

# PARK EQUITY ANALYSIS

Connecting Marylanders to Green Space





# There is No App for This!

- ▶ *ONLY ONE CHILD in seven spends more time playing outdoors than his or her parents did, a study shows.*
- ▶ *Rise in childhood obesity and ADD*
- ▶ *Increase in screen time,*
- ▶ *Less free time*



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# CHILDREN IN NATURE PARTNERSHIP



- ▶ Formed in 2008
- ▶ 10 major recommendations
  - ▶ Connect students during the day
  - ▶ Connect families and communities to nature
  - ▶ Reach out to underserved communities

# OVERLAPPING GOALS



- ▶ Children in Nature: Reach out to underserved communities that have the least access to nature
  - ▶ Increase access and use of public lands and waterways
  - ▶ Provide access within the communities
  - ▶ Support Healthy Community Initiative
- ▶ DNR Goal: Creating Vibrant Communities and Neighborhoods
  - ▶ Community Connections Scorecard for POS Acquisitions
  - ▶ Connecting Communities to Nature
  - ▶ Provide tool for local partners



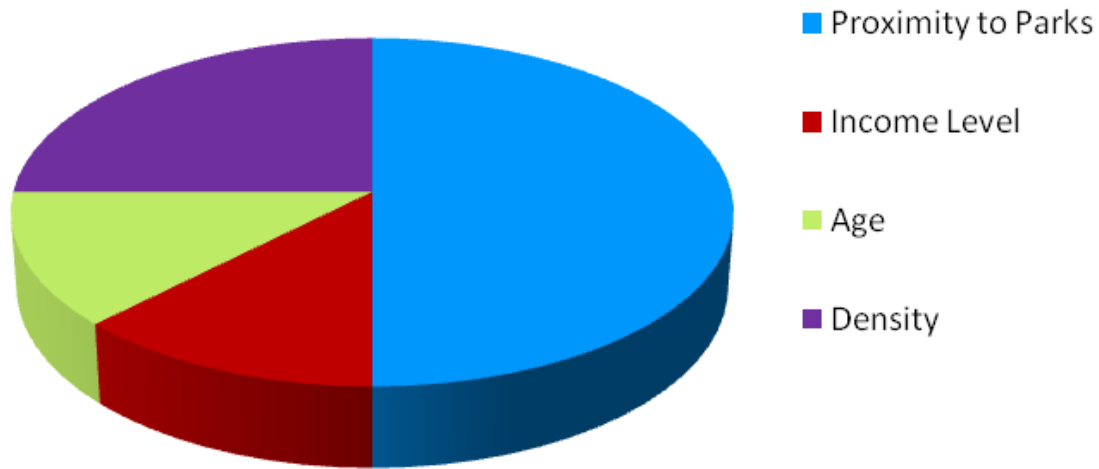
# Children in Nature & Community Planning

- ▶ Parks and Recreation Planning
- ▶ Long Range Comprehensive Planning
  - ▶ Connecting schools and public facilities to parks and trails
- ▶ Community Health Efforts
- ▶ Implementation/ Communities Design
  - ▶ State Funding Programs
  - ▶ Green Space as public amenities!!!
  - ▶ Nature Play Areas



# Park Equity Analysis

## Park Equity



- ▶ Built upon US Census Data, State Park and local park data layer
- ▶ Prioritizes areas in need of park space based on:
  - ▶ High concentration of children under 17
  - ▶ High concentration of populations below the poverty line
  - ▶ High population density
  - ▶ Low access to public park space

# Population Analysis

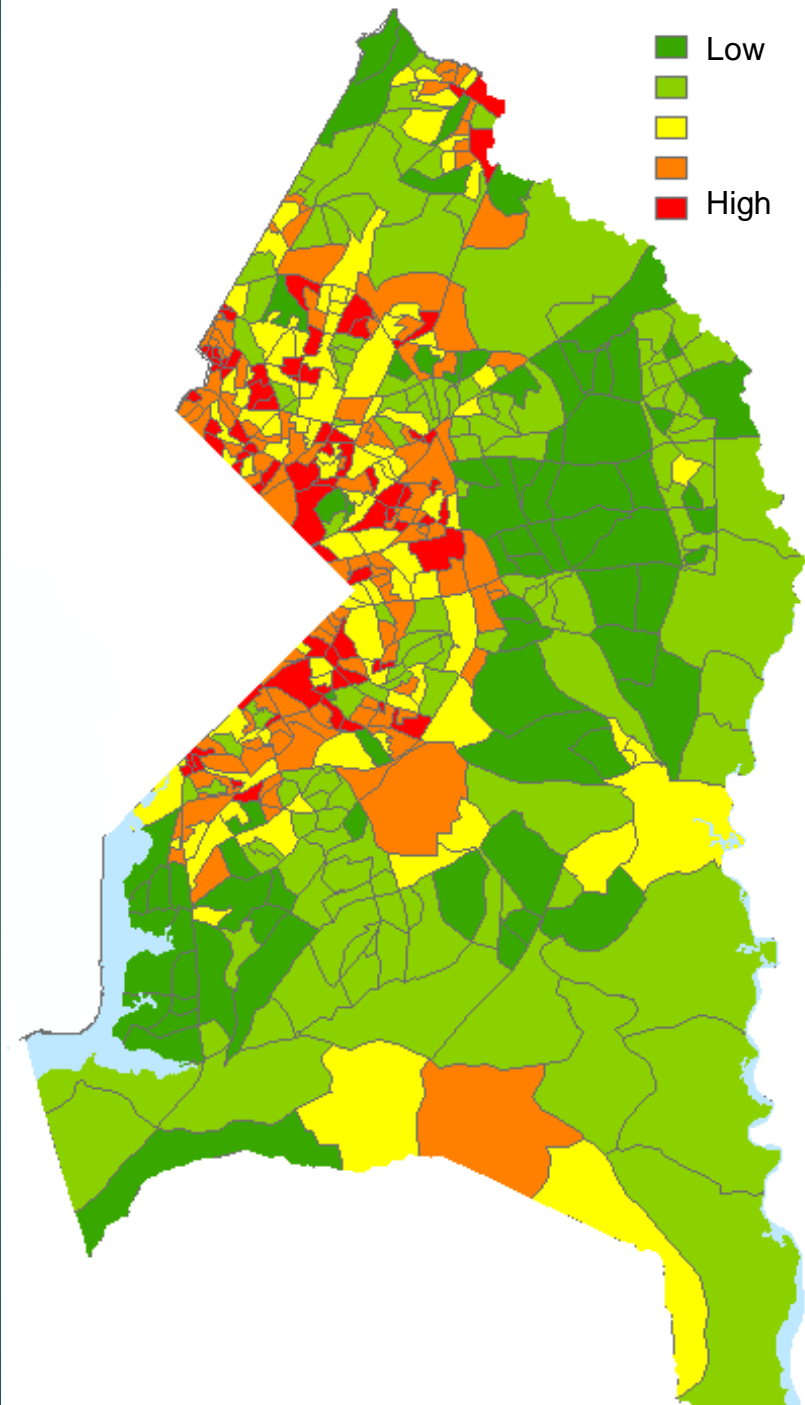
- ▶ Using Census Data
  - ▶ Income, Age, Density
- ▶ Normalized Data





