

Planning in A Virtual World:

GIS Advancements to Support Planning Activities

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The Maryland-National Capital Park & Planning Commission

- *“created by the Maryland General Assembly in 1927 to develop and operate public park systems and provide land use planning for the physical development of the great majority of **Montgomery and Prince George's Counties**, and to operate the public recreation program in Prince George's County.”*



Background

- Population – 909,536
 - Demographic Diversity
- Size – 499 sq. miles
- 27 Municipalities
 - Laurel independent zoning
- Median Household Income - \$73,447
- 290,000 parcels



Information Management Division (IMD)

- Information Management (25 persons)
 - Network and Technology Services Section
 - Data Systems Section
 - GIS Section
 - GIS Specialists
 - Planning Analyst
 - Demographic Data Analyst



GIS Layer Maintenance

- Over 250 Layers Maintained
- Enterprise SDE
- Property, Zoning, Planimetrics, Address Points are key
- Map Services Hosting
 - Internally for Analysis
 - External (map services)
 - Internal (selected map services)

The screenshot shows the 'GIS Data Catalog' for 'The Maryland-National Capital Park and Planning Commission'. It features a search bar and a list of layers on the left. The main content area displays details for the 'Chesapeake Bay Conservation Plan' layer, including its description, purpose, and a table of metadata.

Chesapeake Bay Conservation Plan

This feature class name is: Chesapeake_Bay_Conv_Plan_Pk

Description:
The Chesapeake Bay Conservation Plan is a plan required prior to the issuance of any subdivision, grading or building permit within the Chesapeake Bay Critical Area Overlay Zone.

Purpose:
To ensure sound land management and environmental protection in the Chesapeake Bay Critical Area.

