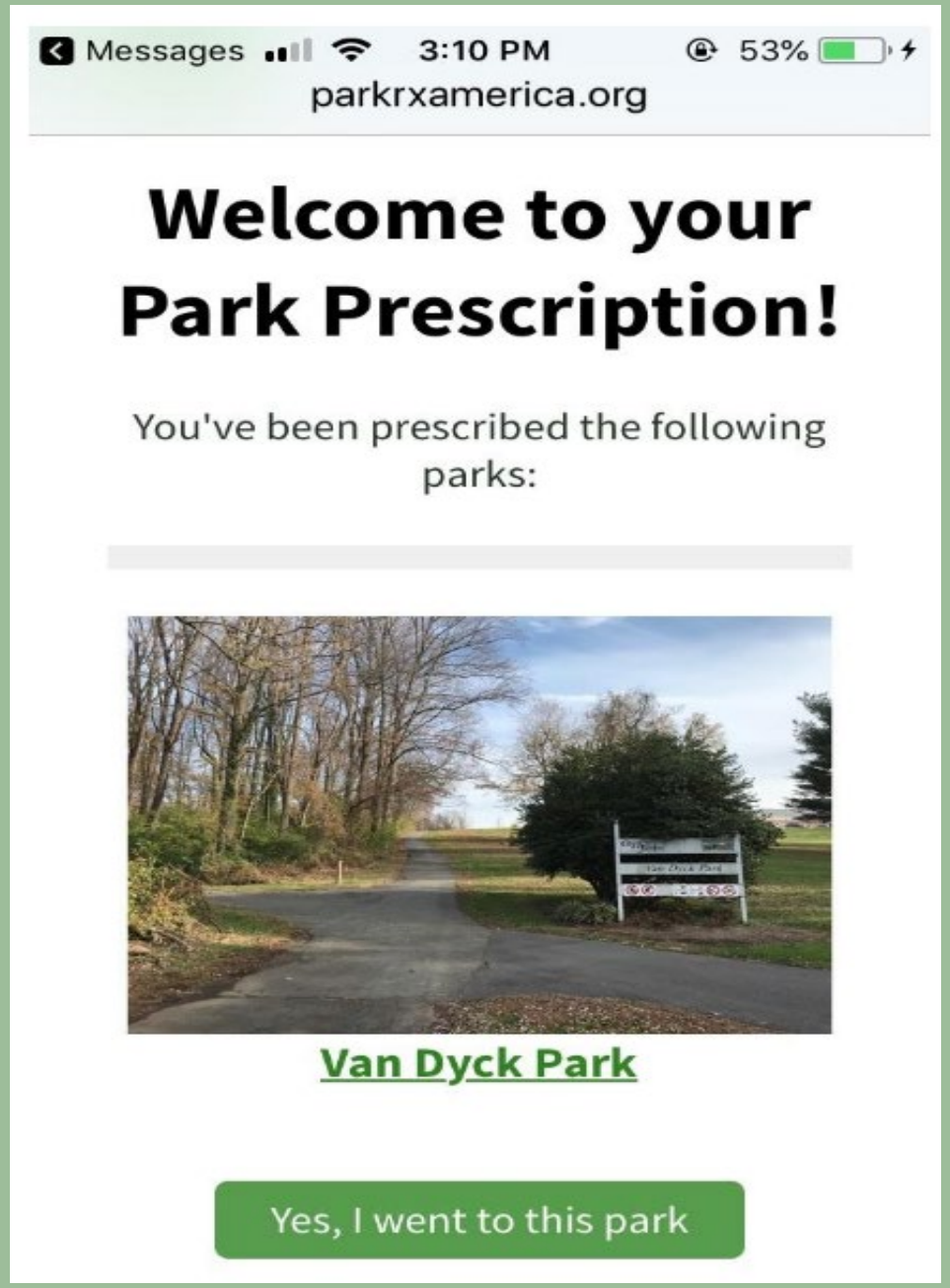
DURATION: 30-60 min

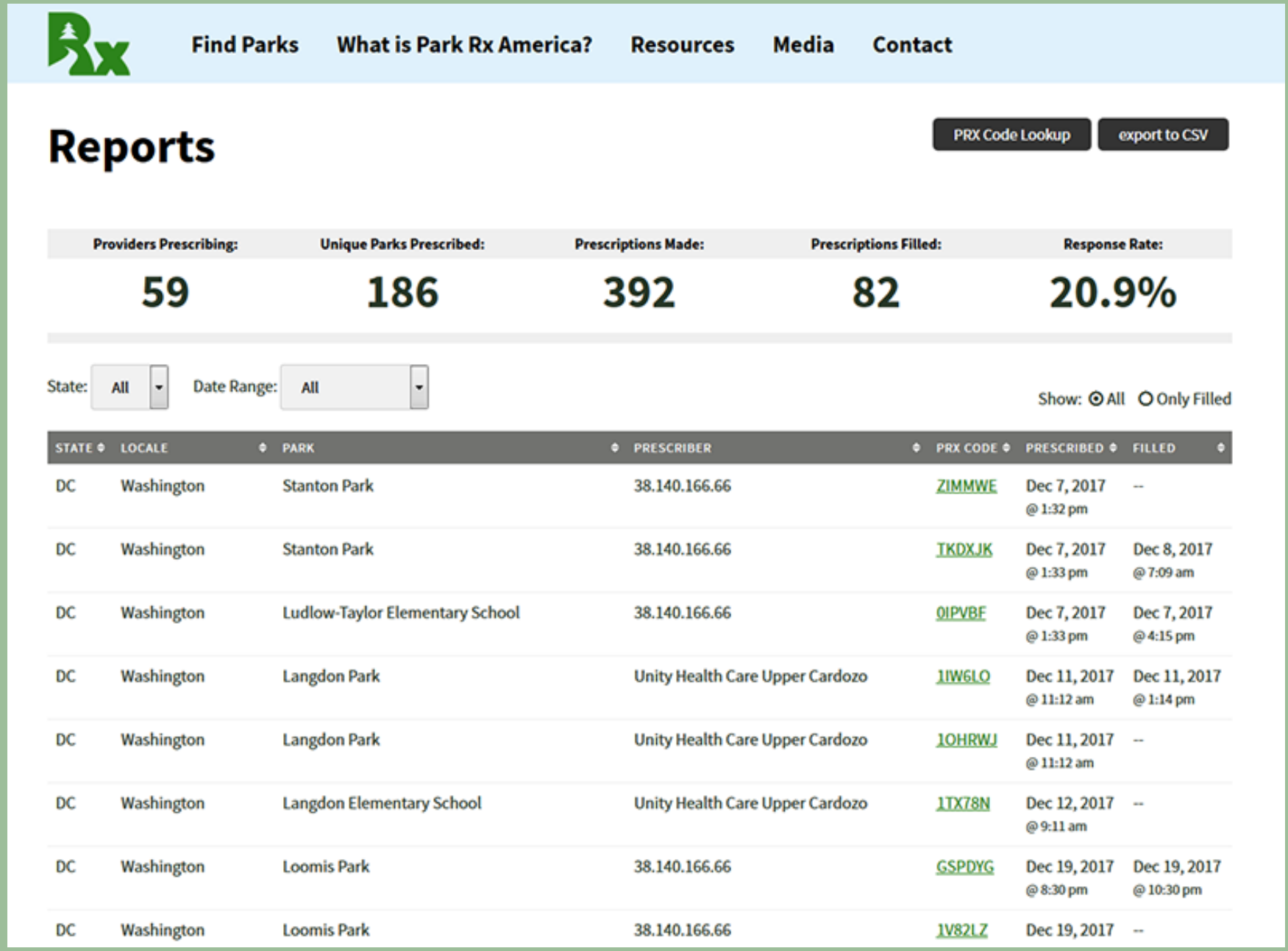
Send by Text | Send by Email

Patient Mobile Number

2025501740

Send to Patient


Messages 3:10 PM 53%
parkrxamerica.org
Welcome to your Park Prescription!
You've been prescribed the following parks:
Van Dyck Park
Yes, I went to this park



STATE	LOCALE	PARK	PRESCRIBER	PRX CODE	PRESCRIBED	FILLED
DC	Washington	Stanton Park	38.140.166.66	ZIMMWE	Dec 7, 2017 @ 1:32 pm	--
DC	Washington	Stanton Park	38.140.166.66	TKDXJK	Dec 7, 2017 @ 1:33 pm	Dec 8, 2017 @ 7:09 am
DC	Washington	Ludlow-Taylor Elementary School	38.140.166.66	0IPVBF	Dec 7, 2017 @ 1:33 pm	Dec 7, 2017 @ 4:15 pm
DC	Washington	Langdon Park	Unity Health Care Upper Cardozo	1IW6LO	Dec 11, 2017 @ 11:12 am	Dec 11, 2017 @ 1:14 pm
DC	Washington	Langdon Park	Unity Health Care Upper Cardozo	1OHRWJ	Dec 11, 2017 @ 11:12 am	--
DC	Washington	Langdon Elementary School	Unity Health Care Upper Cardozo	1TX78N	Dec 12, 2017 @ 9:11 am	--
DC	Washington	Loomis Park	38.140.166.66	GSPDYG	Dec 19, 2017 @ 8:30 pm	Dec 19, 2017 @ 10:30 pm
DC	Washington	Loomis Park	38.140.166.66	1V82LZ	Dec 19, 2017	--

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

ENERGIZED PUBLIC SPACES FUNCTIONAL MASTER PLAN (EPS PLAN)

PEOPLE
(CONSUMER)

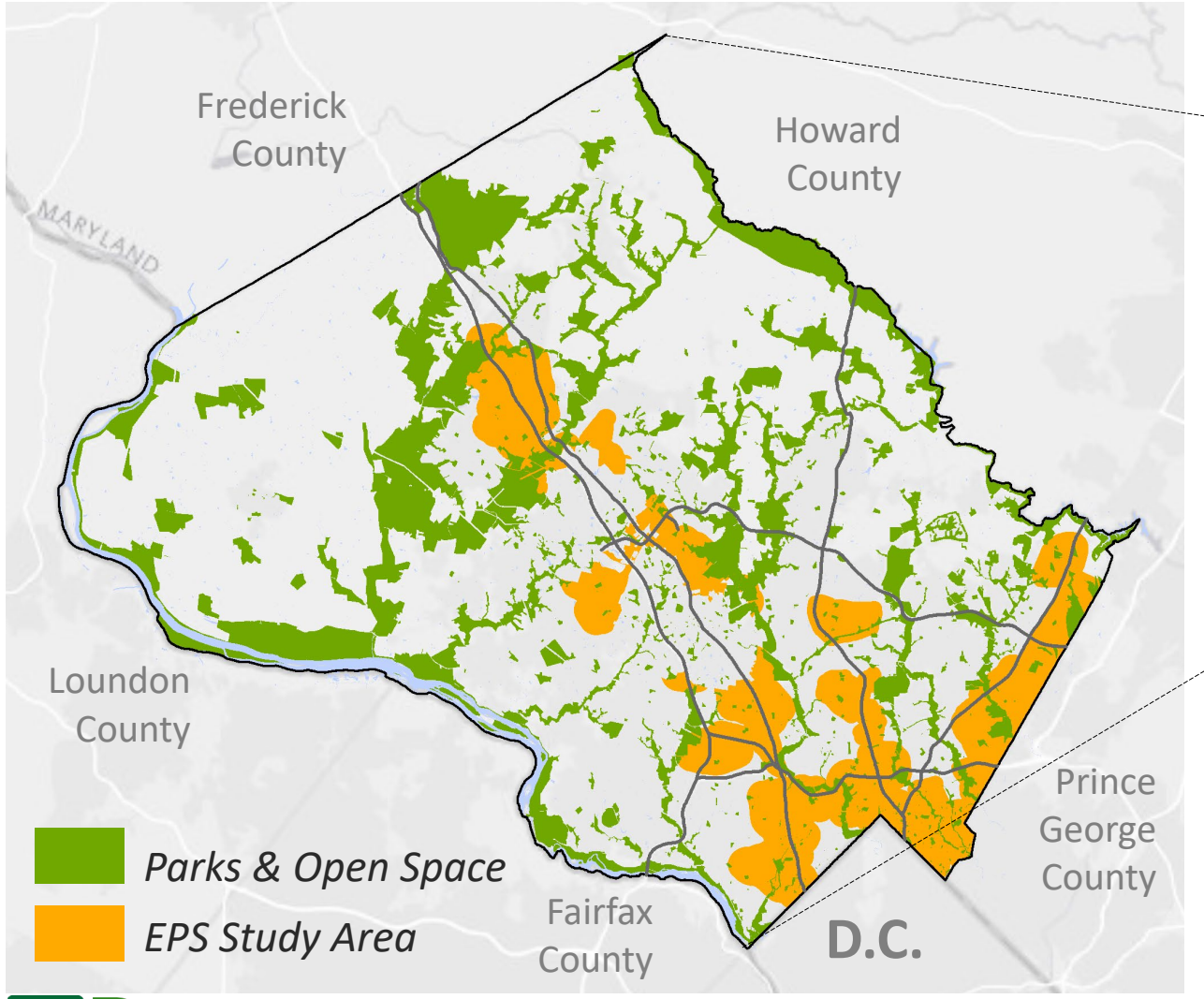
PARK RX
PROGRAM
(PROMOTER)

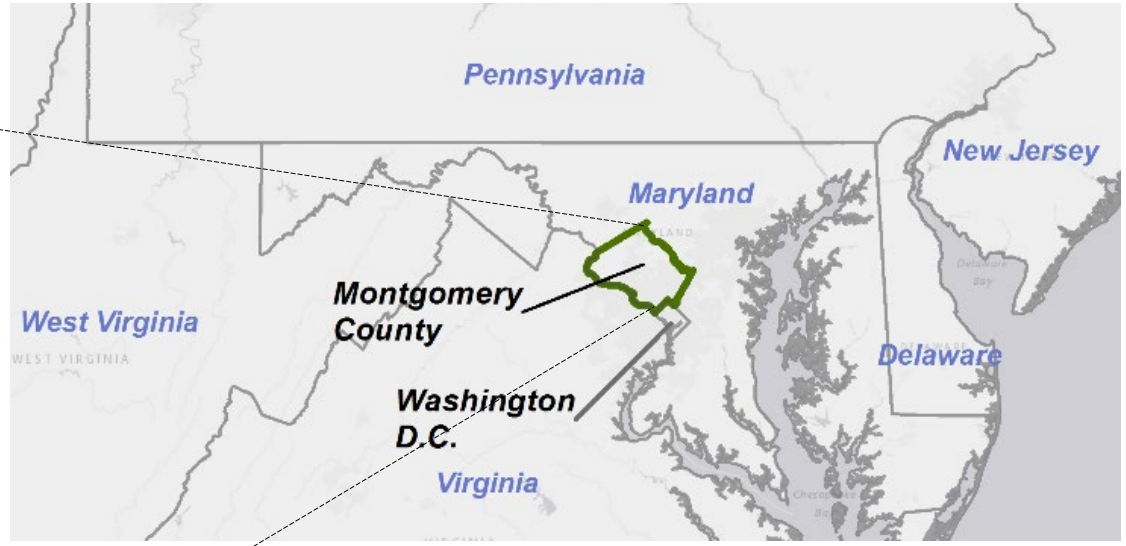
HEALTH

PARKS/PUBLIC SPACES
(PROVIDER)

ENERGIZED
PUBLIC SPACES PLAN
(DATA-DRIVEN TOOL)

MONTGOMERY COUNTY





Most populous county in MD

2017: 1,058,800

38%

1990: 765,500 **+293,300**

FROM SUBURBAN TO URBAN

Growing Suburban

Stream Valley Parks
Water Protection

1930-1940s

Regional Parks &
Athletic Fields

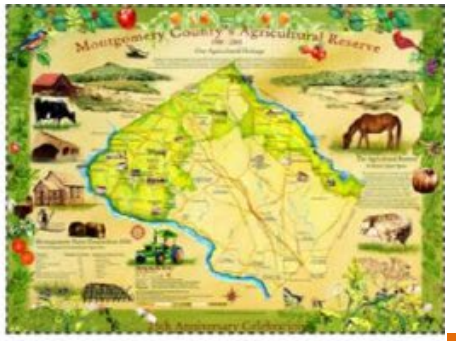
1950-1960s

Neighborhood Parks

1970s

Environmental
Awareness

1960-1970s



Smart Growth
Open Space Preservation

1980-1990s

Growing Urban

DOWNTOWN SILVER SPRING

GERMANTOWN

WHEATON

Urban Parks
Shortage

2000-2000s

VISION: ENERGIZED PUBLIC SPACES

In the EPS Study Area, everyone can

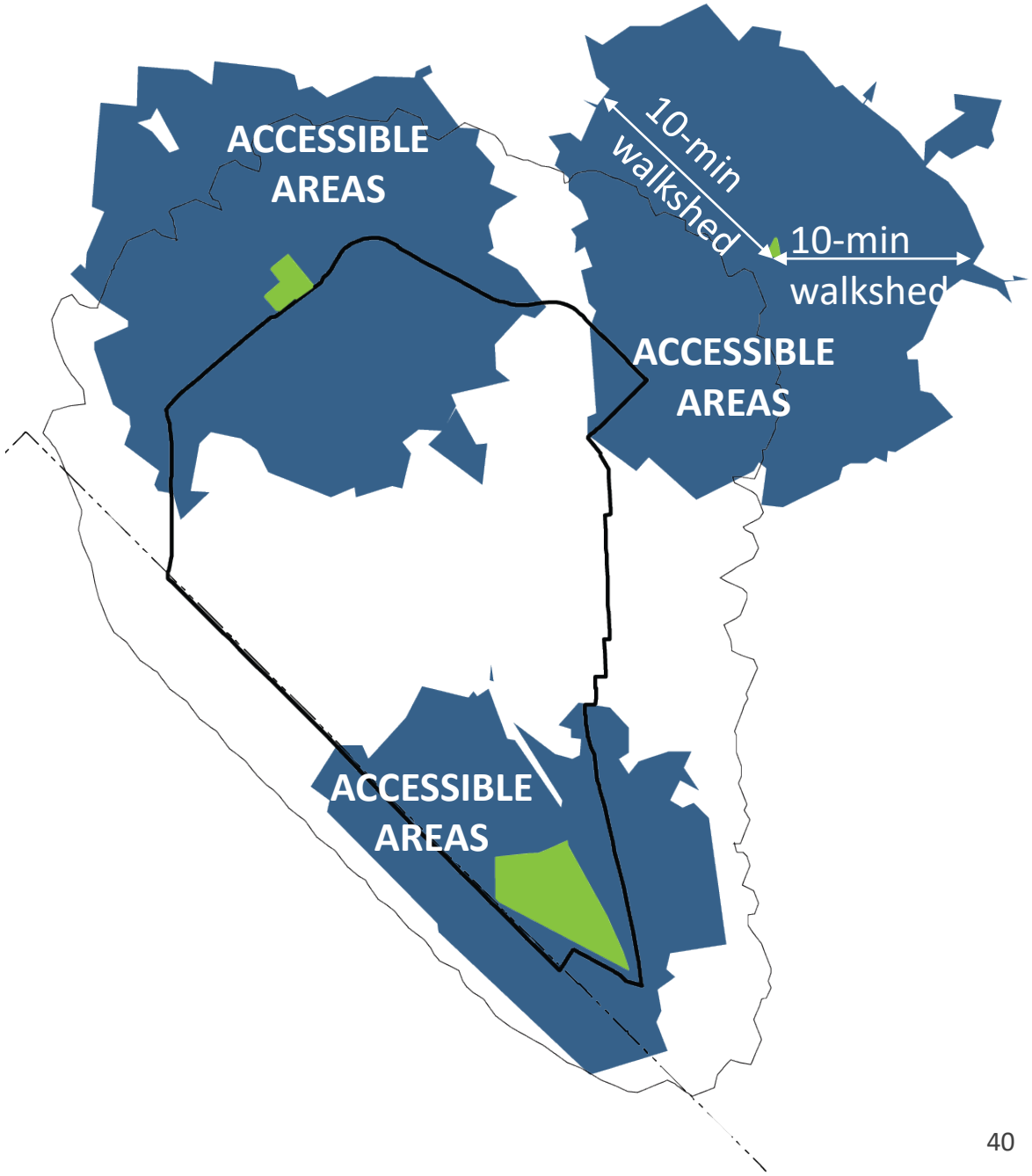
walk to a public space.