# INCOME LEVELS

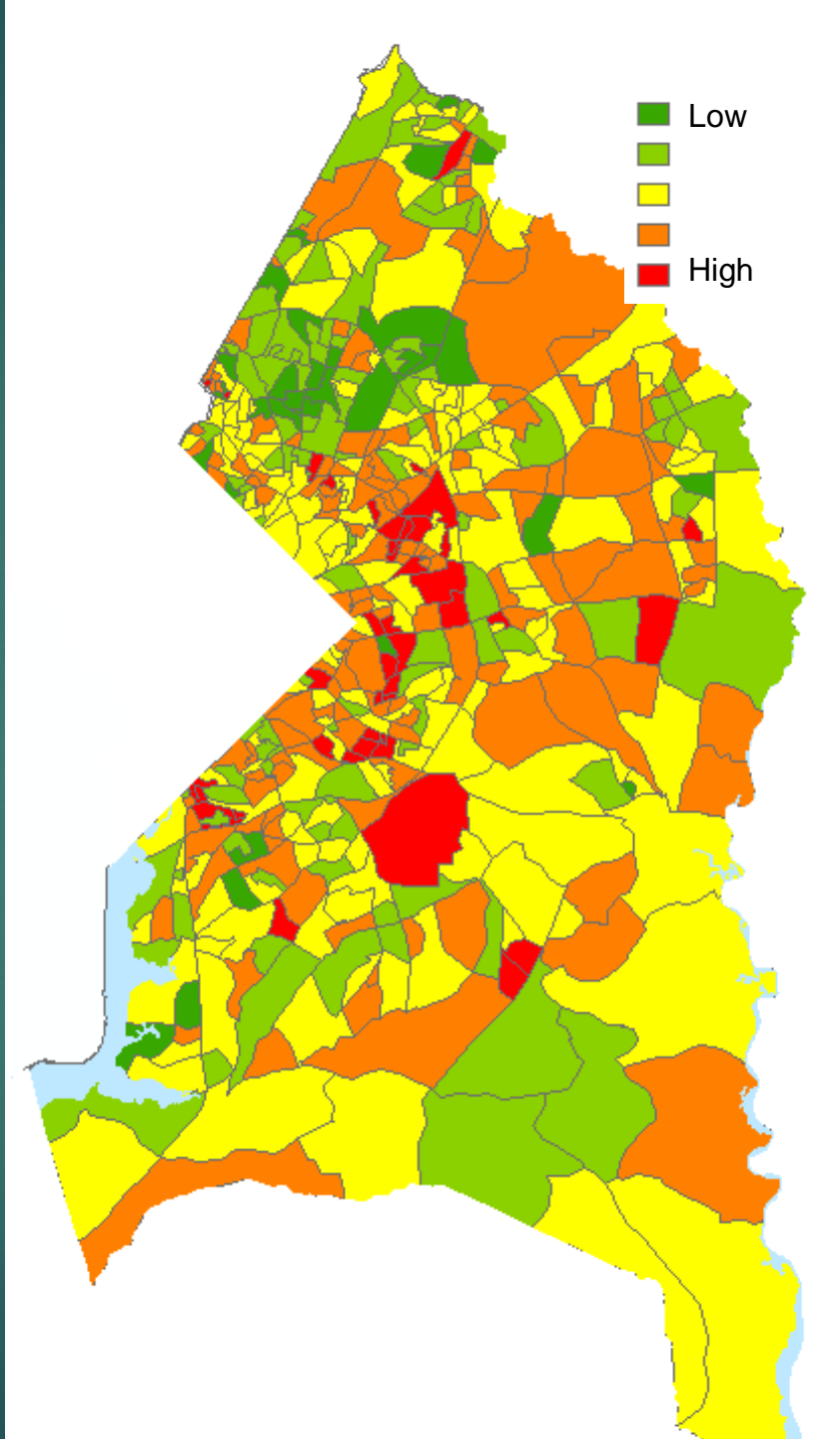
- ⊙ Using Census Data, National Poverty Levels (USDA)
- ⊙ Normalized Data
- ⊙ Income levels set according to % above and below federal levels to qualify for Free and Reduced School Meals (130%-185%)
- ⊙ While these levels are standard across the state, we normalized data according to average income levels by county and percentage of statewide average income
- ⊙ Lower Average Income = Higher Score





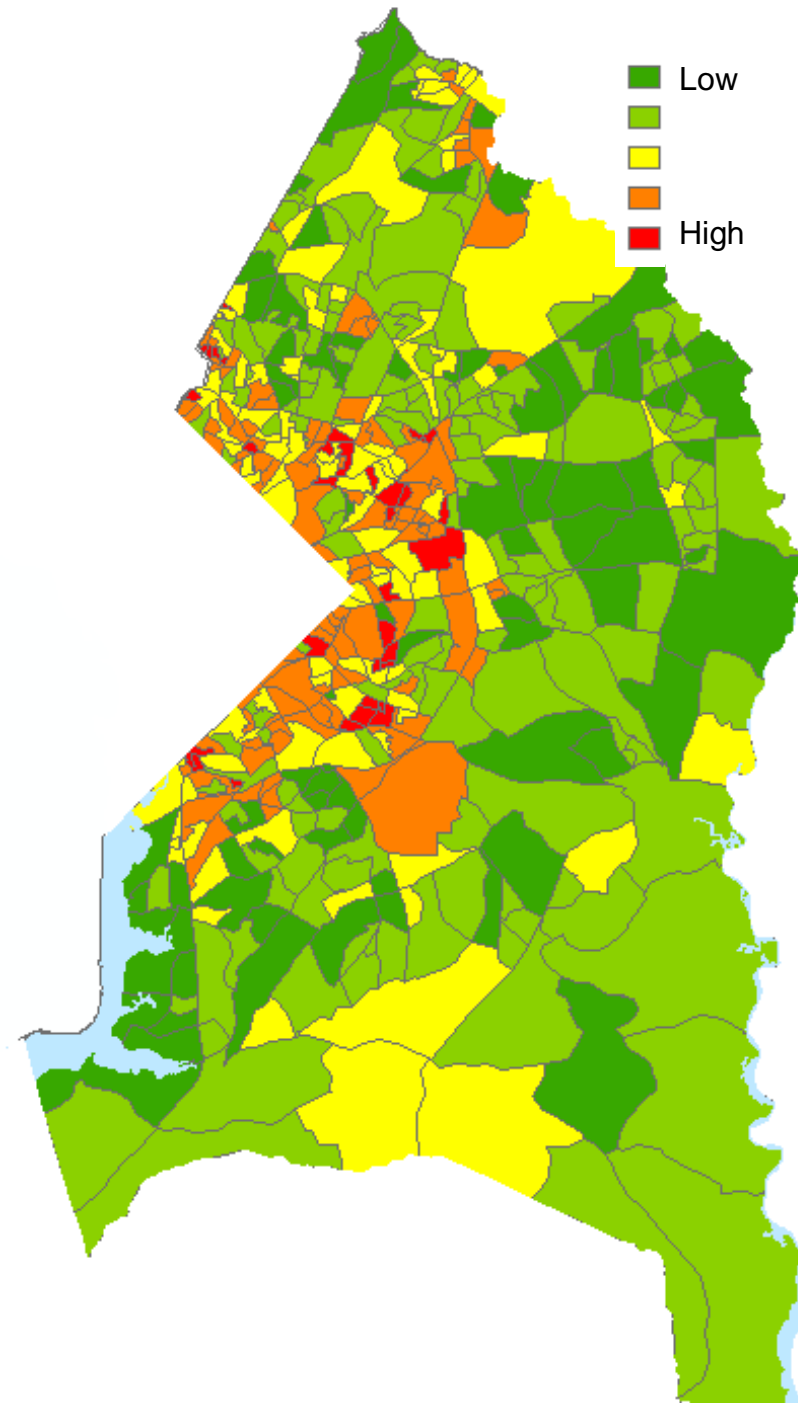
# RATIO OF CHILDREN

- ▶ Target audience of younger developmental stage
- ▶ Children under the driving age of 17 versus total population of census block
- ▶ Higher Ratio of Children= Higher Score



# POPULATION DENSITY

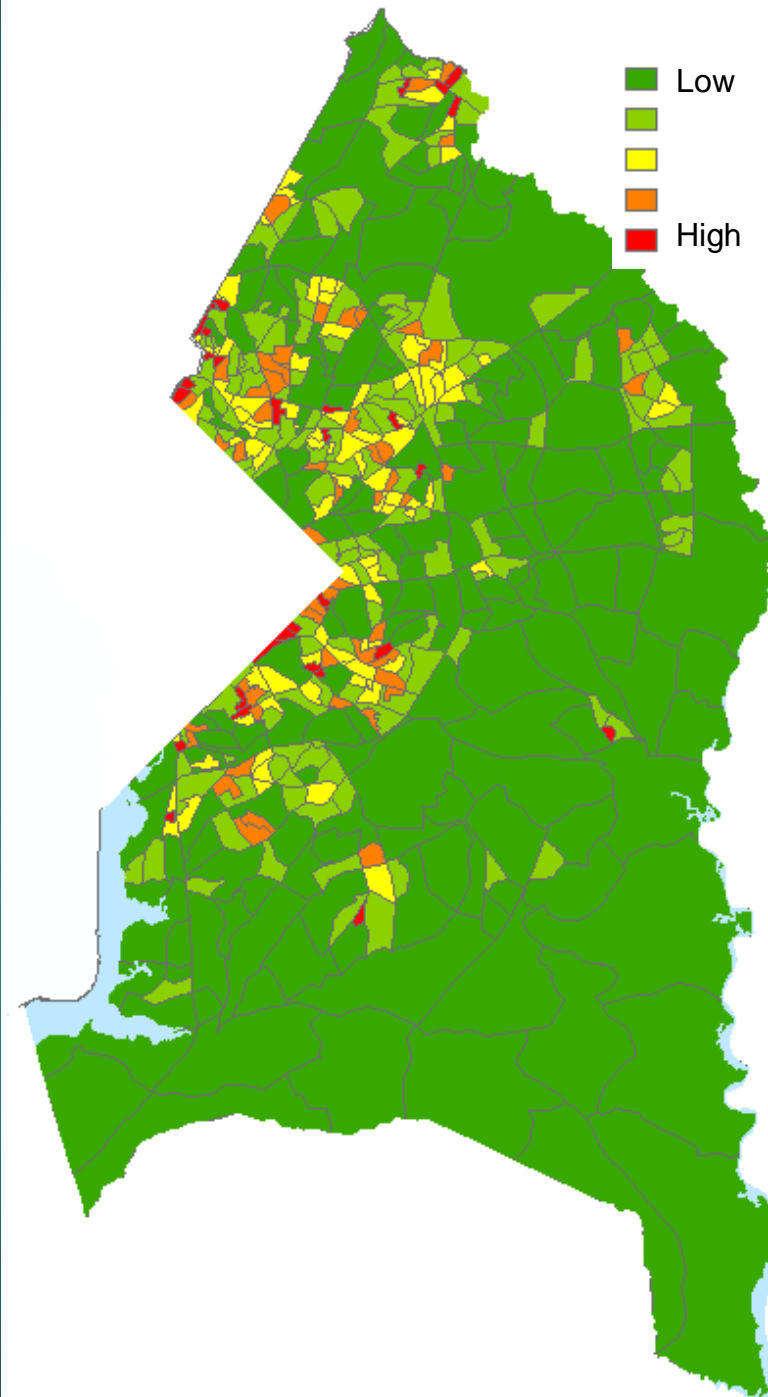
- ▶ Relative number of residents per square mile within the census tract
- ▶ Non urban acres were removed from calculations- preventing large industrial or open space tracts from skewing data
- ▶ Higher Density = Higher Score