Photo: Klyde Warren Park, Dallas Art District. Source: Pinterest.com

WALK TO PARKLAND

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

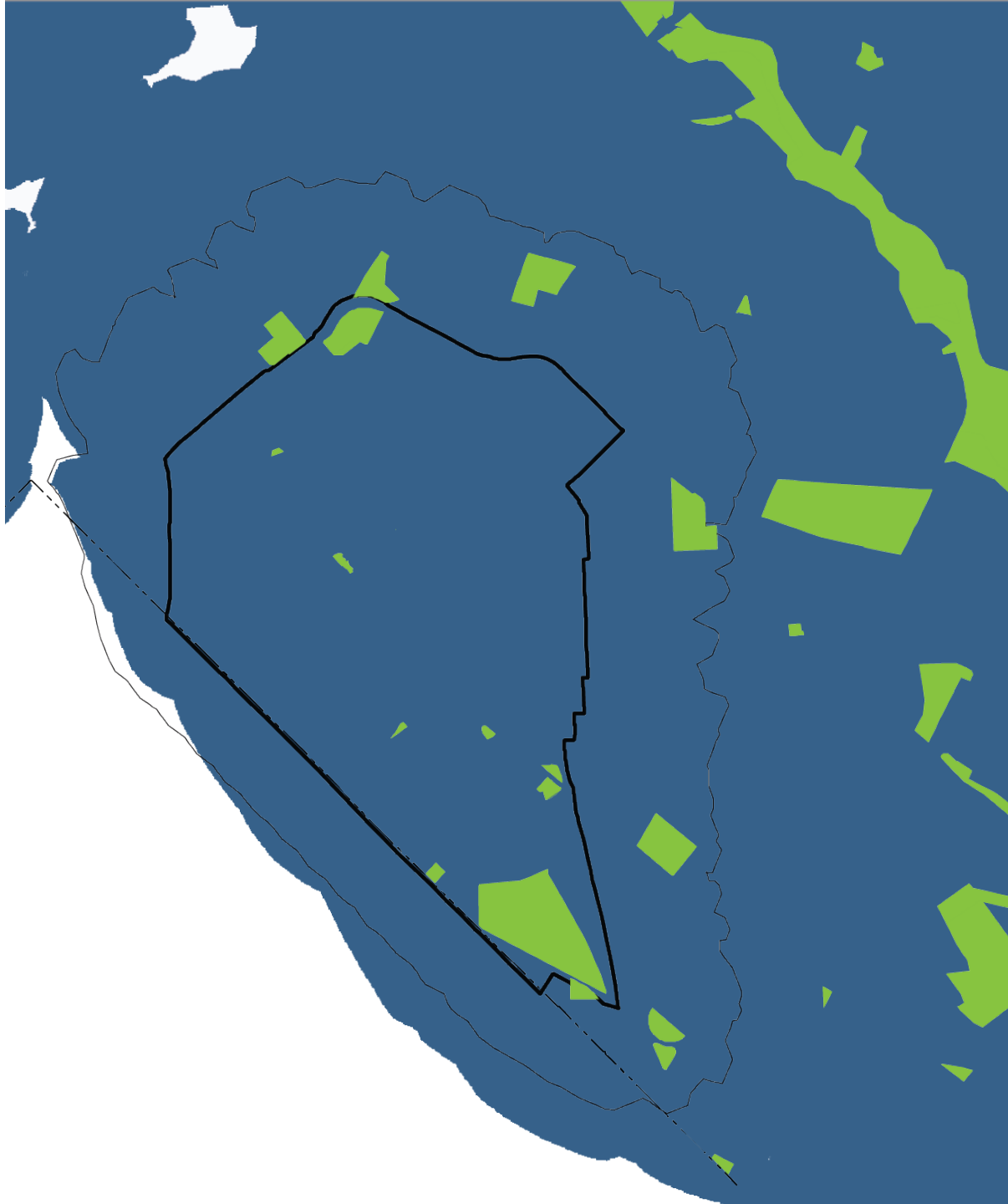
People covered by walkshed = served



CURRENT THINKING

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

Size: 0.15 acres
Amenities: 13

Woodside Urban Park

Size: 2.45 acres
Amenities: 50

Conservation Park

Size: 214 acres
Amenities: 1

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

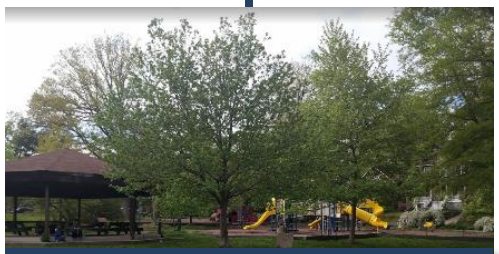
MONTGOMERY PARKS

MONTGOMERY COUNTY

ENERGIZED PUBLIC SPACES NETWORK

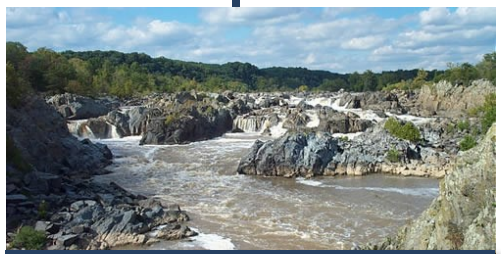
PRIVATELY-OWNED PUBLIC SPACES (POPS)

SCHOOLS



NEIGHBORING COUNTY/ MUNICIPAL PARKS

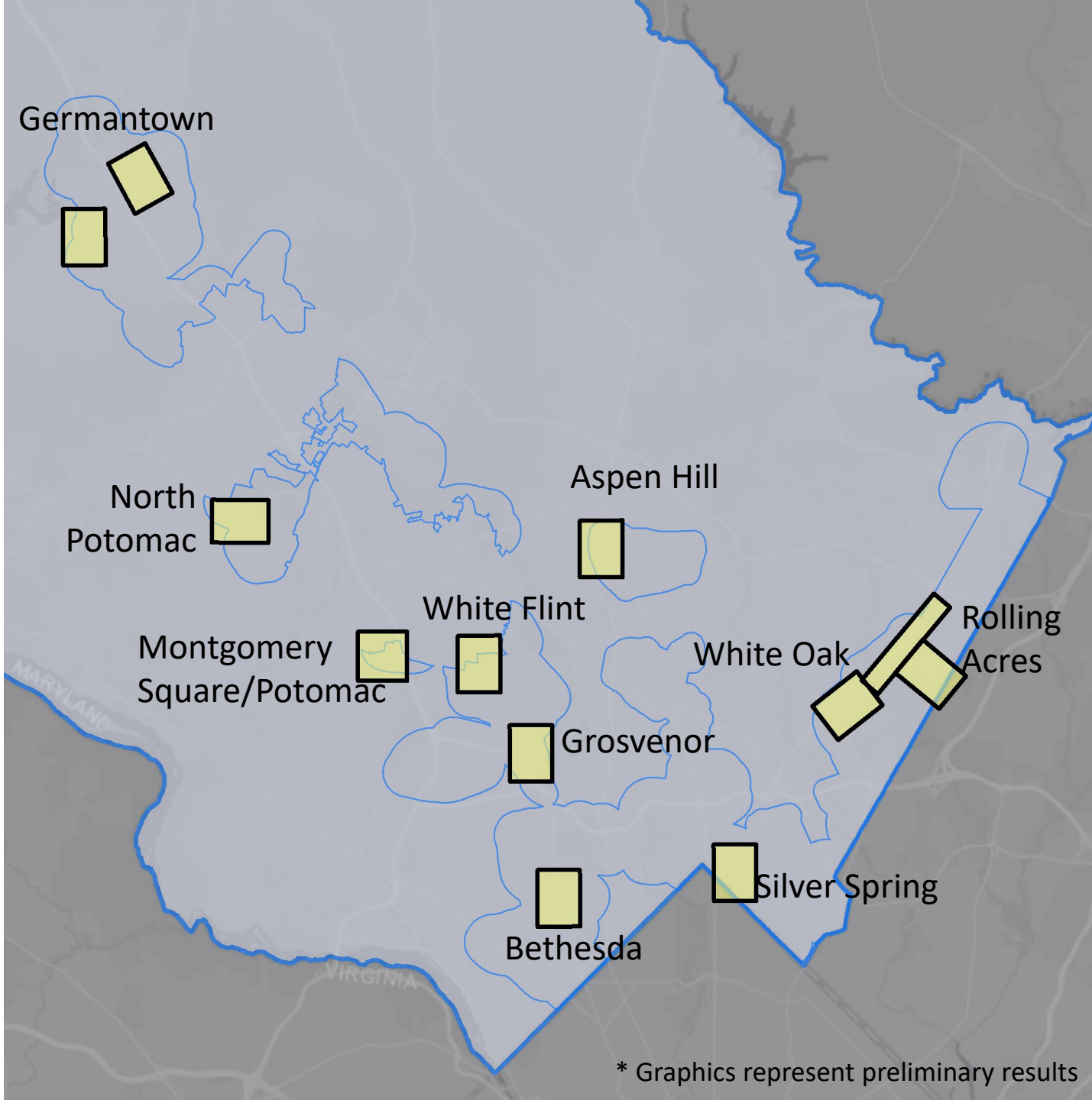
STATE PARKS



NATIONAL PARKS

EPS STUDY AREA
PRELIMINARY RESULTS

EPS PLAN TOP 12 DEFICIT CLUSTERS



Top 12 Deficit Clusters

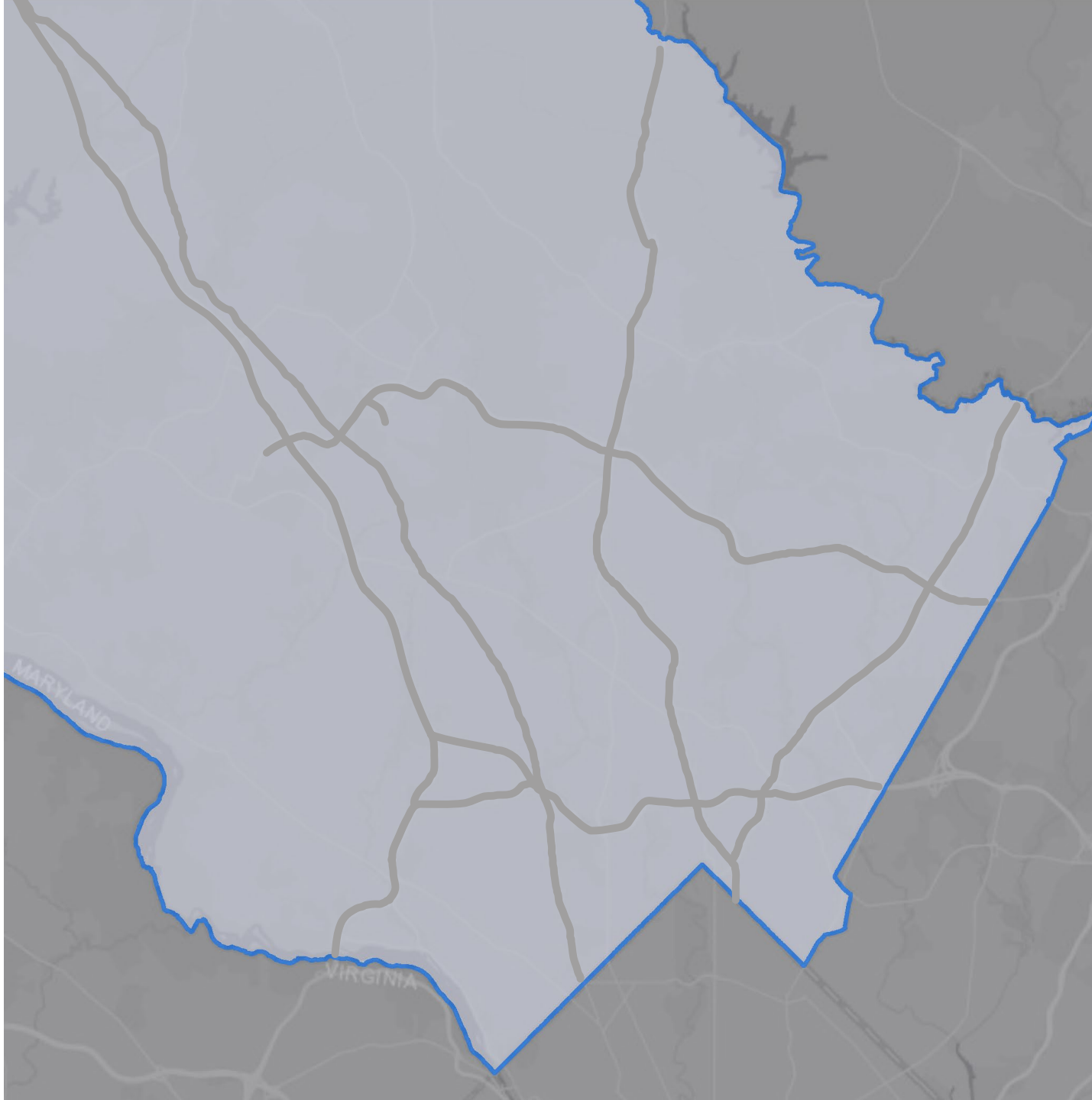
EPS Study Area

Montgomery County

ACCESS TO EXPERIENCES, NOT ACRES

* Graphics represent preliminary results

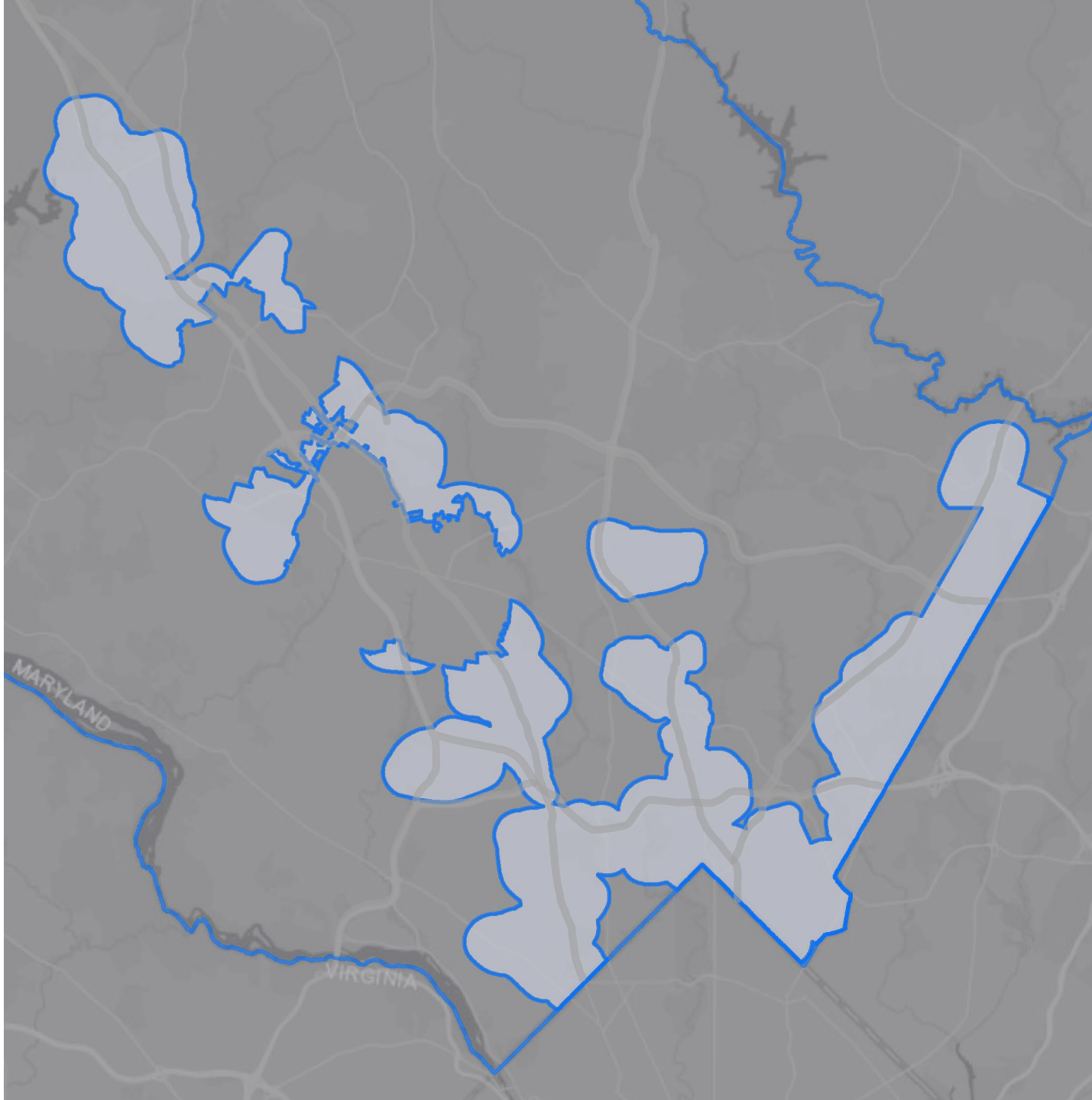
EPS PLAN
COUNTY



Montgomery County

ACCESS TO EXPERIENCES, NOT ACRES

EPS PLAN STUDY AREA

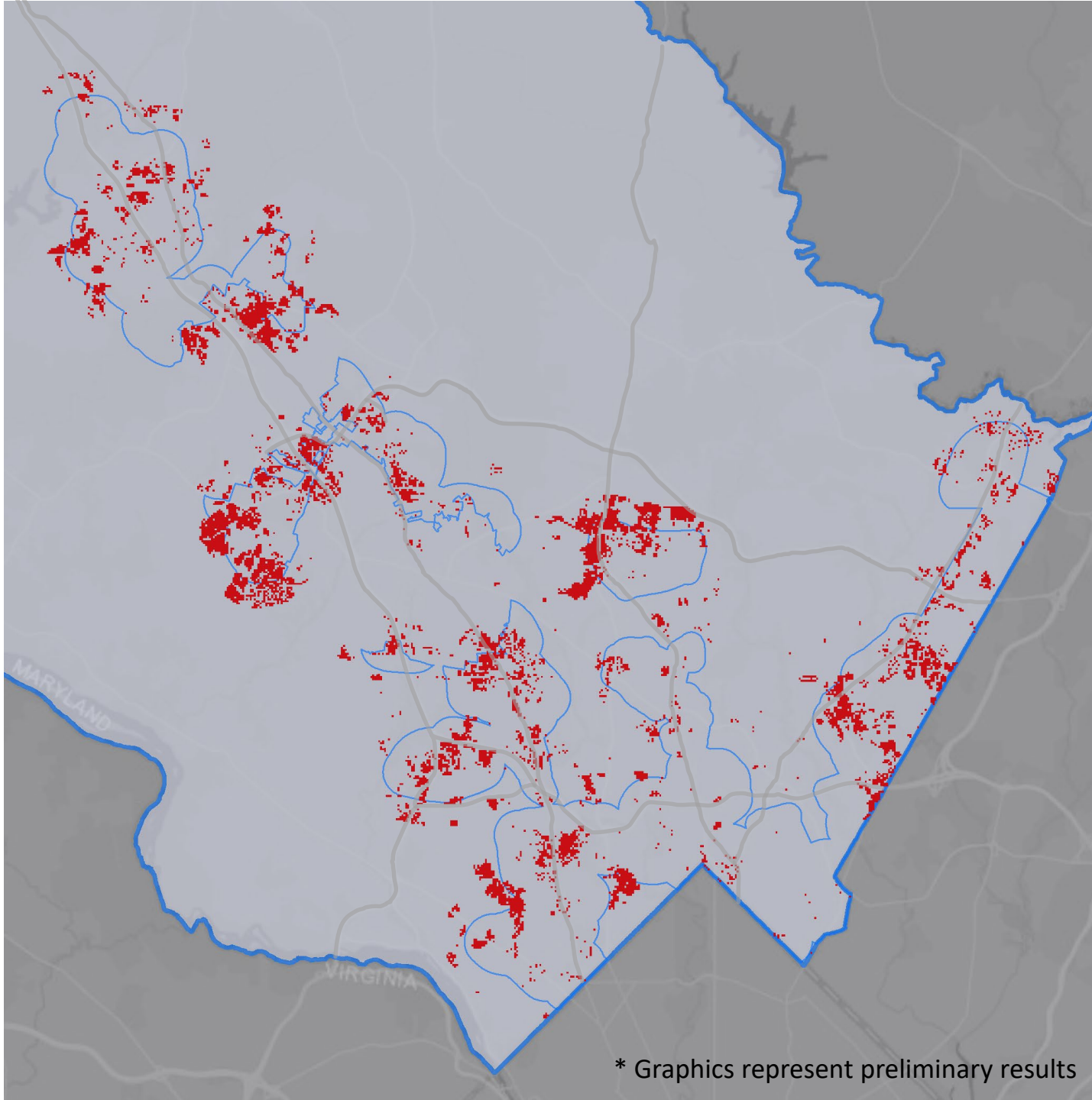


EPS Study Area

Montgomery County

ACCESS TO EXPERIENCES, NOT ACRES

EPS PLAN DEFICITS



Deficits/Shortage of Accessible Experiences

EPS Study Area

Montgomery County

ACCESS TO EXPERIENCES, NOT ACRES

* Graphics represent preliminary results

EPS PLAN
40 CLUSTERS

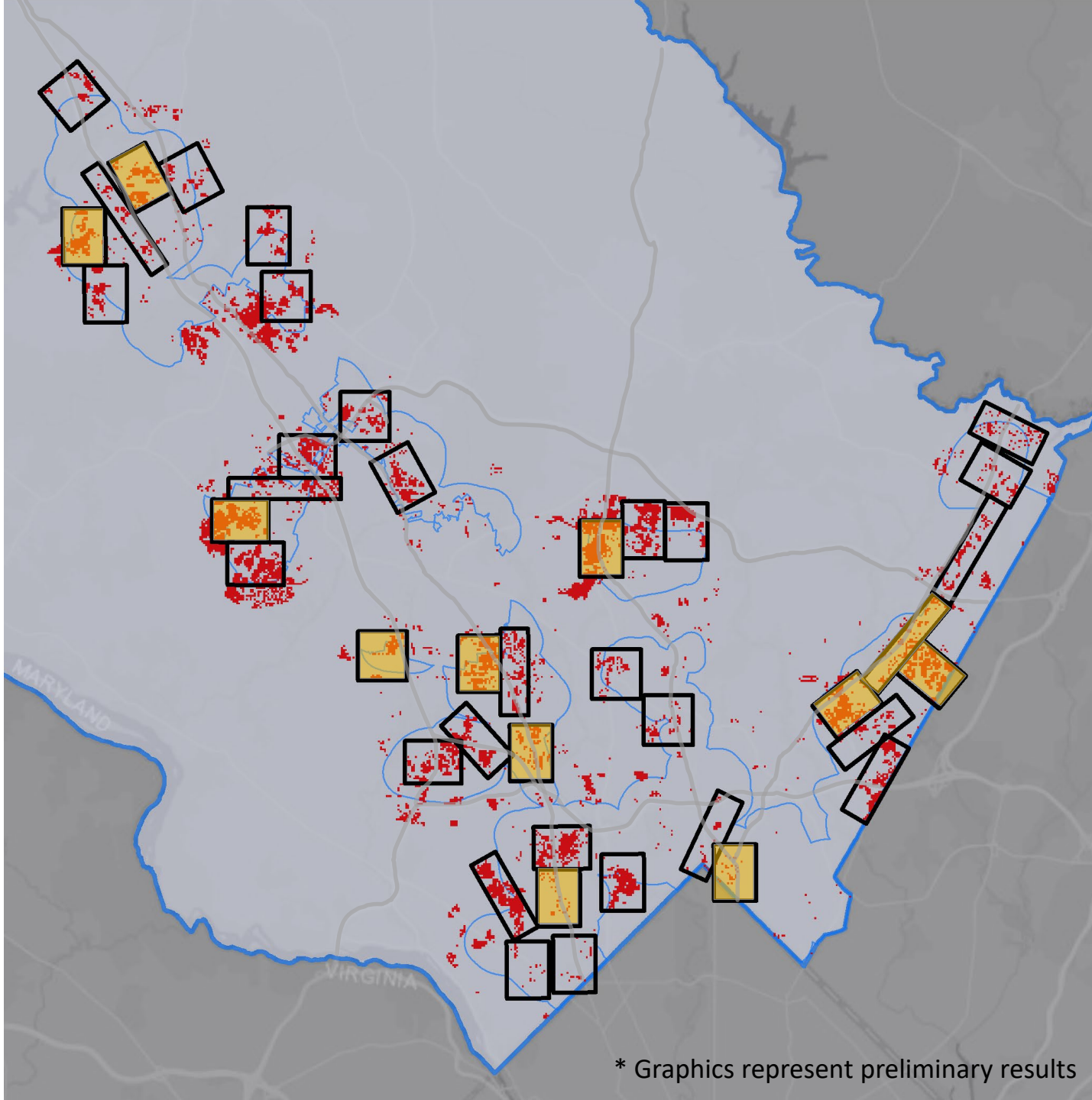
Pppt layer that showcase
the top 12

Development Clusters (1 square-mile)