# PROXIMITY TO PARK SPACE

- ▶ Census blocks were scored based on average distance to a state or local park
- ▶ Longer distance to park yields higher score
- ▶ Average distance allows for accounting of some parks located within block, but still far distance from residential points
- ▶ Longer Distance= Higher Score

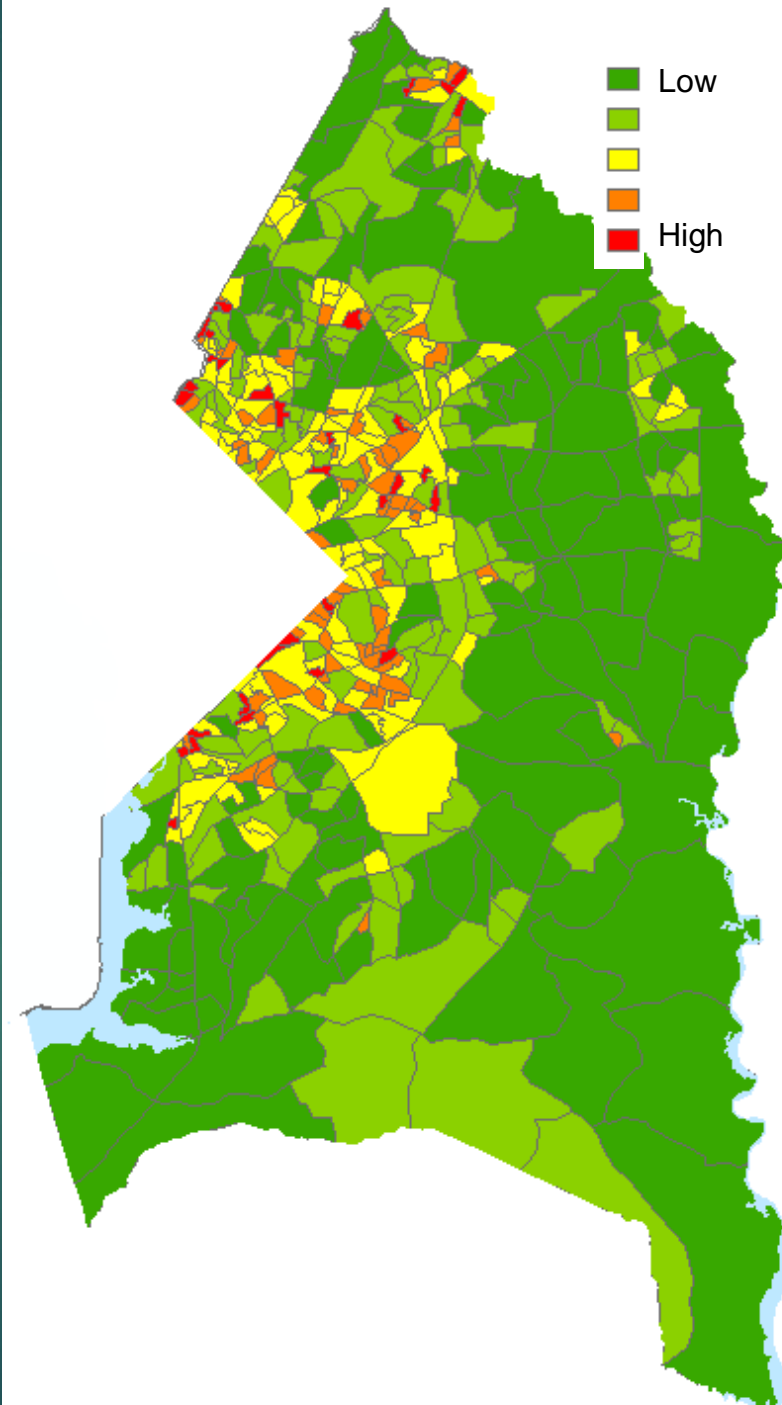


# COMBINED SCORE

- ▶ Shows areas in most need of access to parks
- ▶ More blocks show up as red when combined with population analysis

Combined Score =

Concentration of Children (0-10) +  
Concentration of low income (0-10) +  
Density ( 2 x (0-10)) +  
Proximity to Park Space ( 4 x (0-10))  
x 1.25



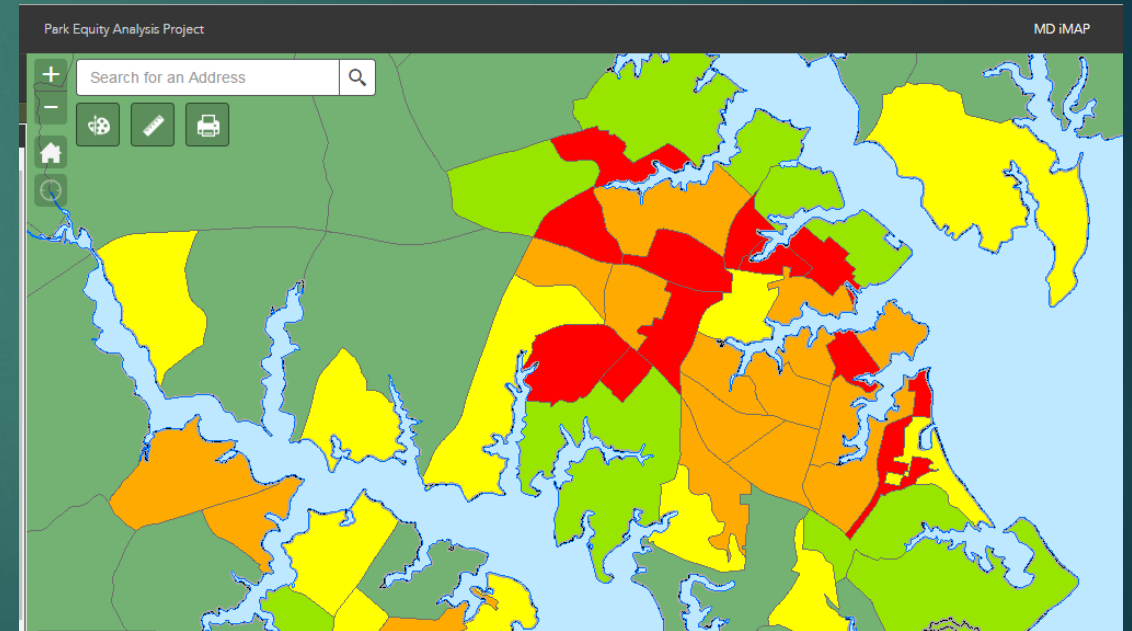
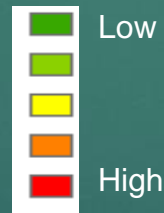


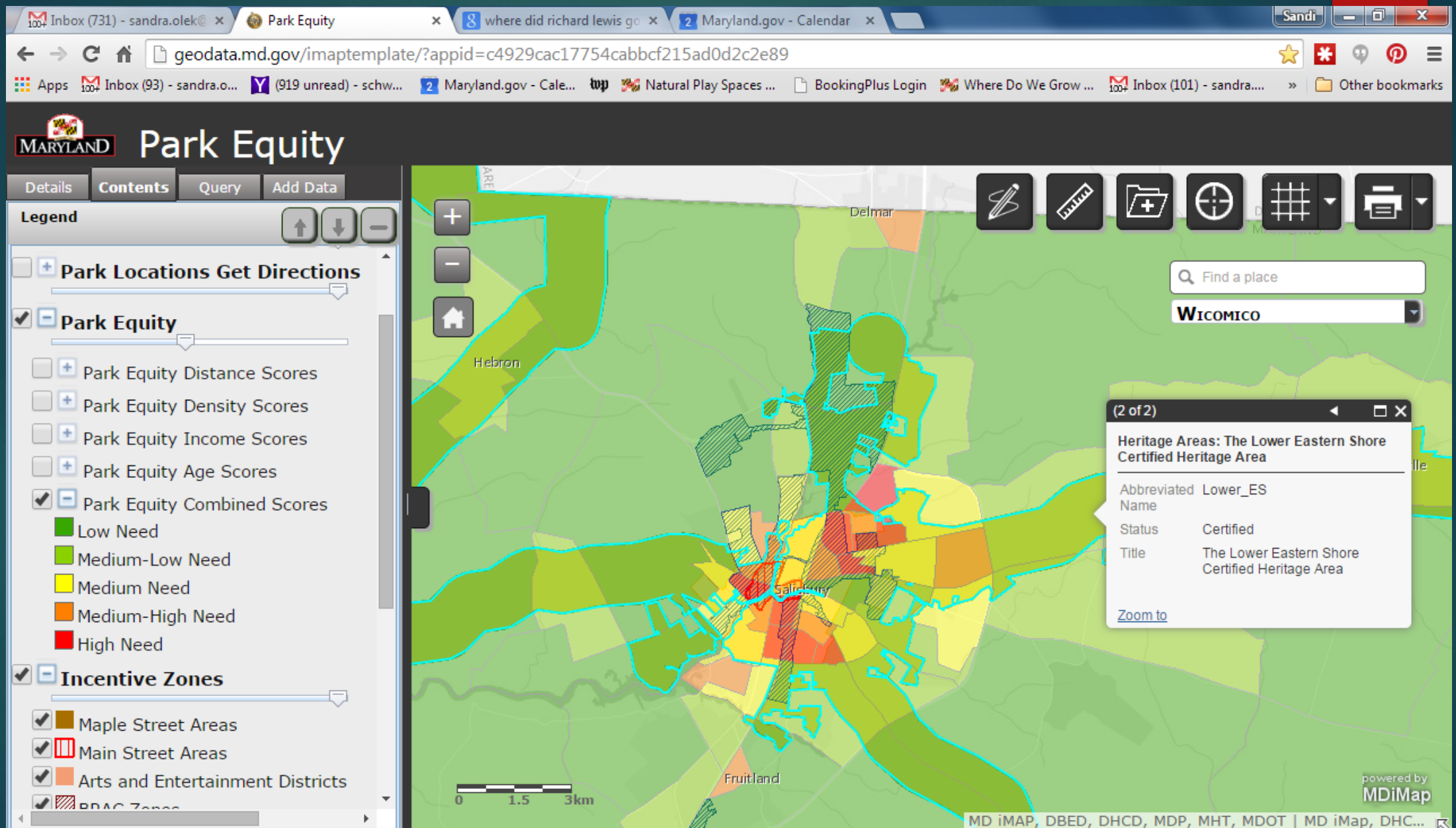
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# Refinement of Model



- ▶ Park Space
  - ▶ Trail Access Points
  - ▶ Local Data as available- more in 2017
- ▶ Evaluation of Park Equity with other data & Policy Issues
- ▶ Prince Georges Pilot Project
  - ▶ Senior Citizens
  - ▶ Tree Cover/ Shade Index
- ▶ Caroline County Park Parity LPRP