Deficits/Shortage of Accessible Experiences

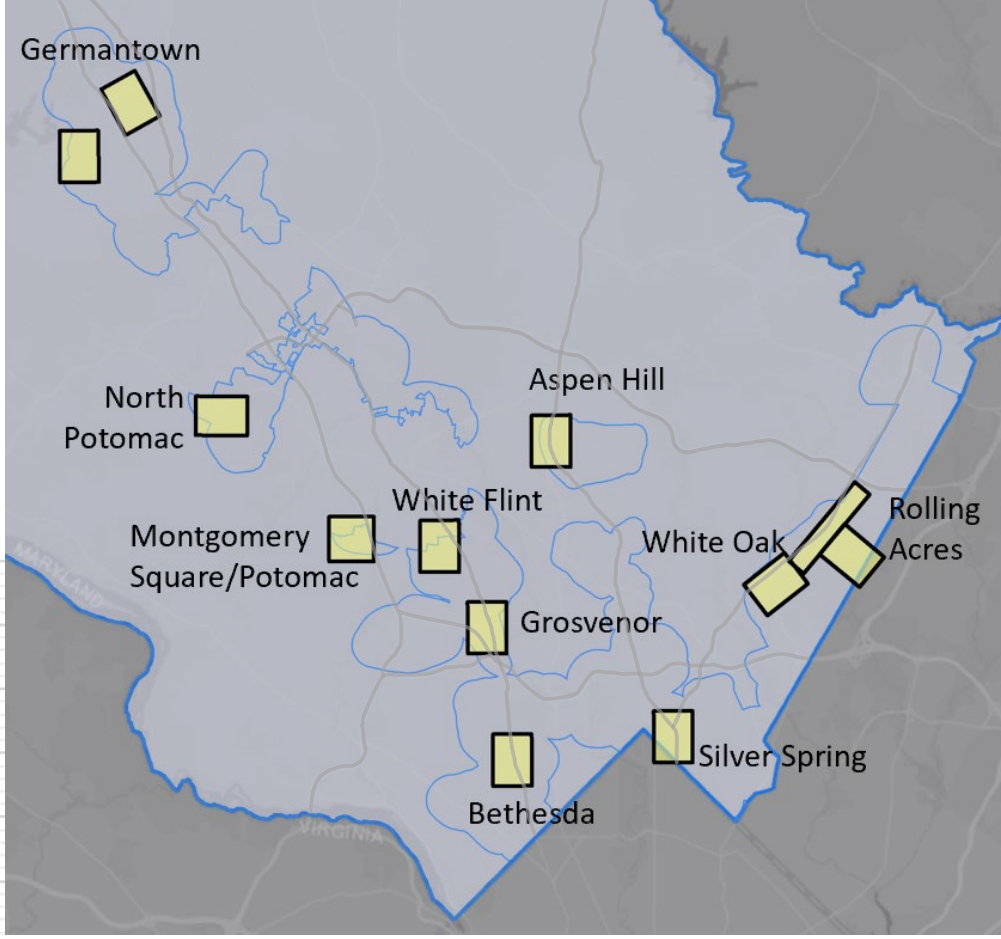
EPS Study Area

Montgomery County

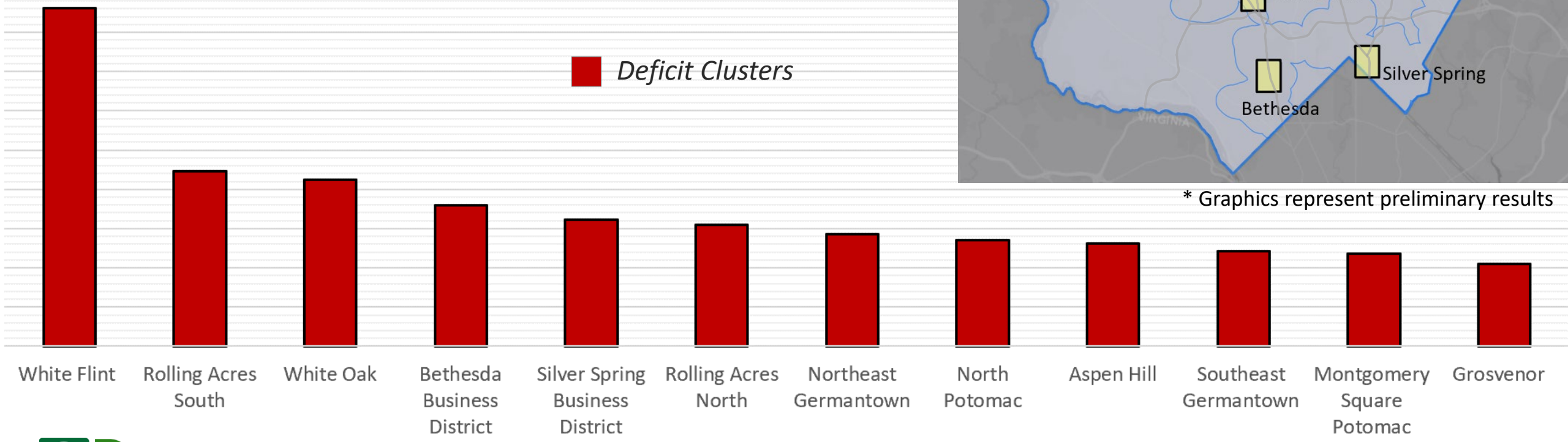


* Graphics represent preliminary results

EPS PLAN
TOP 12 CLUSTERS

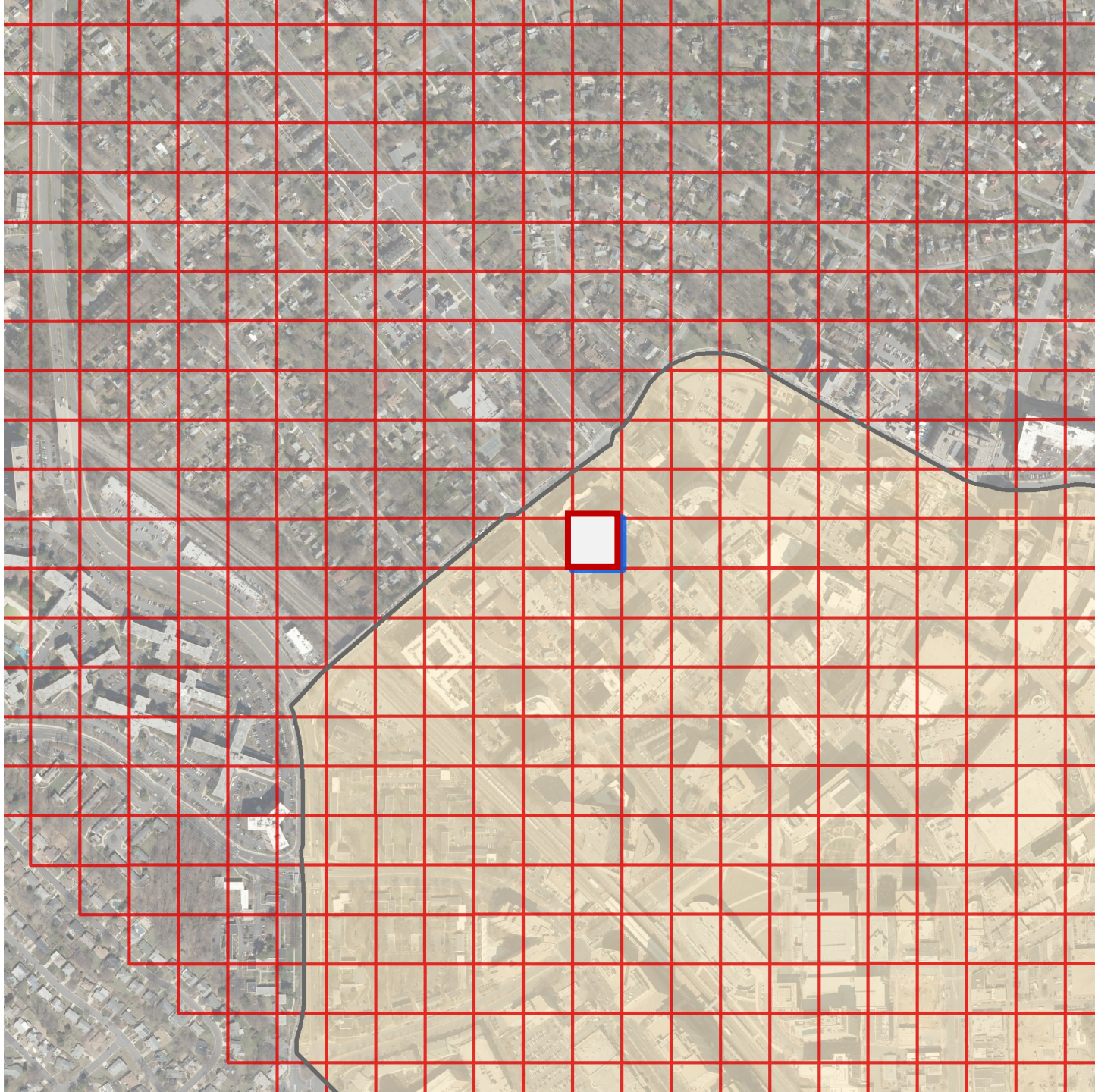


* Graphics represent preliminary results

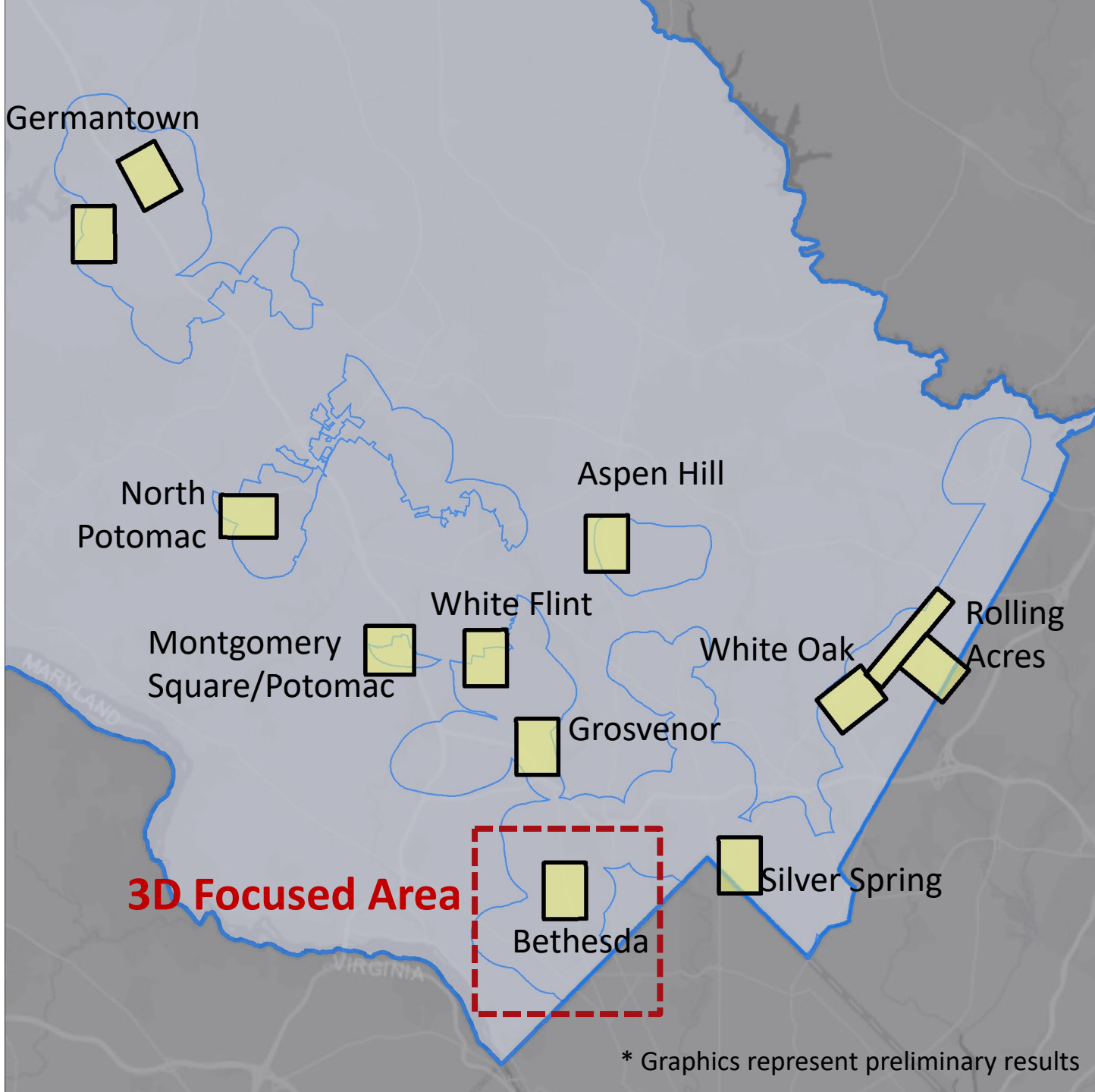


THE GRID

- 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



Top 12 Deficit Clusters

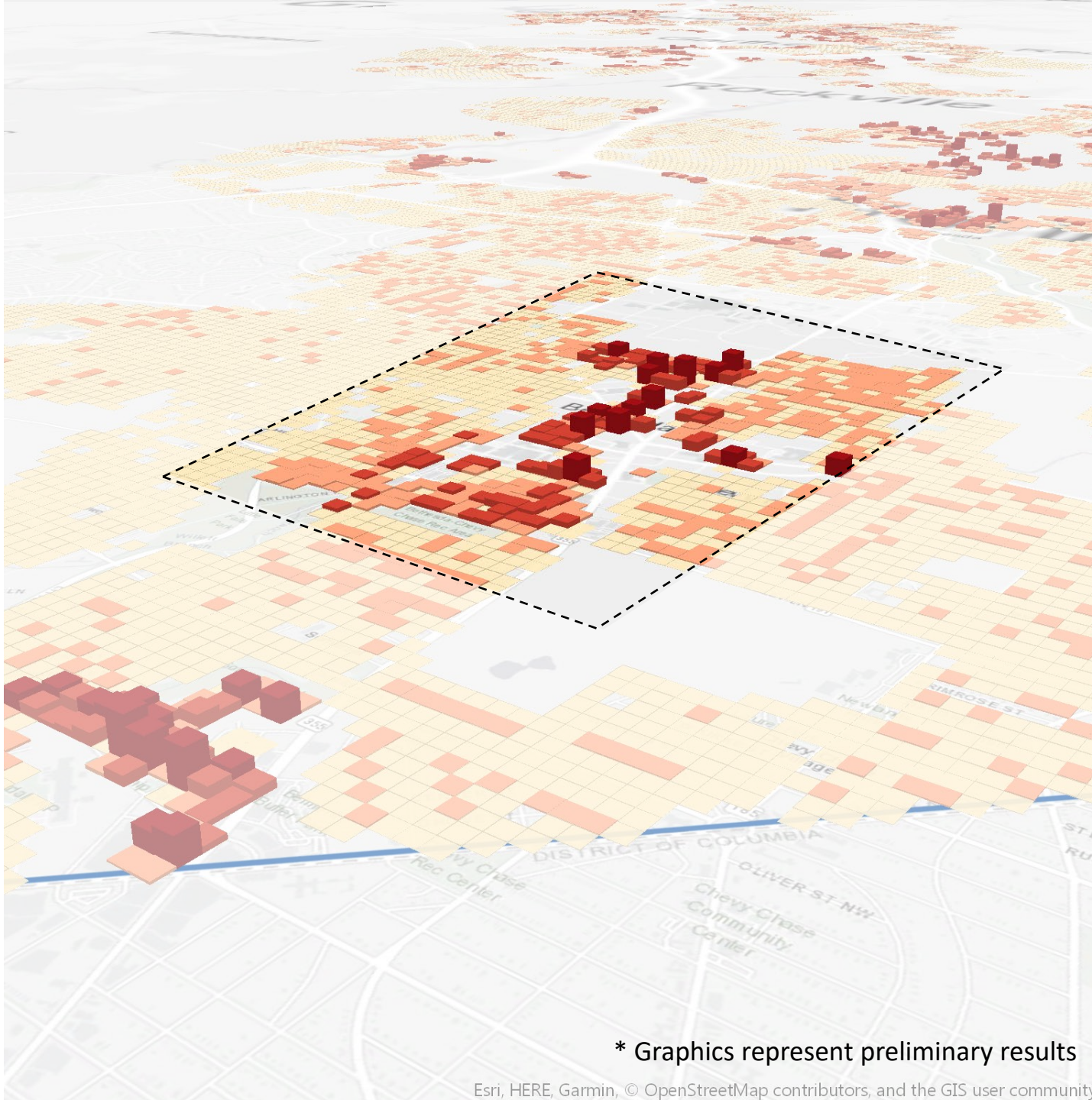
EPS Study Area

Montgomery County

ACCESS TO EXPERIENCES, NOT ACRES

DEMAND RESIDENTIAL

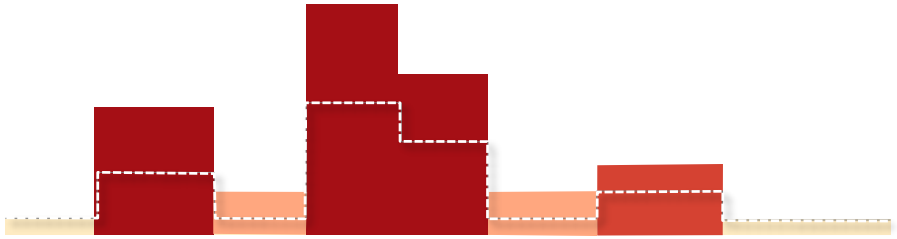
- *< 12 (Single-Family)*
- *< 50 (Single-Family Attached)*
- *< 200 (Garden)*
- *< 1,384 (High Rise)*
- *Development Cluster (1 square-mile)*
- *Montgomery County*



* Graphics represent preliminary results

Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

DEMAND
RESID.+ COMM.



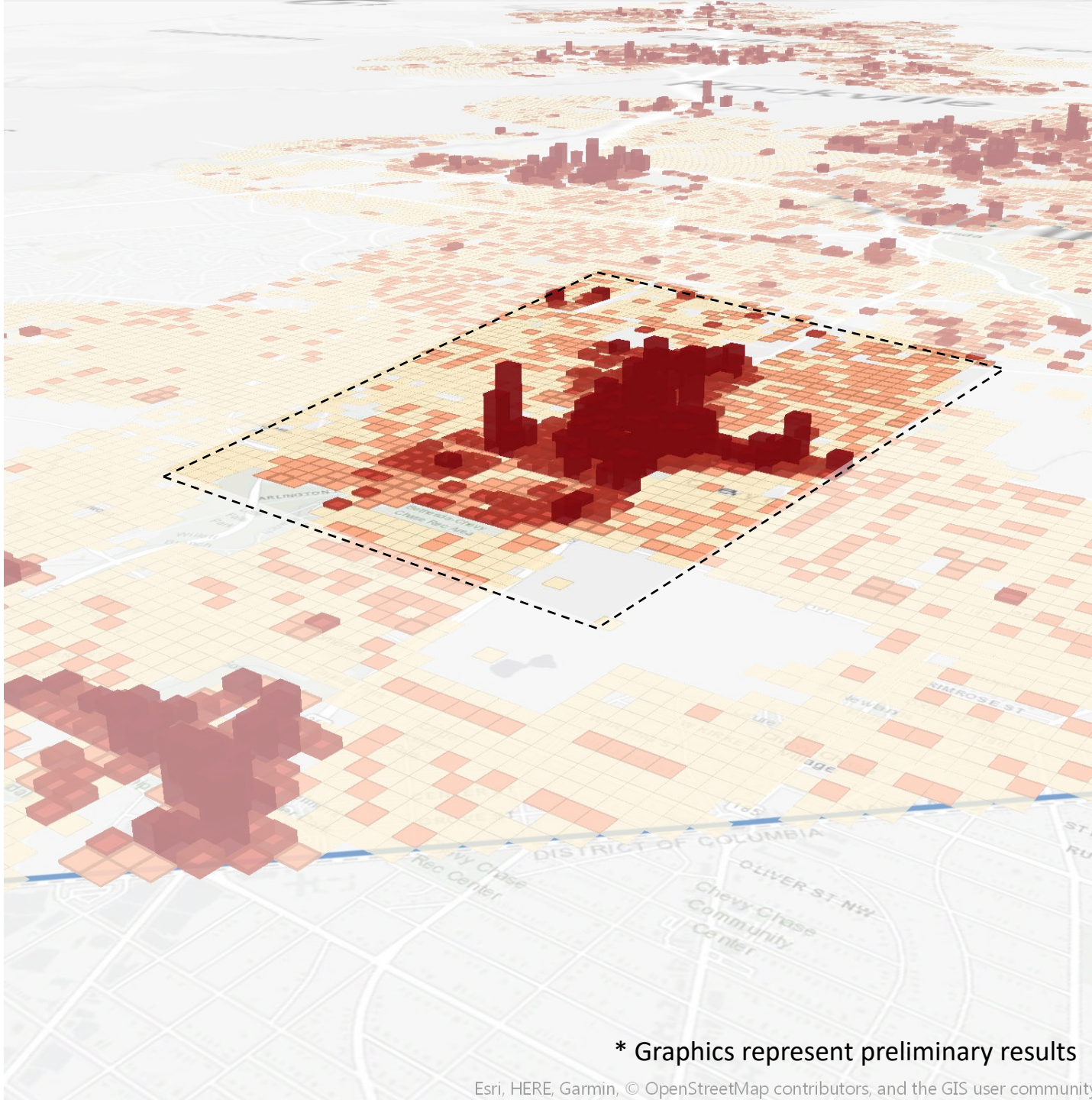
Less People

More People

Development Cluster (1 square-mile)

Montgomery County

ACCESS TO EXPERIENCES, NOT ACRES



* Graphics represent preliminary results

Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

SUPPLY

ACTIVE

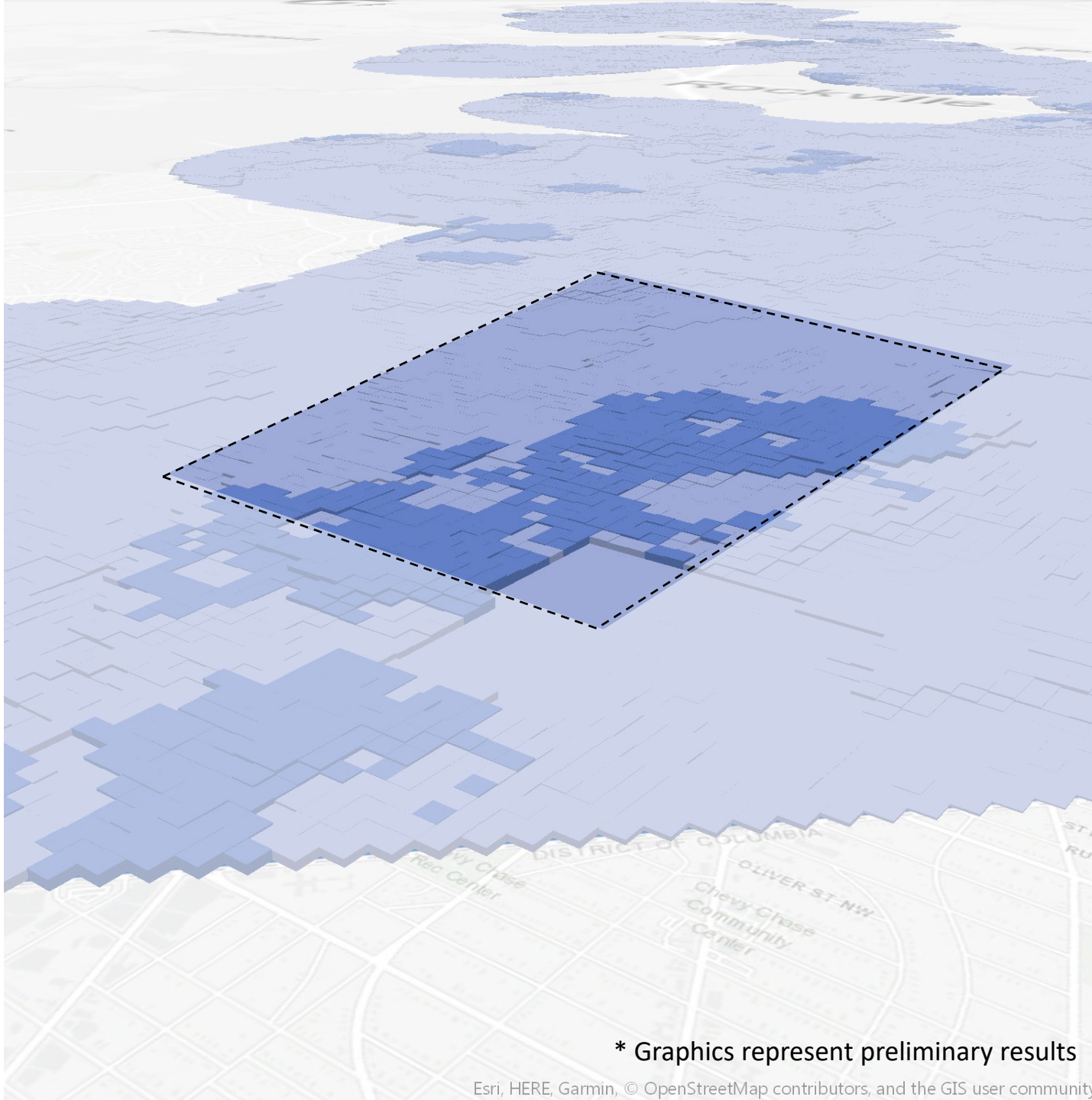
Less Supply

More Supply

Development Cluster (1 square-mile)