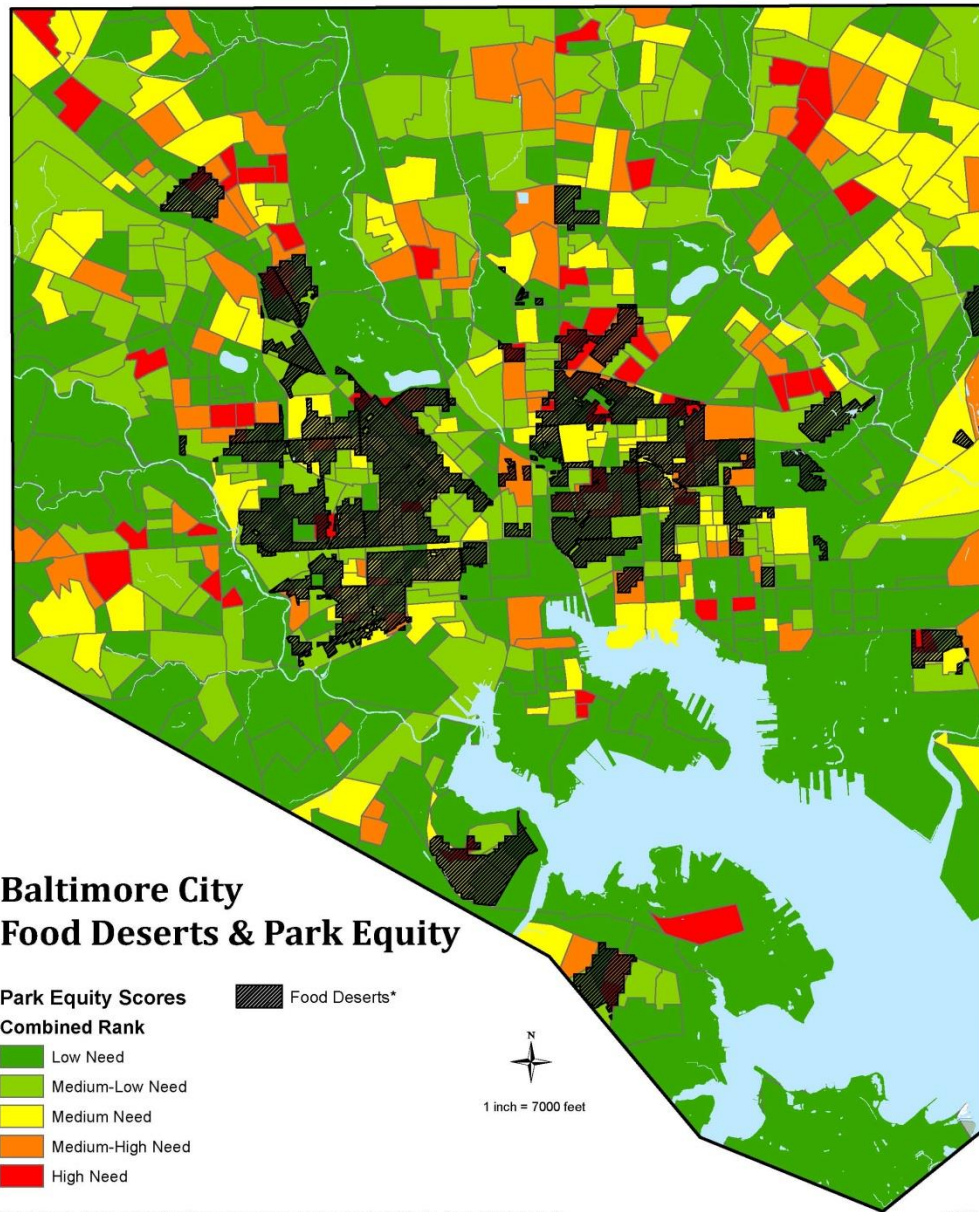
[www.dnr.maryland.gov/park\\_equity.asp](http://www.dnr.maryland.gov/park_equity.asp)

# PARK EQUITY ANALYSIS & Land Preservation and Recreation Plan



- ▶ Can be used in a number of ways to benefit the public:
  - ▶ Identify areas in significant need of access to park space
  - ▶ Help streamline green space funding programs
  - ▶ Aid local partners in planning for green infrastructure and park and recreation development opportunities
  - ▶ Help identify green space needs in school construction and public facility planning
  - ▶ Be combined with other data layers such as other climate vulnerability, access issues, qualitative analysis, health data, tree canopy etc.





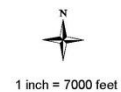
## Baltimore City Food Deserts & Park Equity

### Park Equity Scores

#### Combined Rank

- Low Need
- Medium-Low Need
- Medium Need
- Medium-High Need
- High Need

Food Deserts\*

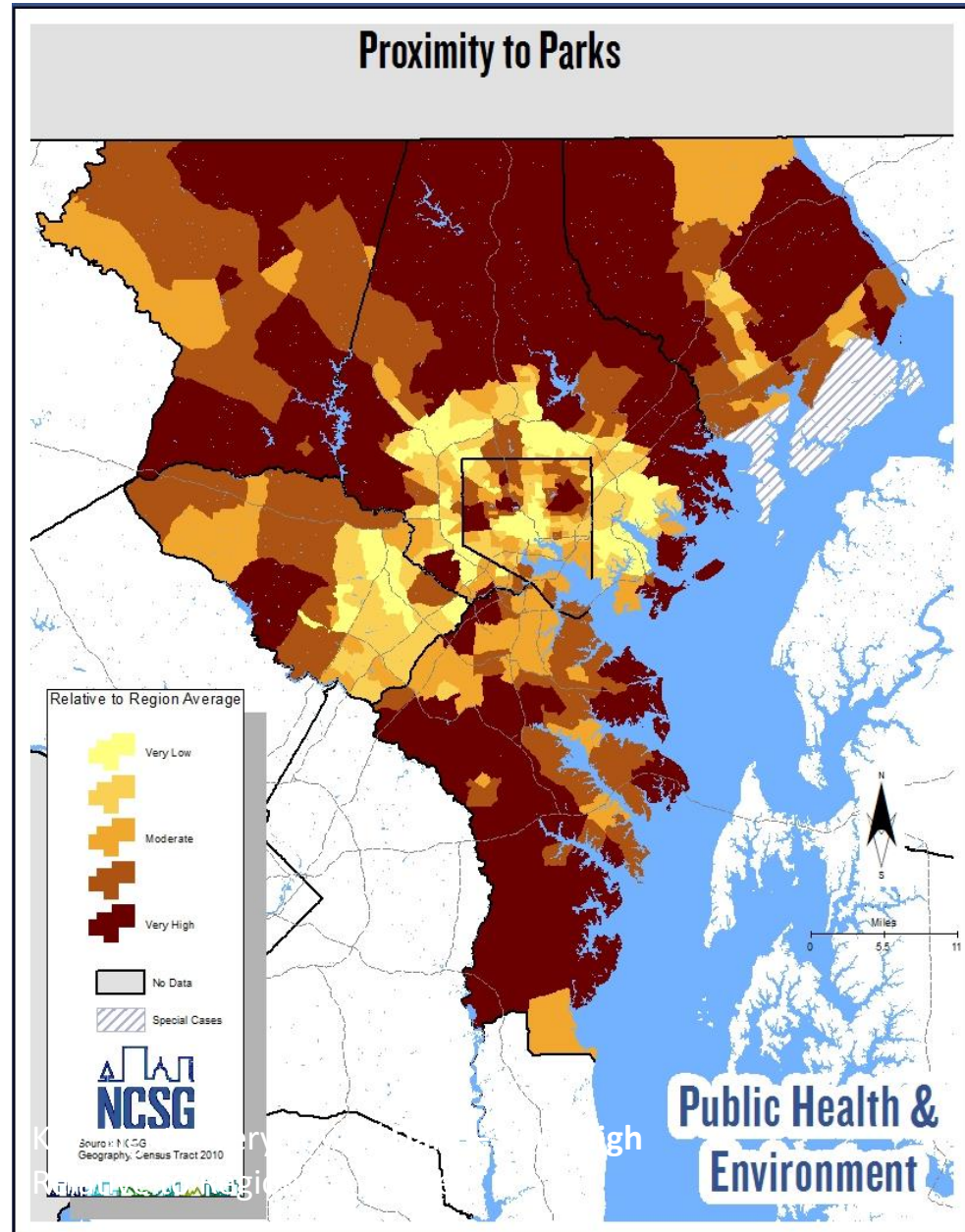


\*Food Desert: An area where the distance to a supermarket is more than 1/4 mile, the median household income is at or below 185% of the Federal Poverty Level, over 40% of households have no vehicle available, and the average Healthy Food Availability Index score for supermarkets, convenience and corner stores is low.

2012

# Public Health & Environment

- ▶ Indicators
  - ▶ Cancer Risk
  - ▶ Neurological Disease Risk
  - ▶ Respiratory Disease Risk
  - ▶ Estimated Exposure to Environmental Carcinogens
  - ▶ Estimated Exposure to Environmental Pollutants
  - ▶ Density of Emergency Services
  - ▶ Density of Social Services
  - ▶ Density of Hospitals
  - ▶ Density of Outpatient Care Centers
  - ▶ Density of Physician Offices
  - ▶ Density of Grocery Stores
  - ▶ **Proximity to Parks**







- Can export to a CSV on “Query”

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[dnr.maryland.gov/pages/parkequity.aspx](http://dnr.maryland.gov/pages/parkequity.aspx)



### **Steering Committee Member**

American Planning Association  
Baltimore City  
The Center for Chesapeake Communities  
Chesapeake Conservancy  
The Conservation Fund  
Maryland Department of Natural Resources  
Parks & People Foundation  
Prince George's County Planning/MD National Capital Park and  
Planning Commission  
Urban Waters Partnership  
U.S. Fish and Wildlife Service, Chesapeake Bay Field Office  
U.S. Forest Service/Baltimore Ecosystem Study  
US Department of the Interior, Urban Environmental Issues  
National Aquarium  
Harford County Department of Planning and Zoning

### **Member Organizations**

American Forests  
Baltimore Chesapeake Bay Outward Bound School  
Baltimore Sustainability Commission & Greater  
Baltimore Parks and Recreation Alliance  
Gunpowder Valley Conservancy  
Hispanic Access Foundation  
National Park Service, Chesapeake Bay Office and  
John Smith Trail  
National Wildlife Federation  
Rails-to-Trails Conservancy  
Sagamore Development  
USGS MD-DE-DC Water Science Center  
USGS Northeast Regional  
USACE Baltimore District  
USFWS Patuxent Research Refuge  
Wildlife Habitat Council