Montgomery County

ACCESS TO EXPERIENCES, NOT ACRES



* Graphics represent preliminary results

Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

SUPPLY

CONTEMPLATIVE

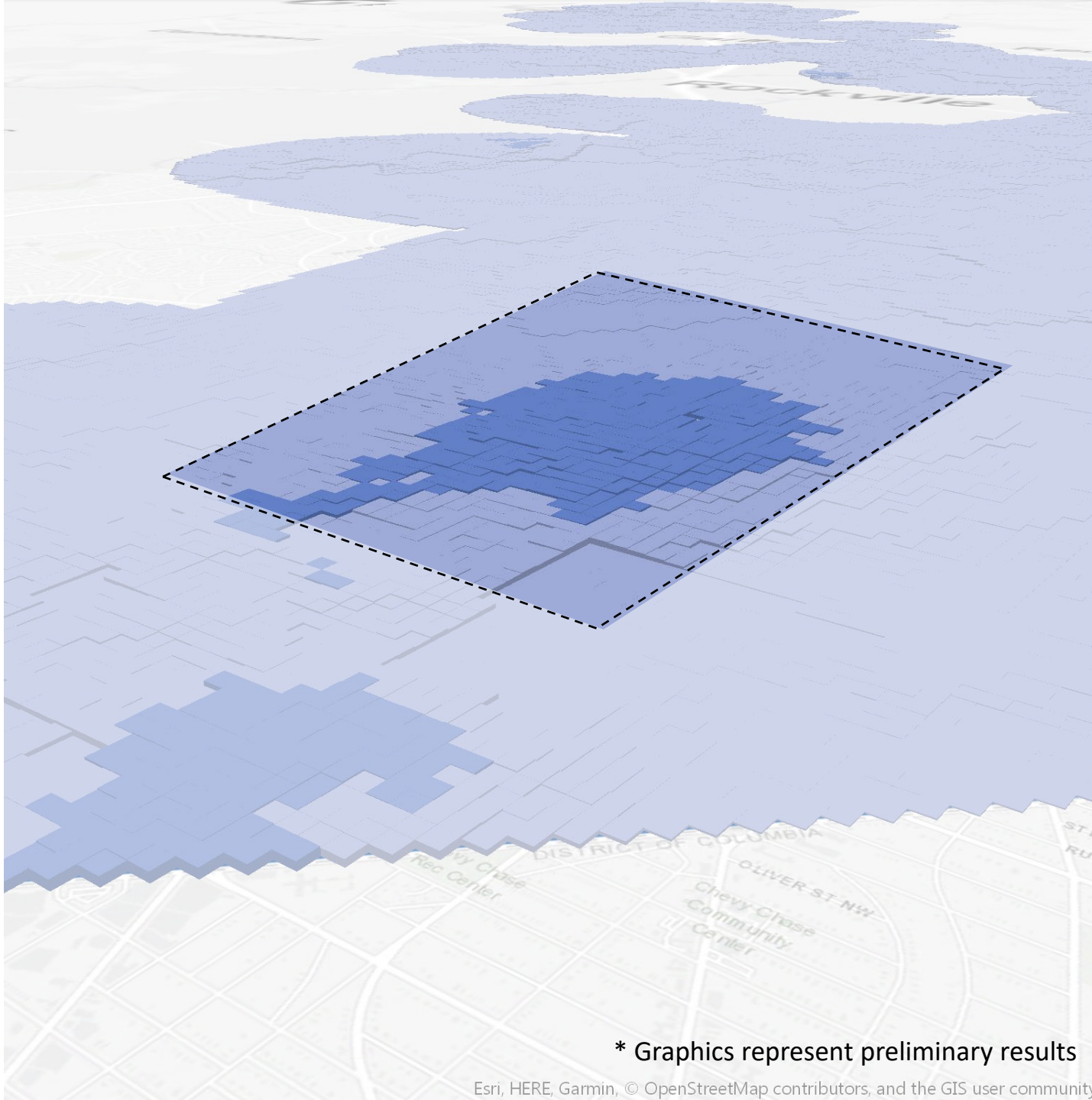
Less Supply

More Supply

Development Cluster (1 square-mile)

Montgomery County

ACCESS TO EXPERIENCES, NOT ACRES

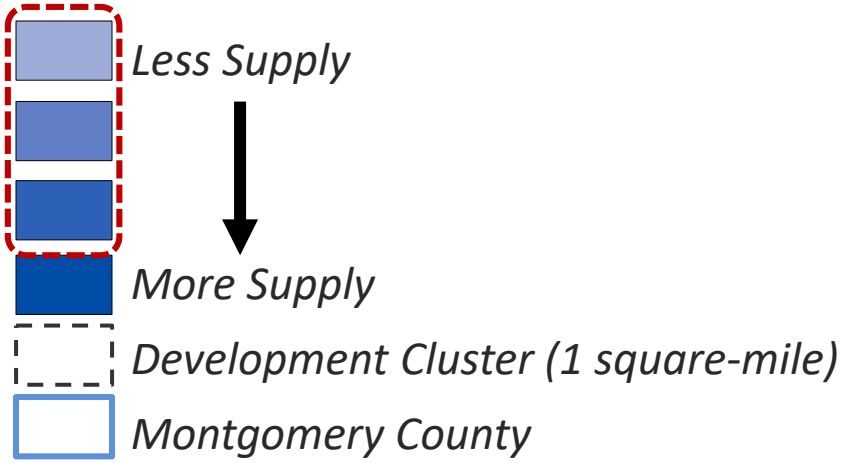


* Graphics represent preliminary results

Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

SUPPLY

SOCIAL GATHERING



ACCESS TO EXPERIENCES, NOT ACRES

* Graphics represent preliminary results

Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

SUPPLY TOTAL

Less Supply

More Supply

Development Cluster (1 square-mile)

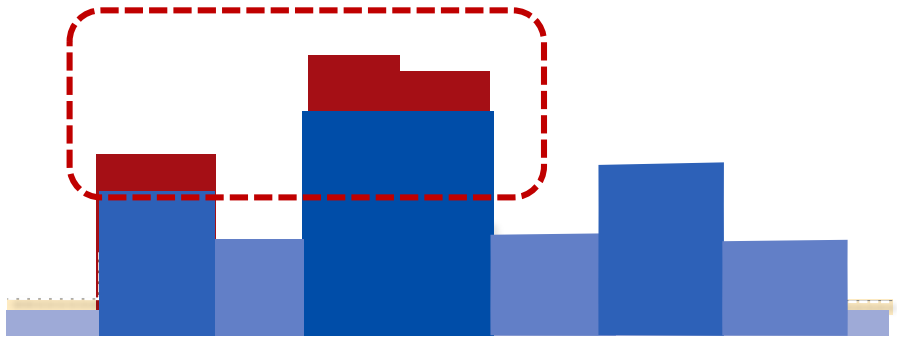
Montgomery County

ACCESS TO EXPERIENCES, NOT ACRES

* Graphics represent preliminary results

Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

OVERLAY SUPPLY + DEMAND



Development Cluster (1 square-mile)

Montgomery County

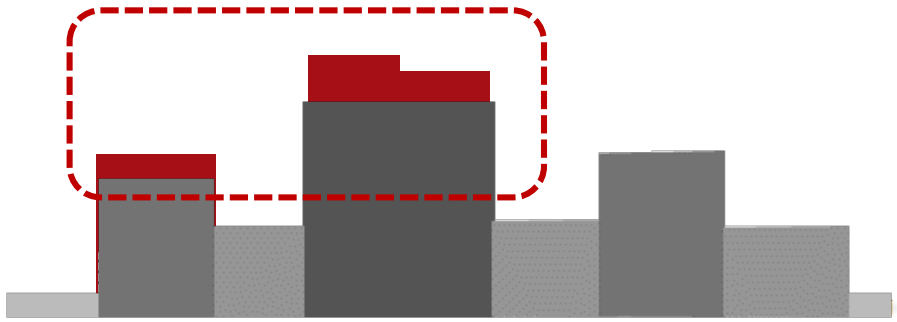
ACCESS TO EXPERIENCES, NOT ACRES

* Graphics represent preliminary results

Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

DEFICITS/

< LEVEL OF SERVICE



Deficits

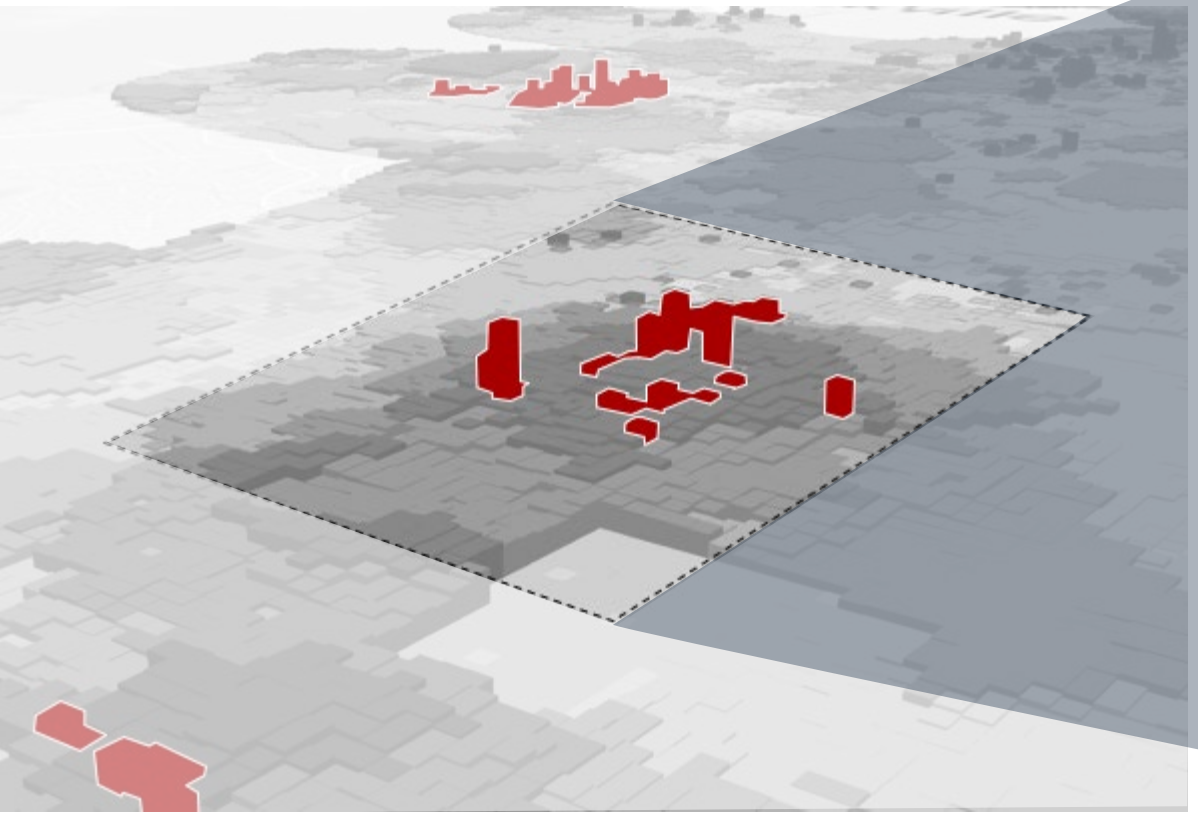
Development Cluster (1 square-mile)

ACCESS TO EXPERIENCES, NOT ACRES

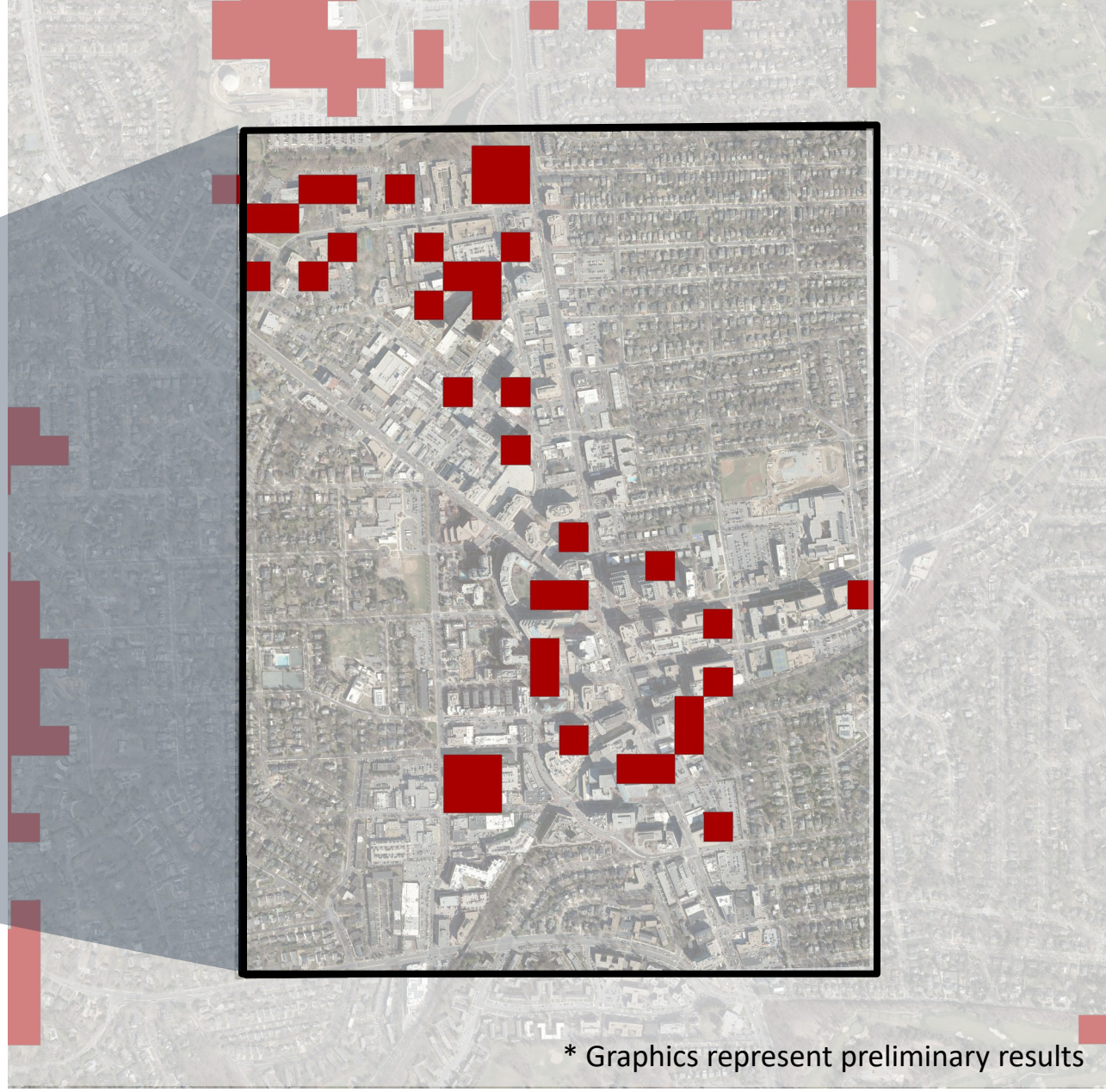
* Graphics represent preliminary results

Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

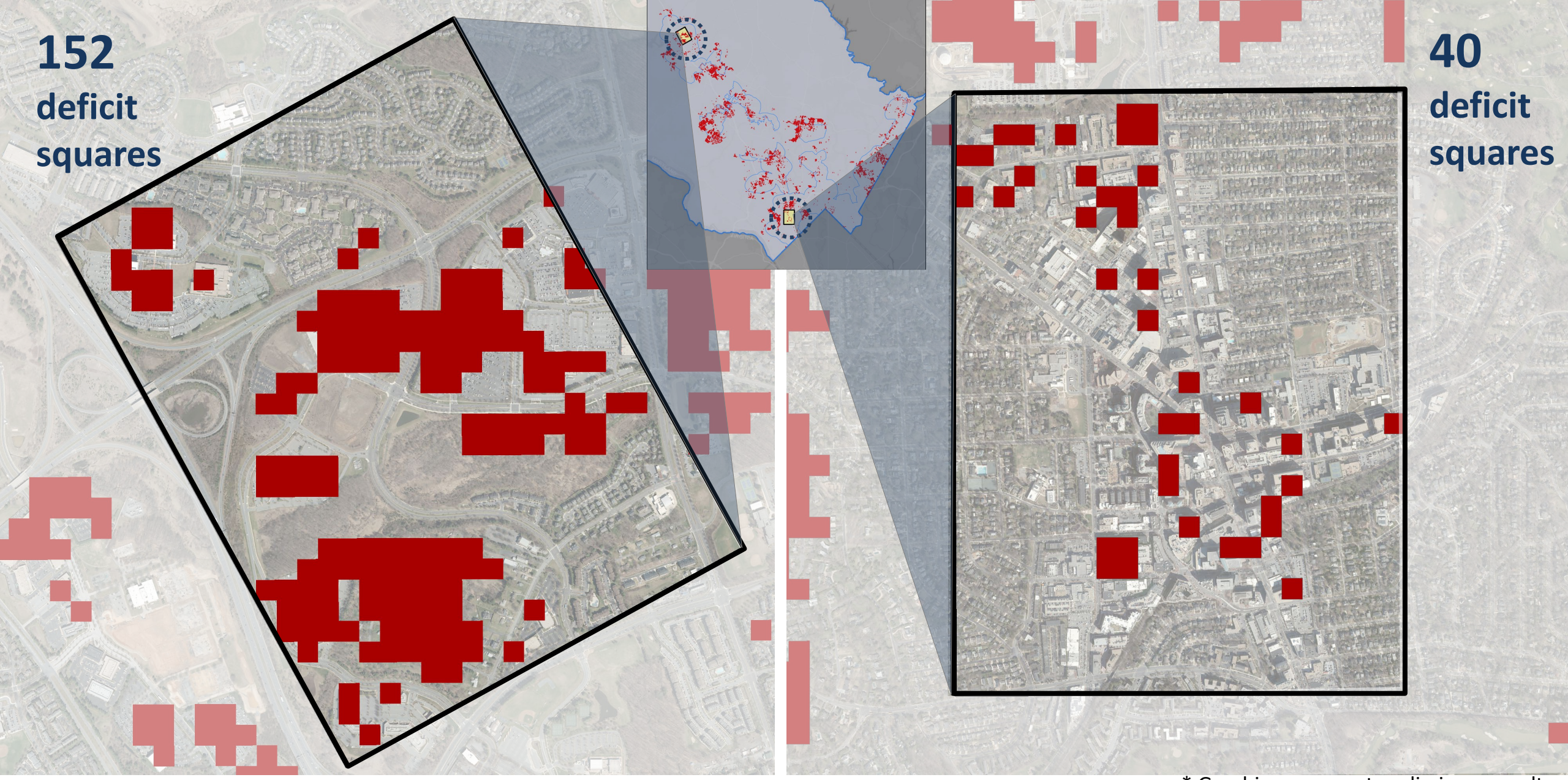
DEFICITS



40 deficit squares



* Graphics represent preliminary results



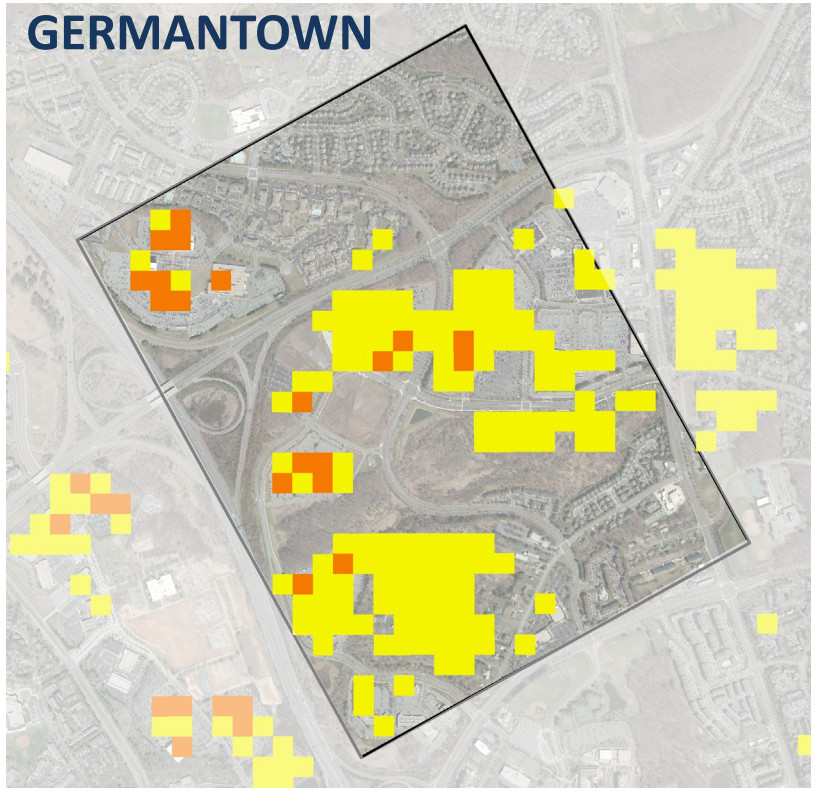
* Graphics represent preliminary results