# Resiliency Biodiversity Discovery Equity

## OUR MISSION

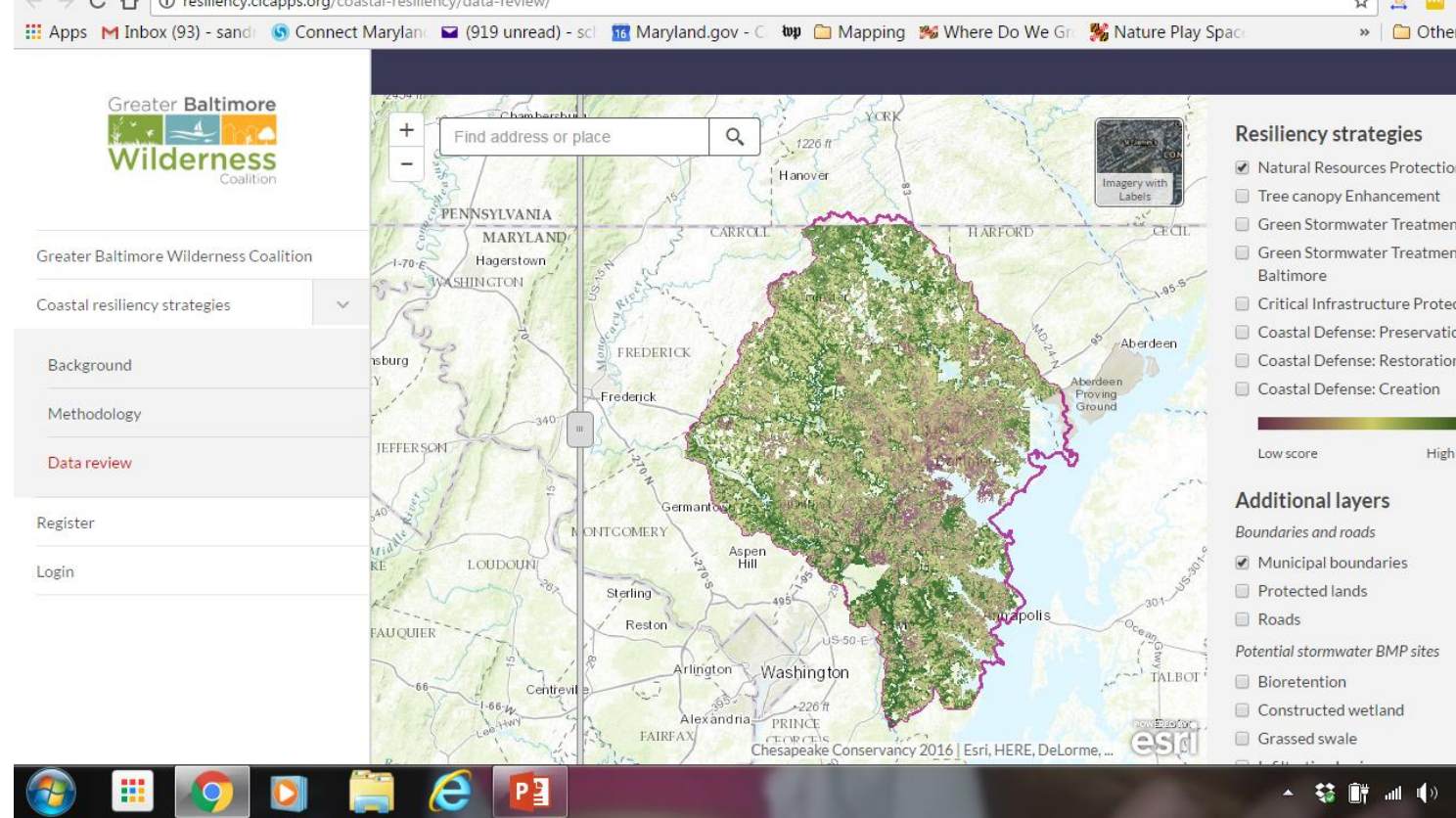
- ▶ To improve the quality of life by identifying, restoring, enhancing and protecting an interconnected network of lands and waters supporting healthy ecosystems and communities to benefit the people and wildlife of central Maryland.

Equity through the lens of biodiversity, resiliency and discovery- As access to nature is unequally available across the region, Greater Baltimore Wilderness Coalition's partners seek to connect the region's increasingly urbanized population with nature.





# Resiliency Mapper



- ▶ Mapping of critical infrastructure
- ▶ Best Management Practices opportunities
- ▶ Expanded floodplain- above and beyond FEMA defined areas
- ▶ Stitched together local GI network- Ho, Mo, PG, AA
- ▶ Population Vulnerability
  - ▶ DNR- Park Equity, EPA EJ Screen
- ▶ Looking to identify maximum inter-jurisdictional projects

## Population vulnerability

- Number of people/mi<sup>2</sup>
- % Population with income below poverty (12mo)
- % Population of non-proficient English speakers
- % Population <18 or >= 65 years of age

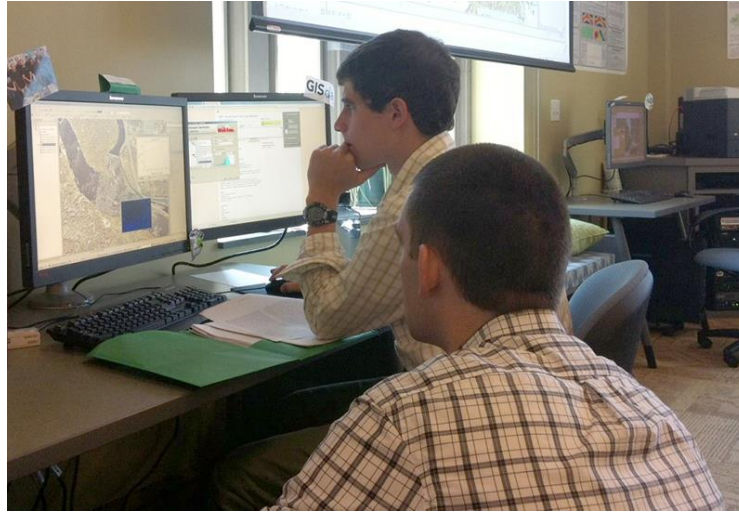
# Community Interviews

- ▶ Input from community development corporations, funders, non-profits, housing and health organizations, transportation advocates
  - ▶ Heard about need for community connections, signage, enhancements, design and technical assistance, safety, community health, jobs and local owned business





# Job Watersheds



- ▶ Convene Partners- Identify leverage points
  - ▶ Internships/ Jobs Corps
  - ▶ Green infrastructure jobs
  - ▶ Conservation Professional jobs
- ▶ Job Training
- ▶ Opportunities for leadership
- ▶ Broaden the appeal to communities of color





# South Baltimore Focal Area



- ▶ Garrett Park- GI update
  - ▶ National Aquarium- lead
  - ▶ Center for Chesapeake Youth Development
  - ▶ NWF
  - ▶ USFW
  - ▶ Blue Water Baltimore
- ▶ 25 native gardens including 24 residences and one church
- ▶ Trail and access mapping



# Future Defined Focal Areas

- ▶ Defining new areas
- ▶ Coordinated lifts
- ▶ Collective impact