ACCESS TO EXPERIENCES, NOT ACRES

Deficits (1 square-acre)

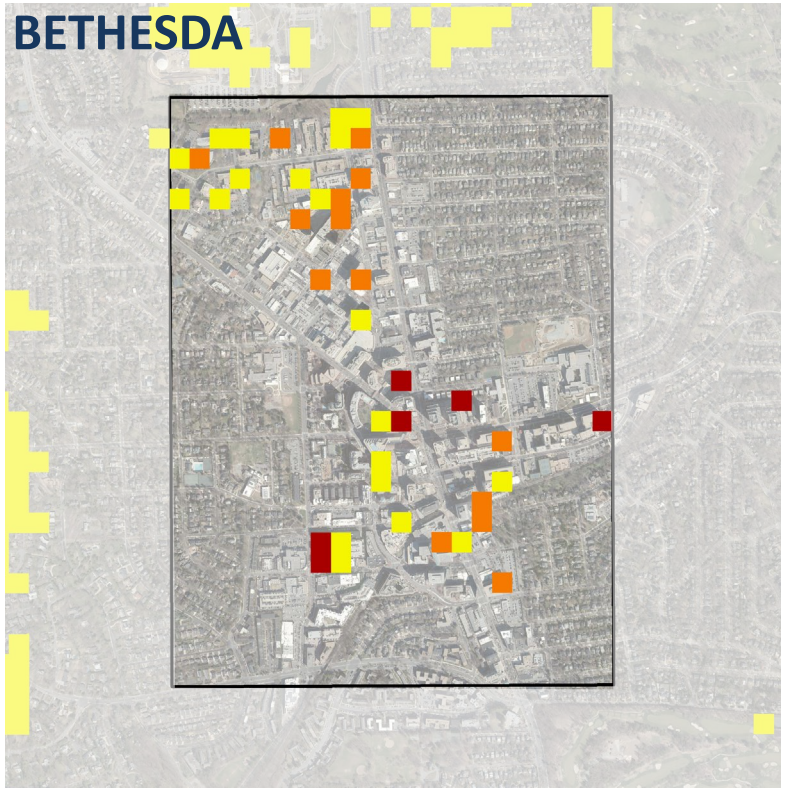
Development Cluster (1 square-mile)

DEFICITS HAVE DIFFERENT WEIGHT



152
deficit
squares
< demand
< supply
↓connection

DEFICIT = 5,732



40
deficit
squares
> demand
< supply
↑connection

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

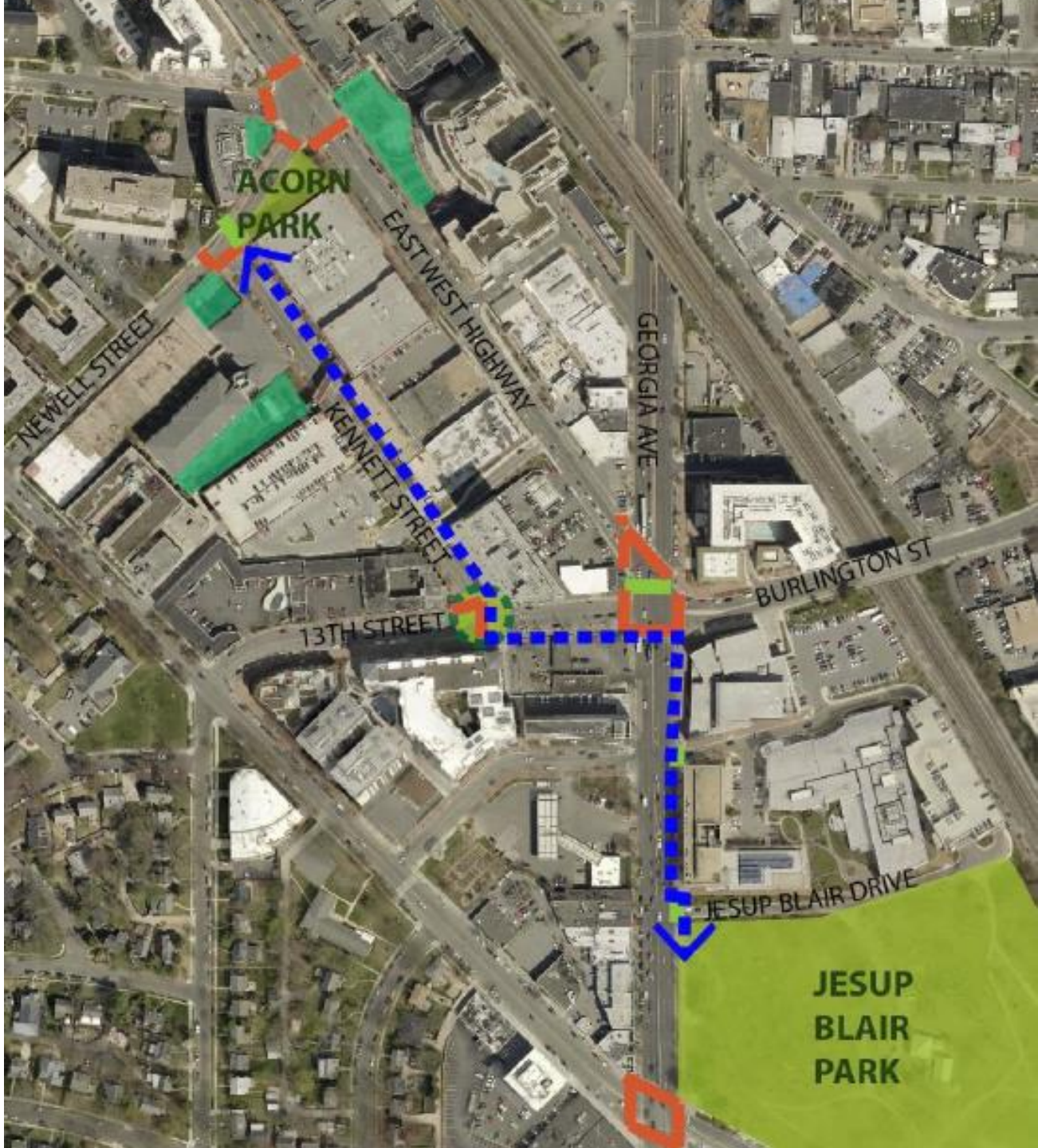
BEFORE: Underutilized courtyard

AFTER: Popular dog park

CONNECT

Improvements to cross busy avenue & connect to larger park

- Public Open Space
- Public/Private Open Space
- Proposed Pedestrian Node
- Existing Crosswalk
- Proposed Crosswalk/Pedestrian Improvement
- Proposed Park Pedestrian Connection



ACTIVATE

White Flint Placemaking Festival

ACTIVATE

Climbing Trees

Pump Track

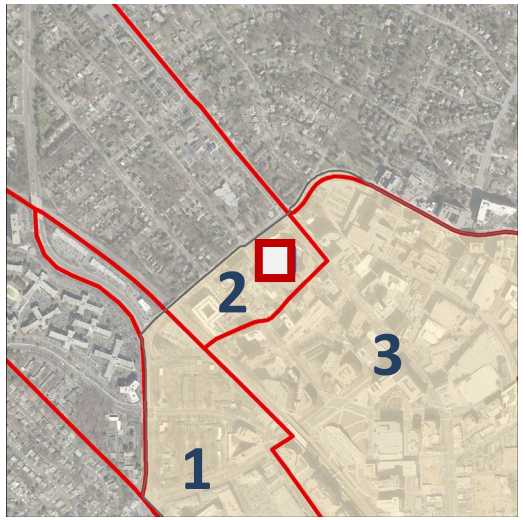
Yappy Hour: Partners

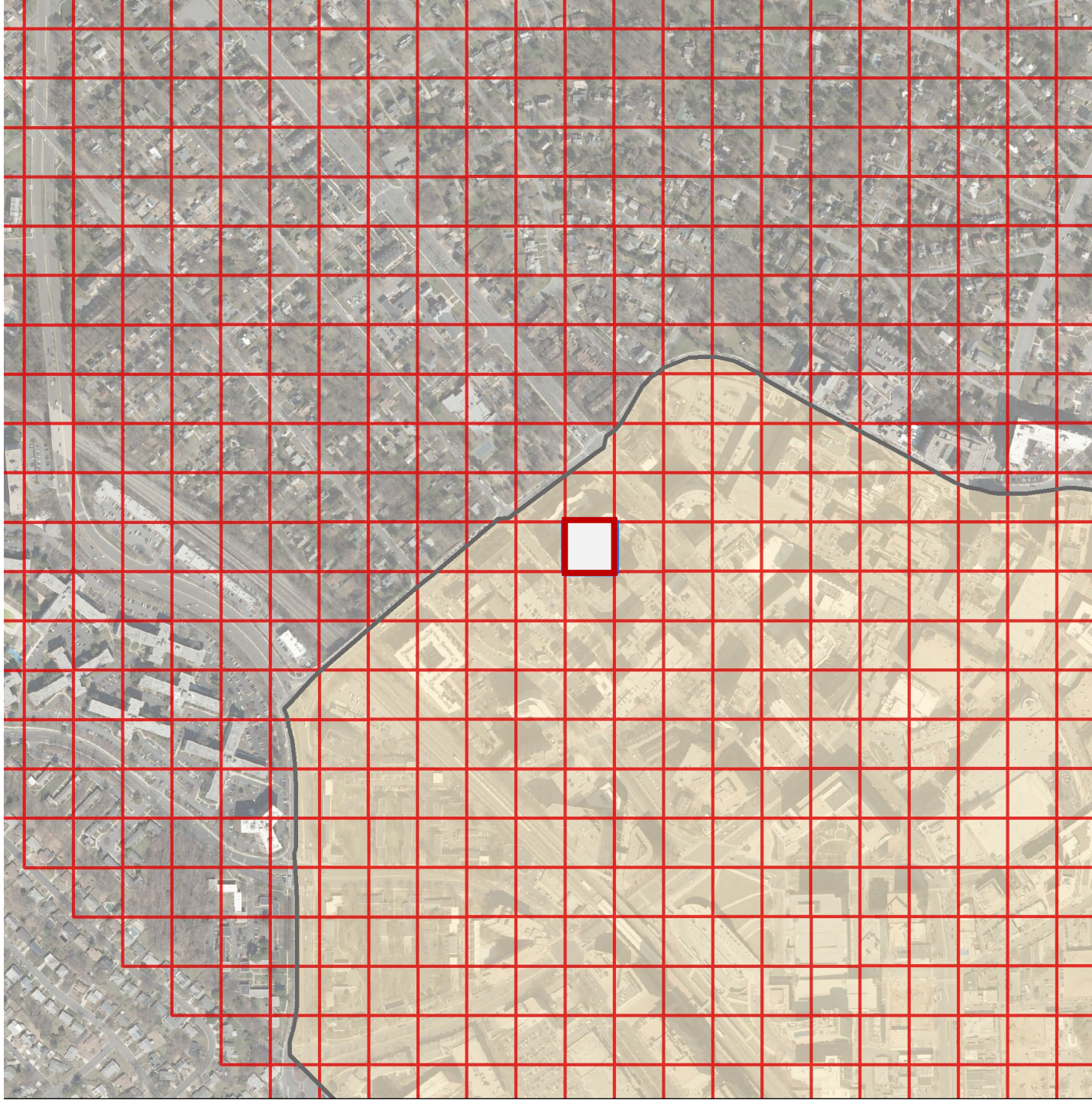
THANK YOU

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

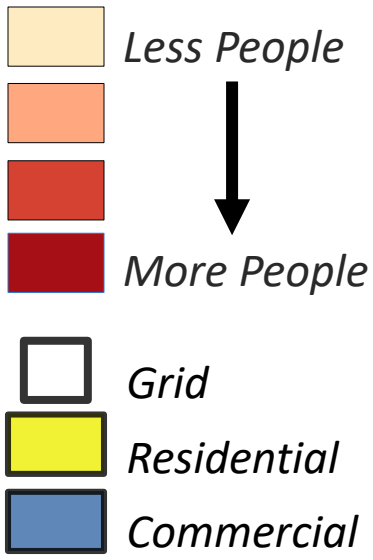


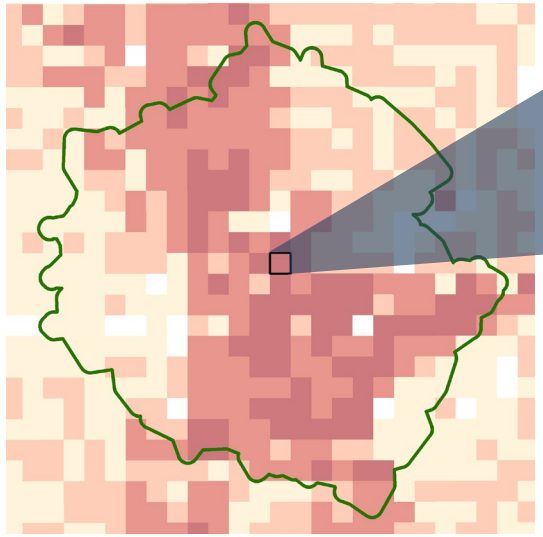


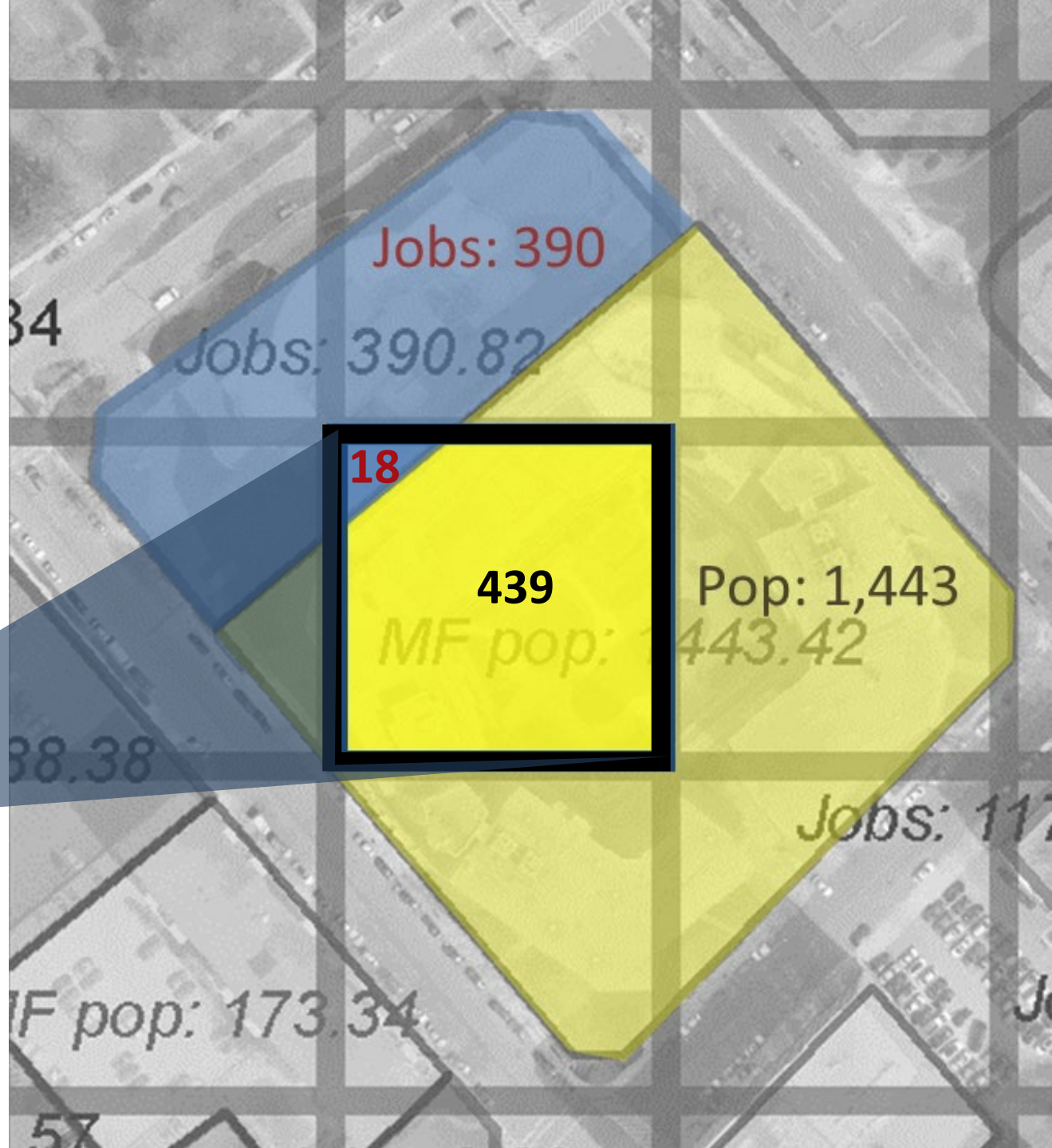
DEMAND

Demand:

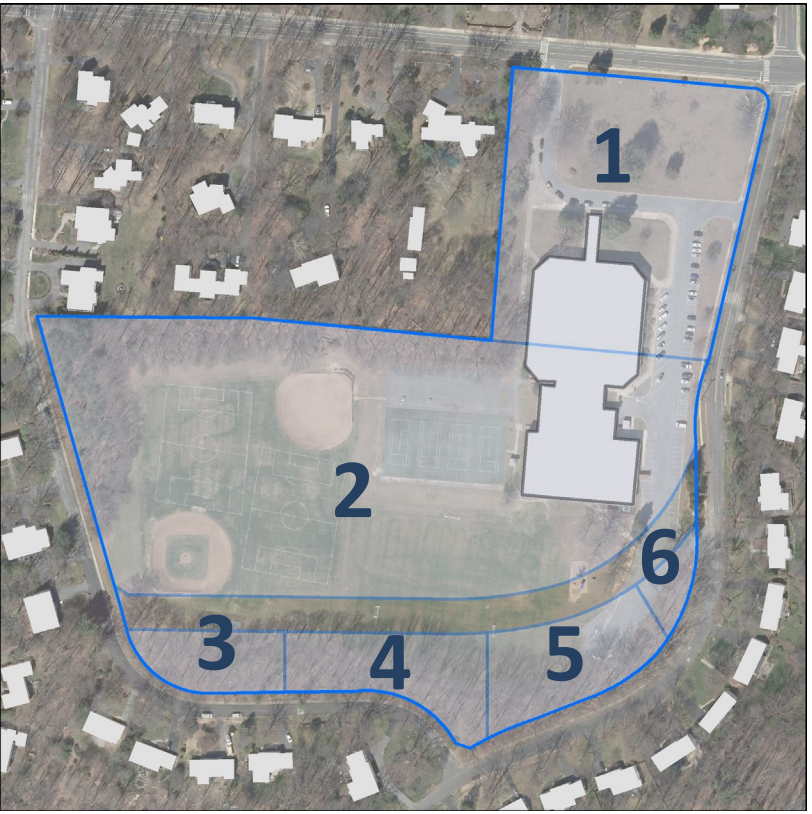
- Population of Residents + Workers
- Sample demand for one square





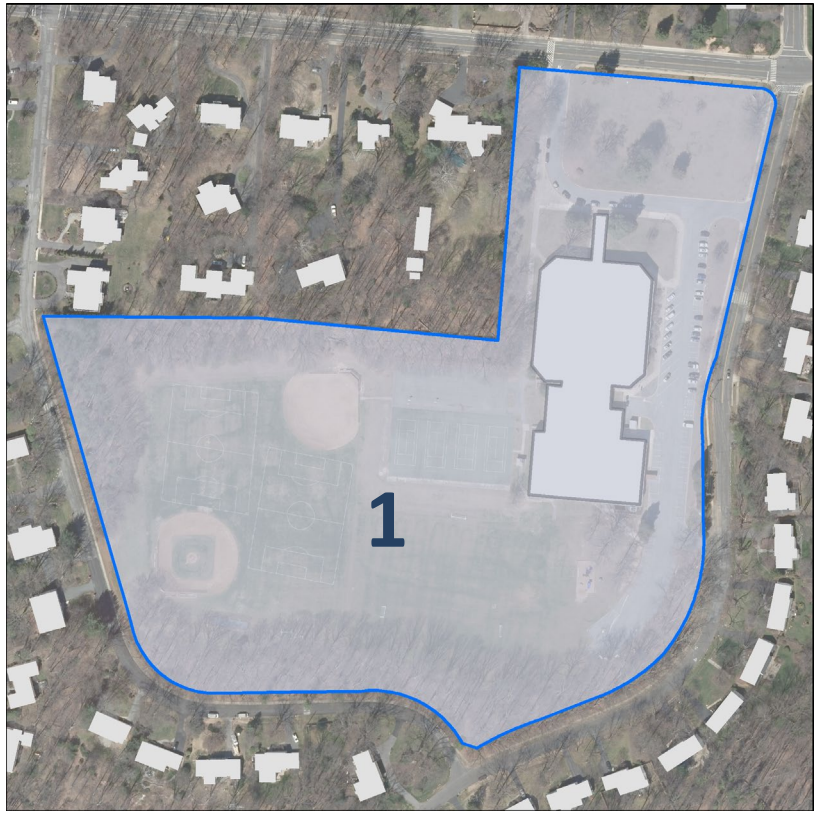


DEMAND: CONSOLIDATE LARGE SITES



6 PARCELS

Only 1 parcel contains total info



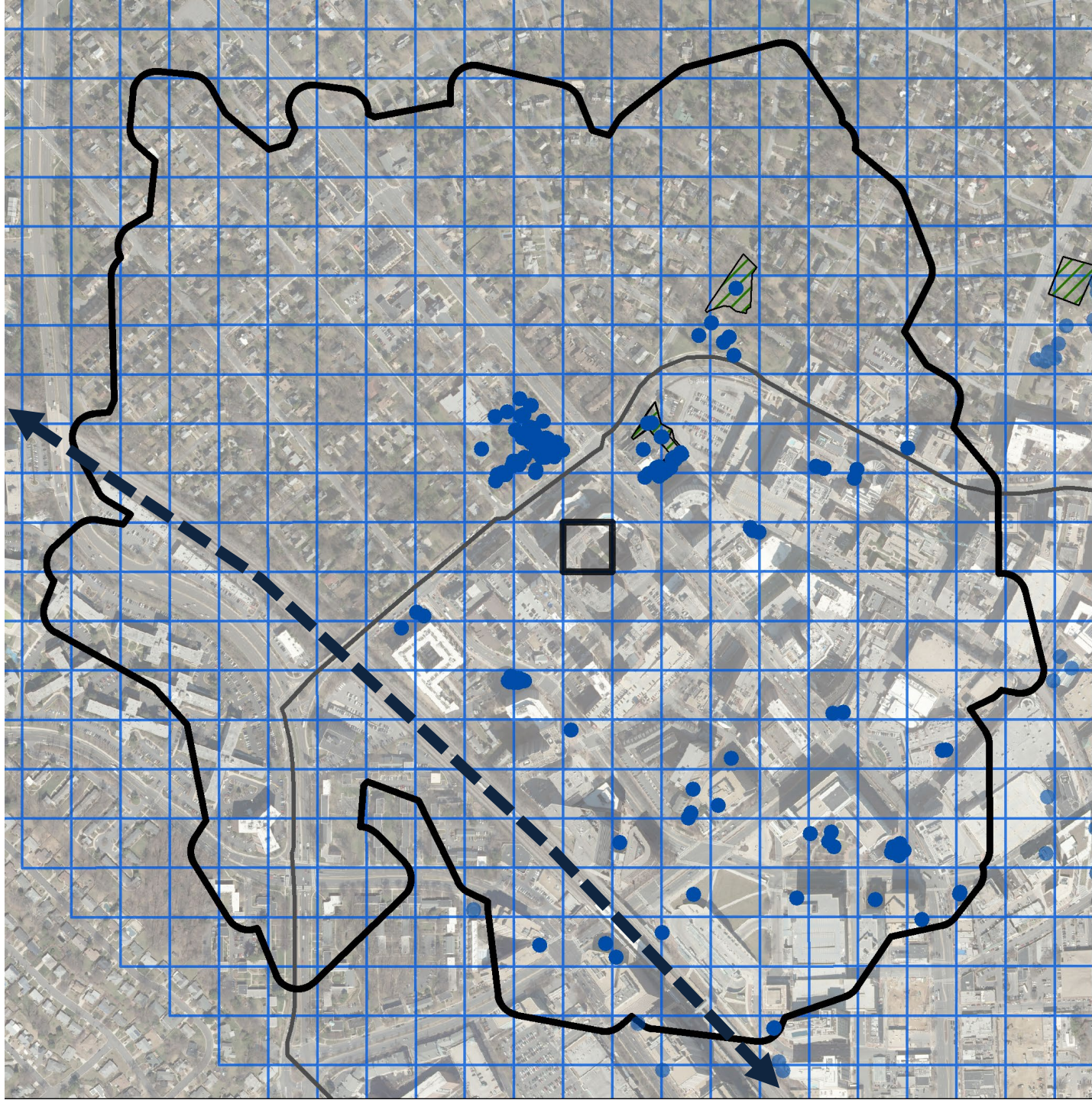
1 PARCEL

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

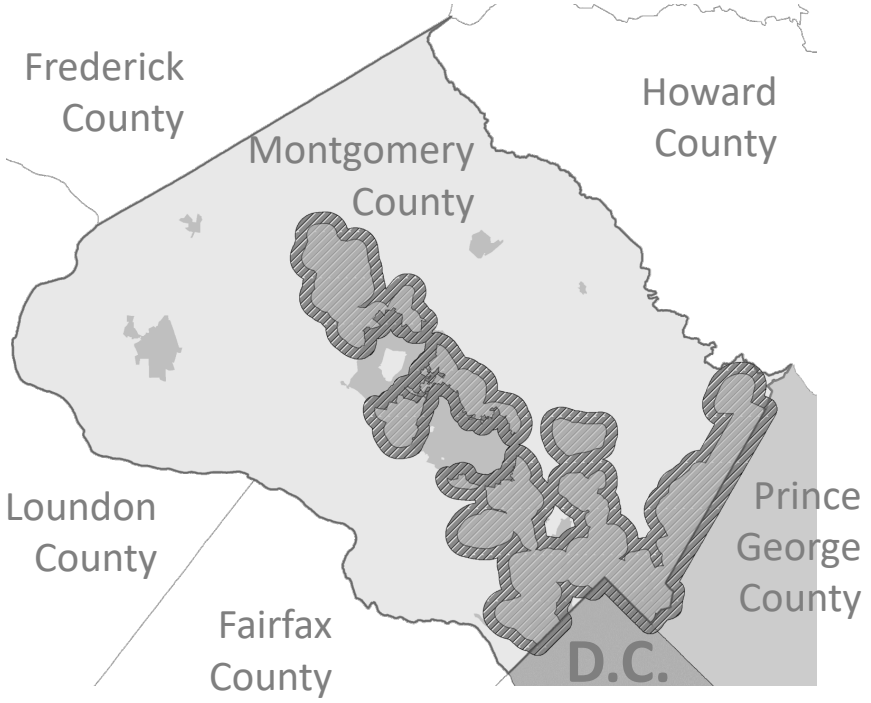
Amenity

Active

Contemplative

Social Gathering

#	ID CODE	COUNT	AMENITY	ACTIVE	CONTEMPLATIVE	SOCIAL
1	ADVENTURE_SPORT	2	Adventure Sport	1.5	0	1.5
2	AMPHITHEATER	13	Amphitheater	0	0.5	0.75
3	ARCHERY_RANGE	2	Archery Range	0.5	0	0.5
4	ART_FOUNTAIN	25	Decorative Fountain	0	1	0.75
5	ART_INTERACTIVE	12	Artistic Interactive Element	0.5	1	1
6	ART_SCULPTURE	60	Decorative Sculpture	0	0.5	0.5
7				0	0.5	0.25
8				0	0	0
9				0	1.5	2
10			nter	6	0	6
11			Center	4.5	0.5	4.5
12			r	3	4	4
13				1	3	3
14				9	0	9
15	CENTR_TENNIS	4	Tennis Center (Indoor)	6	0	4
16	COURT_BBALL_FULL	667	Basketball Full Court	2	0	2
17	COURT_BBALL_HA			1	0	1
18	COURT_GAME_CO			0.75	0	1.5
19	COURT_HANDBALL			0.75	0	0.75
20	COURT_HOCKEY			1	0	1
21	COURT_MULTI_FU			2.5	0	2.5
22	COURT_MULTI_HA			1.5	0	1.5
23	COURT_PICKLEBA			1	0	1
24	COURT_RACQUET			1	0	1
25	COURT_SQUASH	TBD	Squash Court	1	0	1
26	COURT_TAICHI	1	Tai Chi Court	0.5	0.5	1
27	COURT_TENNIS	759	Tennis Court	1	0	1
28	COURT_TENNIS_HT	10	Tennis Half Court	0.75	0	0.75
29	COURT_VOLLEYBALL					2
30	DECK					1
31	DOG_PARK					3
32	DOG_RUN					1
33	DUGOUT					0
34	EXERCISE_STATION					1
35	FIELD_CRICKET					2
36	FIELD_DIAMOND_LG					2
37	FIELD_DIAMOND_SM	370	Softball Diamond	1.5	0.5	1.5
38	FIELD_RECT_LARGE	386	Large Rectangular Field	3	1.5	2
39	FIELD_RECT_MED	15	Medium Rectangular Field	3	1.5	2
40	FIELD_RECT_SMALL	32	Small Rectangular Field			
41	GARDEN_COMMUNITY	30	Community Garden			
42	GARDEN_DECOR_LG	14	Large Decorative Garden			
43	GARDEN_DECOR_SM	30	Small Decorative Garden			
44	GAZEBO	59	Gazebo			
45	GOLF_DRIVE_RANGE	5	Golf Driving Range			
46	GREEN_CIVIC	9	Civic Green			
47	GREEN_NEIGHBOR	11	Neighborhood Green			
48	GREEN_POCKET	37	Pocket Green			
49	GRILL_FIREPIT	201	Firepit or Grill			
50	HARDSCAPE_SPACE	48	Hardscape Space			
51	HISTORY_MUSEUM	8	Museum or Interpretative Historic Site			
52	HISTORY_PRESERV1	96	Preserved Historic Site (No Signage)			
53	HISTORY_PRESERV2	13	Preserved Historic Site (Signage)			
54	HISTORY_STORE	2	Business/Store at Preserved Historic Site	0.25	1.5	1
56	LAWN_LARGE	233	Large Lawn	2	2	3
57	LAWN_MEDIUM	79	Medium Lawn	1	1	2
58	LAWN_SMALL	53	Small Lawn	0.5	0.5	1
59	MAINTENANCE	52	Maintenance Facility	0	0	0
60	MEADOW	352	Meadow	0	12 (area system)	0
61	MEMORIAL	56	Memorial	0	0.5	0.5
62	MINIGOLF	2	Minigolf	0.75	0	2
63	MINITRAIN	2	Minitrain	0	1.5	2
64	MODEL_AIRPARK	1	Model Airpark	0	0.5	0.5
65	PARK_ACTV_BLDG	45	Park Activity (Event) Building	0	1	2.5
66	PICNIC_AREA	100	Picnic Area	0.5	1	3
67	PICNIC_SHELTER	198	Picnic Shelter	0.5	1	2
68	PICNIC_TABLE	468	Picnic Table	0	0.25	0.5
72	PLAY_MULTIAGE	784	Playground	2	0	2.5
73	PLAY_TOT	38	Tot Lot Play Area, Age 2 - 5	1	0	1
74	PLAZA_POCKET	53	Pocket Plaza	0	1	1
75	PLAZA_URBAN	11	Urban Plaza	1.5	4	6
76	POND	81	Pond	0	0.5	0
77	RENTAL_BOAT	5	Boat Rental	1.5	2	0.5



90+ categories

500+ locations

14k+ amenities

ACCESS TO EXPERIENCES, NOT ACRES

TRAILS SCORING

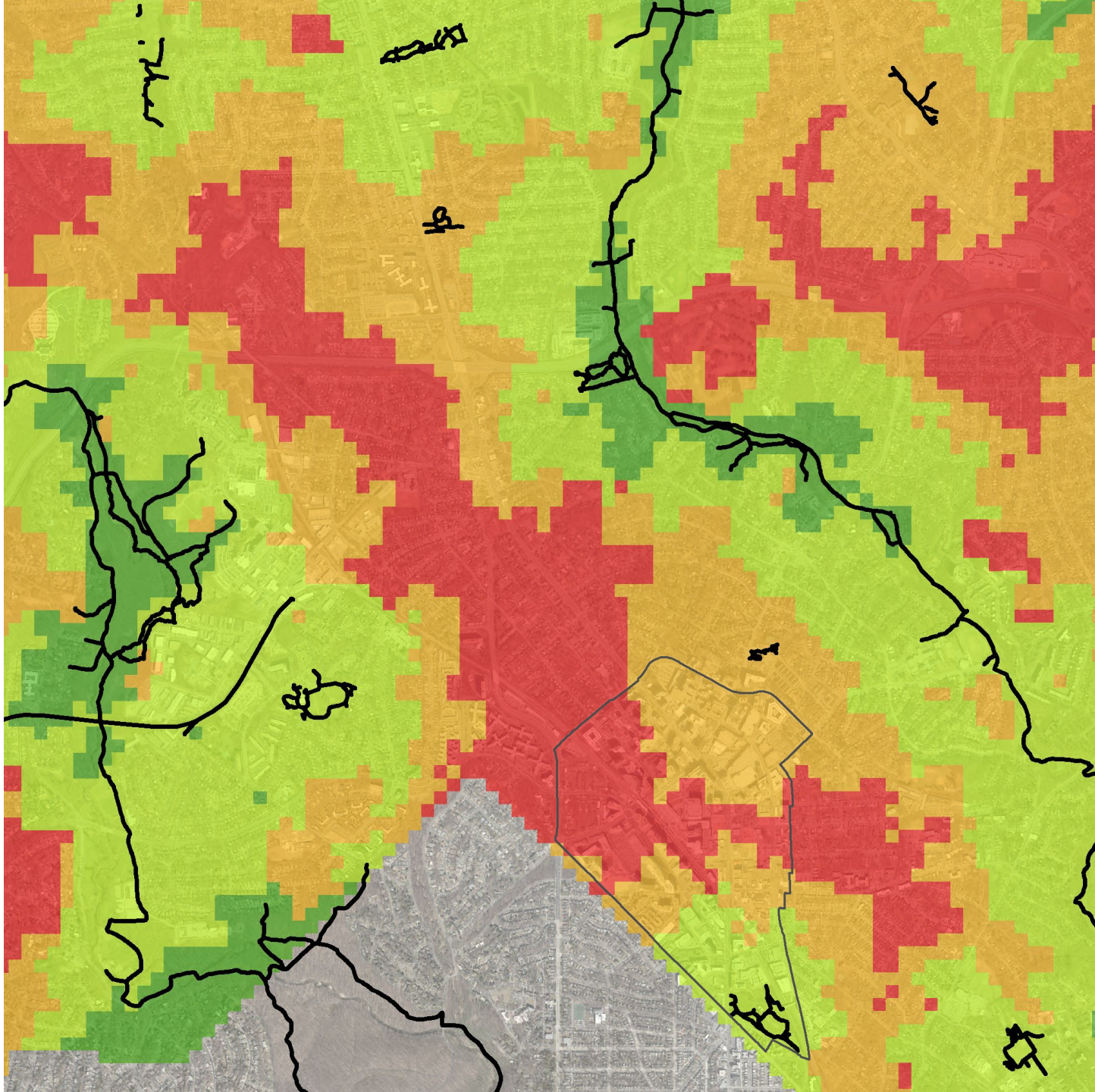
	ACTIVE	CONTEMPLATIVE	SOCIAL
TRAIL	6/10/14	6/10/14	2/2.5/3

Less Access to Trails

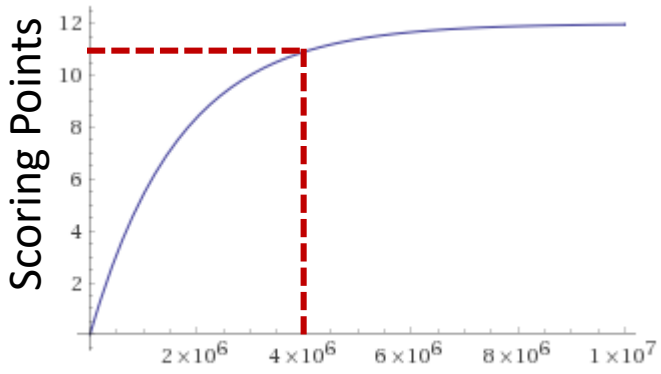
More Access to Trails

Trails

ACCESS TO EXPERIENCES, NOT ACRES



WOODS SCORING

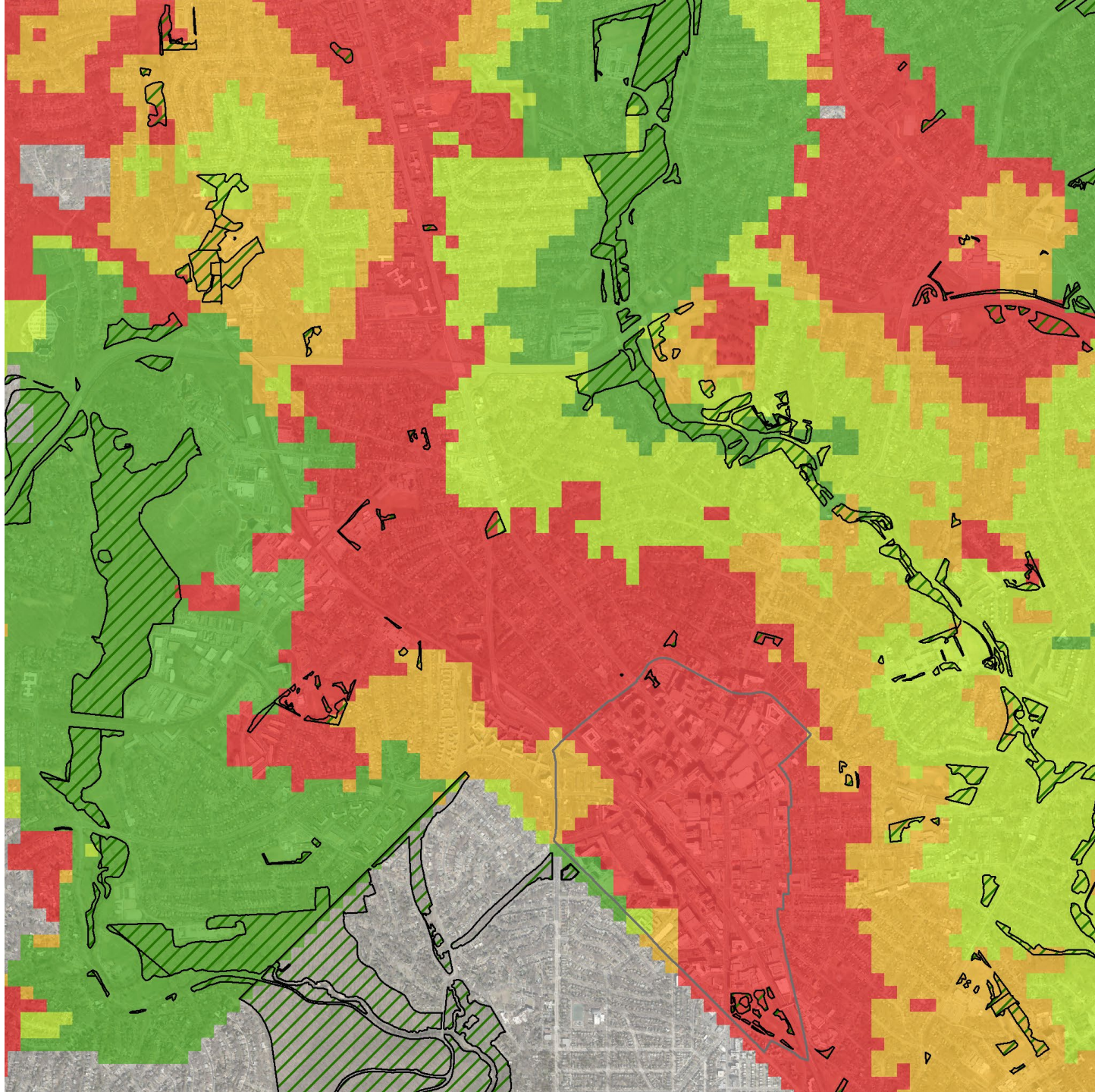


Size (amount of woods)

Less Access to Woods

More Access to Woods

Woods



ACCESS TO EXPERIENCES, NOT ACRES

WALKABLE NETWORK

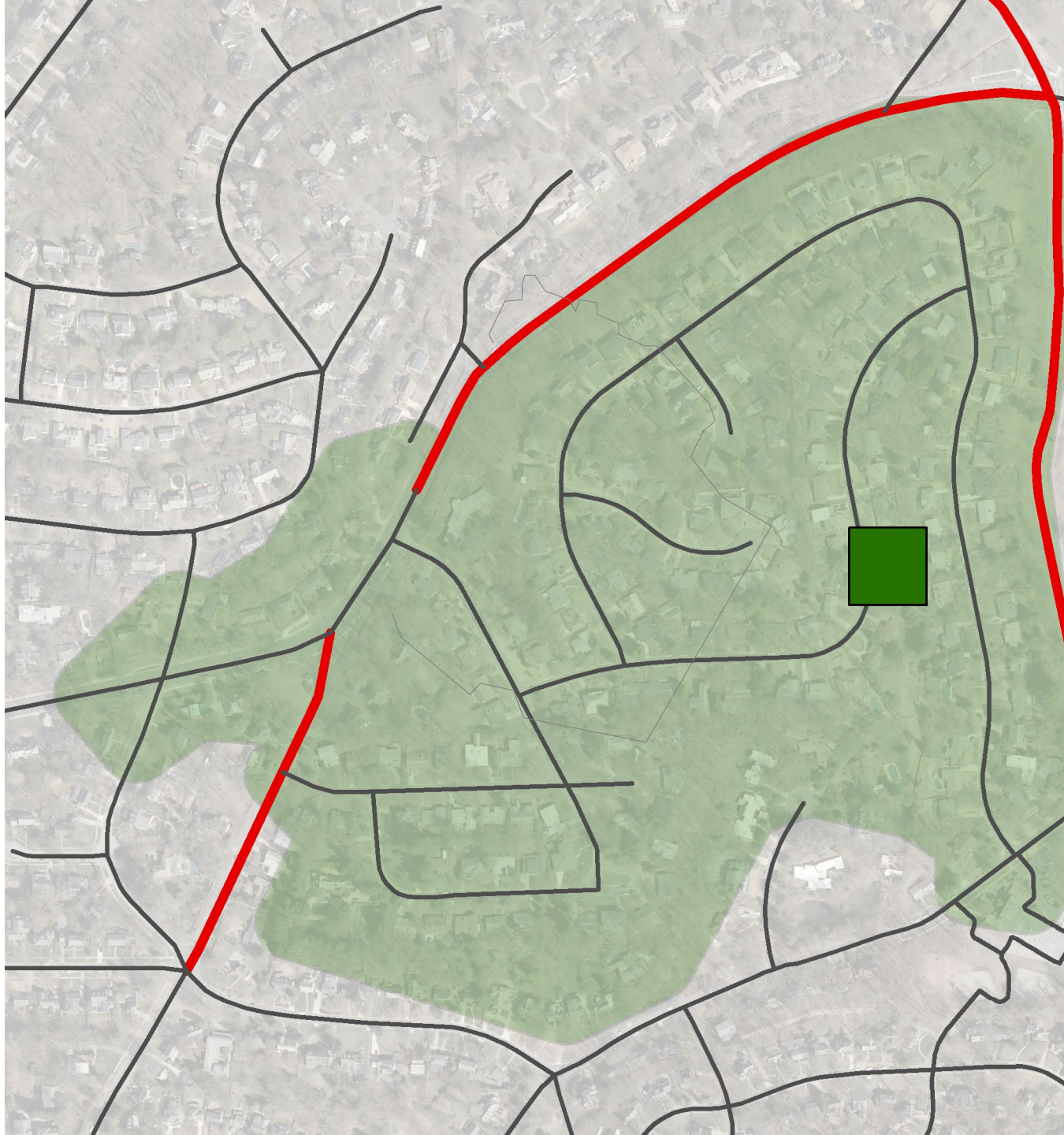
Create Walk Links:

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

Walkshed

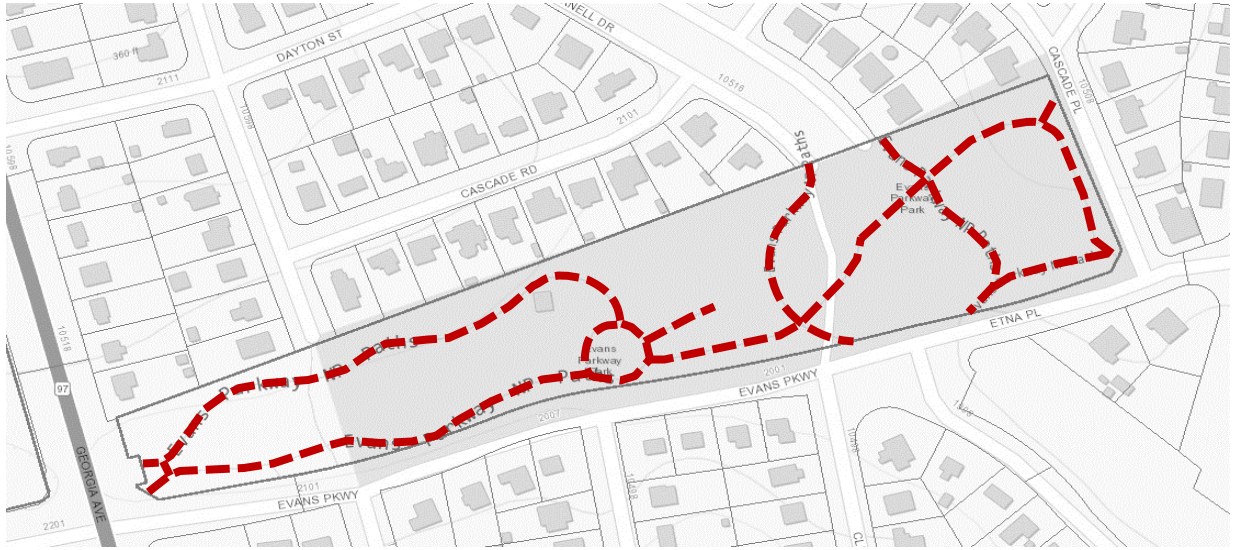
Walkable Network

Non-Walkable Network

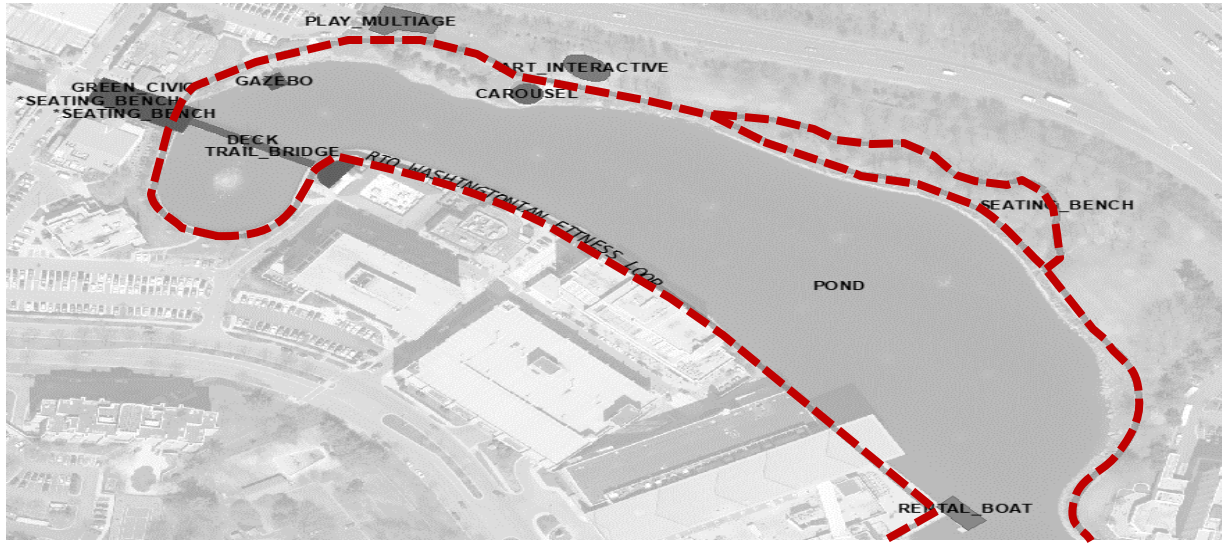


WALKABLE NETWORK

Montgomery Park-owned pathway/trail

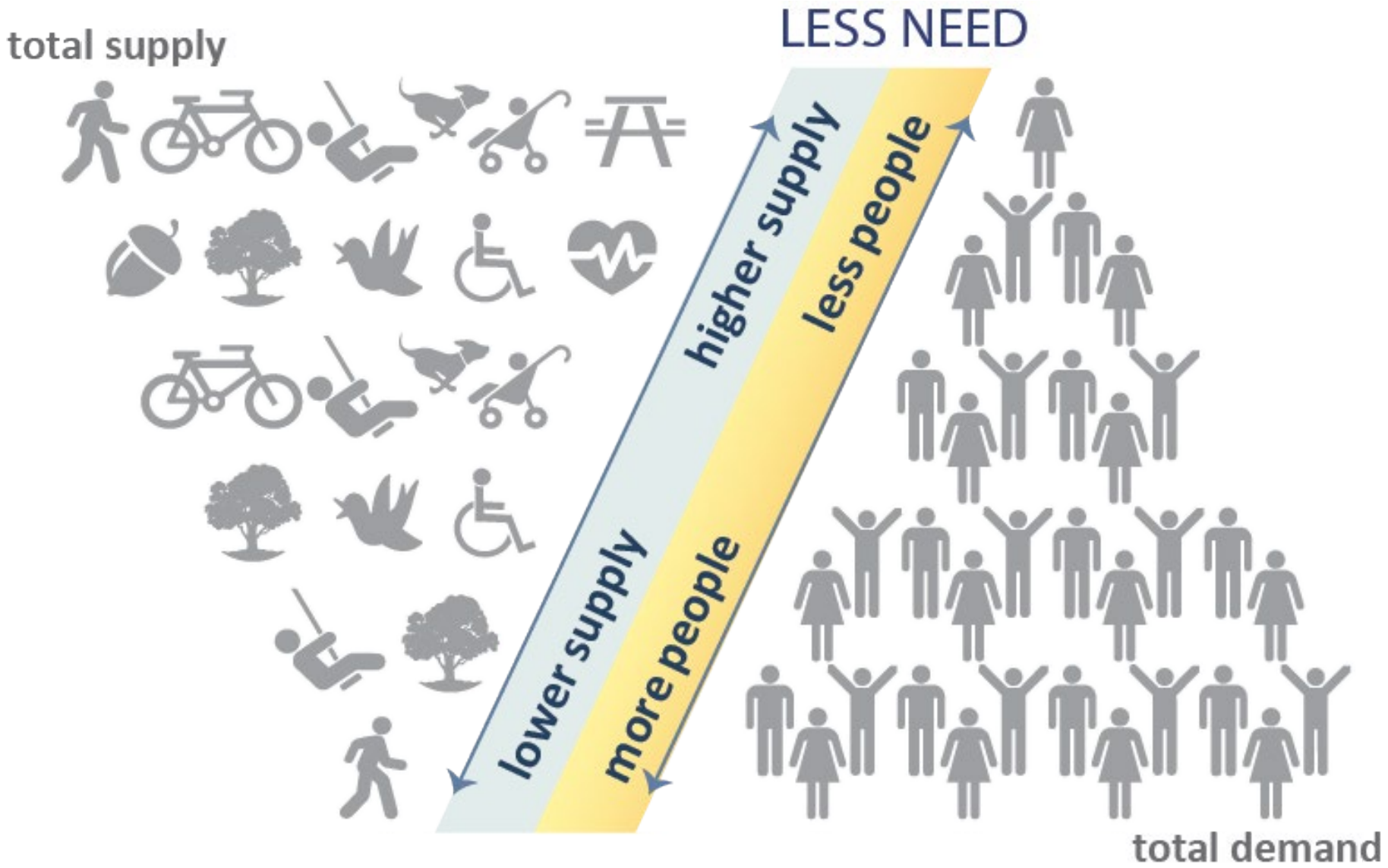


Private-owned public pathway/trail



Pathways

THANK YOU


total supply
LESS NEED
higher supply
less people
lower supply
more people
total demand
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

Source: Carl Morgan, M-NCPPC

energized public spaces
functional master plan for parks

Rx

Questions?

www.montgomeryparks.org

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

https://parkrxamerica.org/

John@parkrxamerica.org

Source: ForsythWoman.com