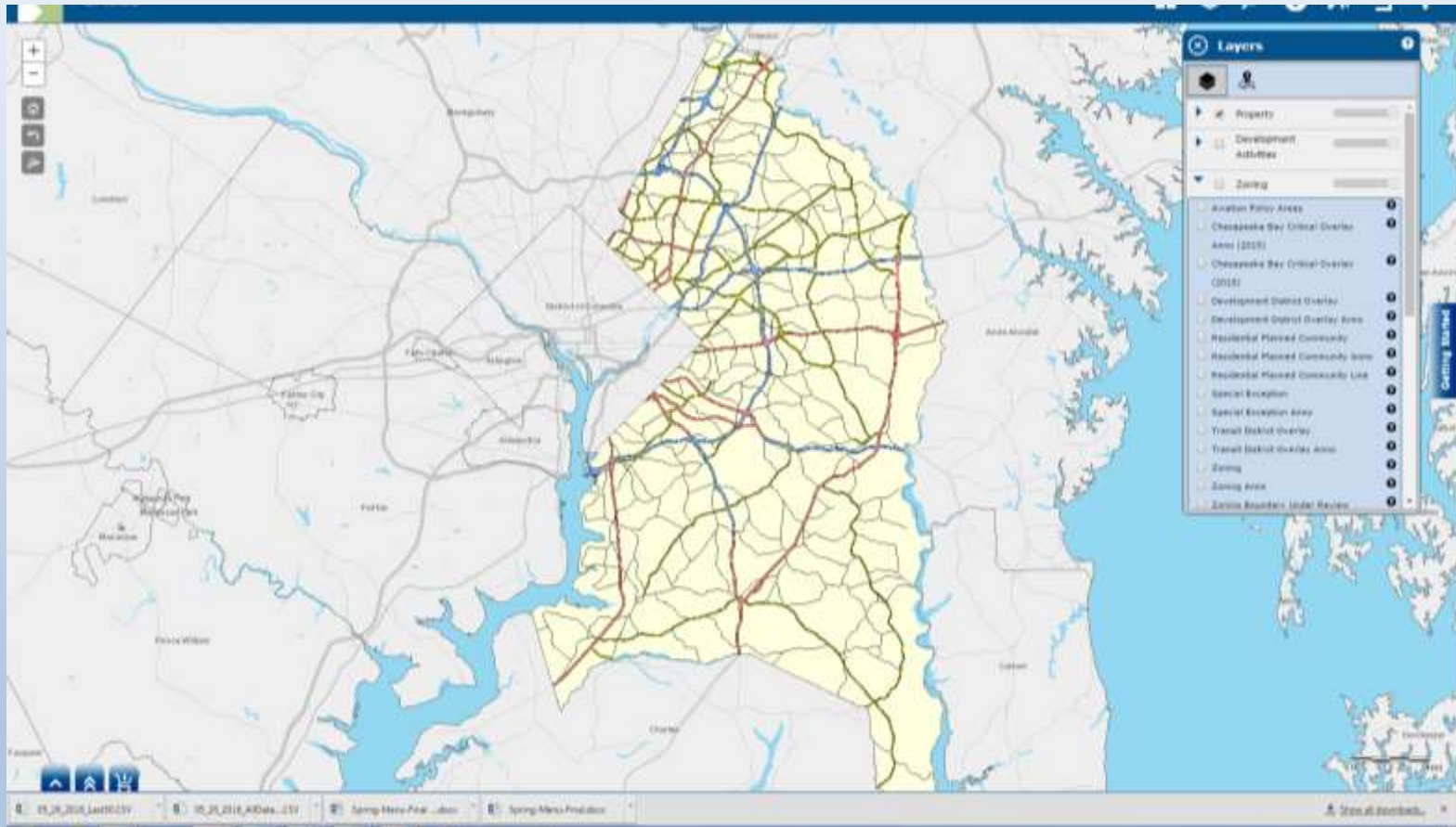
Download

| Name | Description | Definition | More Information |
|-----------------------|---|----------------------------|-------------------------|
| OBJECTID (OID) | Internal feature number | Precision: 0 Length: 4 | |
| CASE_NUM (String) | The Case number assigned by the B-1 RCAPD technical staff | Precision: 0 Length: 10 | |
| DATE_CAPTURED (Date) | The date that the shape was captured | Precision: 0 Length: 8 | |
| QC (String) | How the shape was captured | Precision: 0 Length: 20 | Details |
| SHAPE (Geometry) | Feature geometry | Precision: 0 Length: 0 | |
| SHAPE_Length (Number) | Length of feature in external units | Precision: 0 Length: 8 | |

<http://gisdata.pgplanning.org/metadata/>



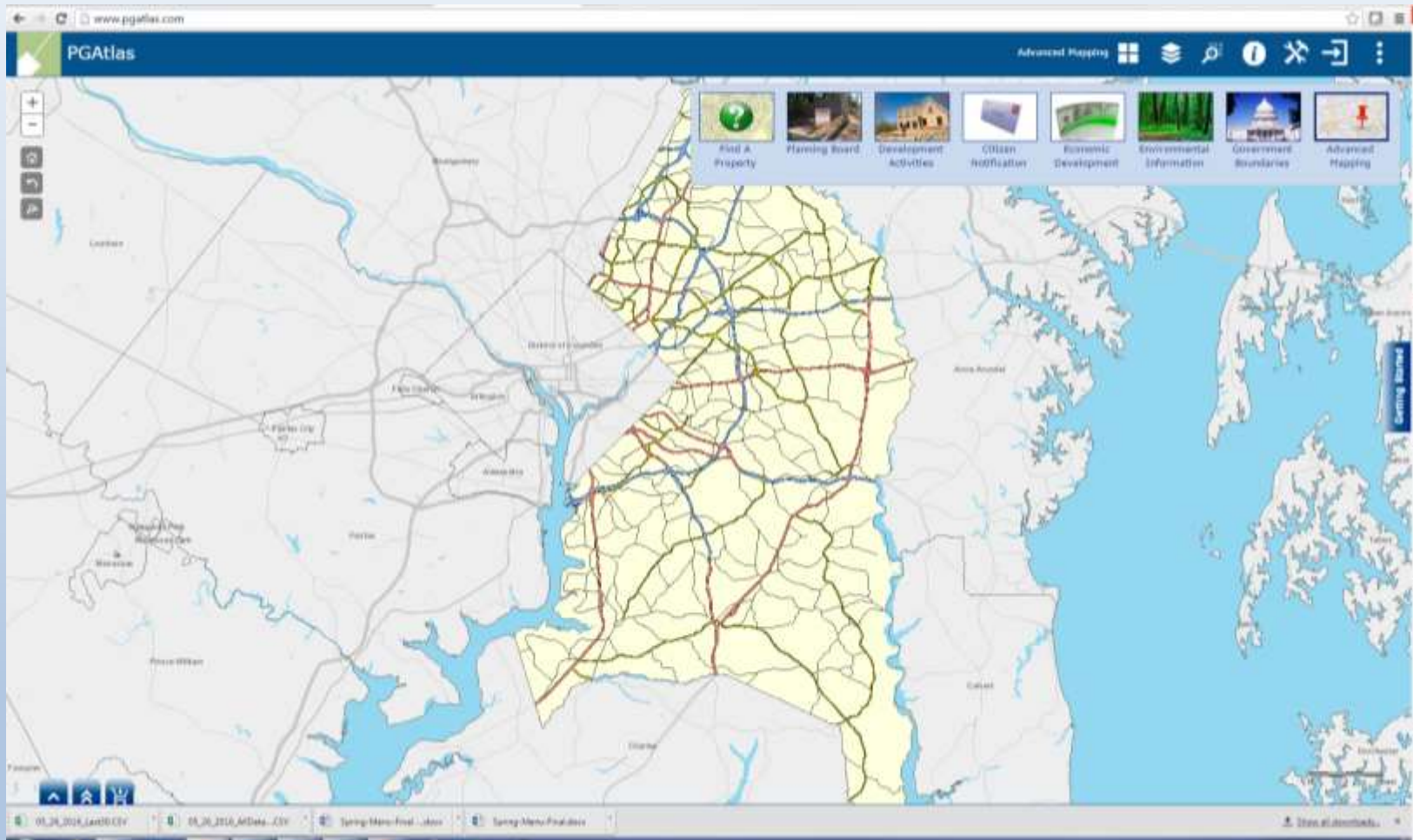
PGAtlas www.pgatlas.com



Robust Mapping Application, Internal and External Versions, Externally Hosted Data, HTML 5/JavaScript application, Tablet compatible



PGAtlas www.pgatlas.com



Multiple Sub-applications, 10,000 page views per month



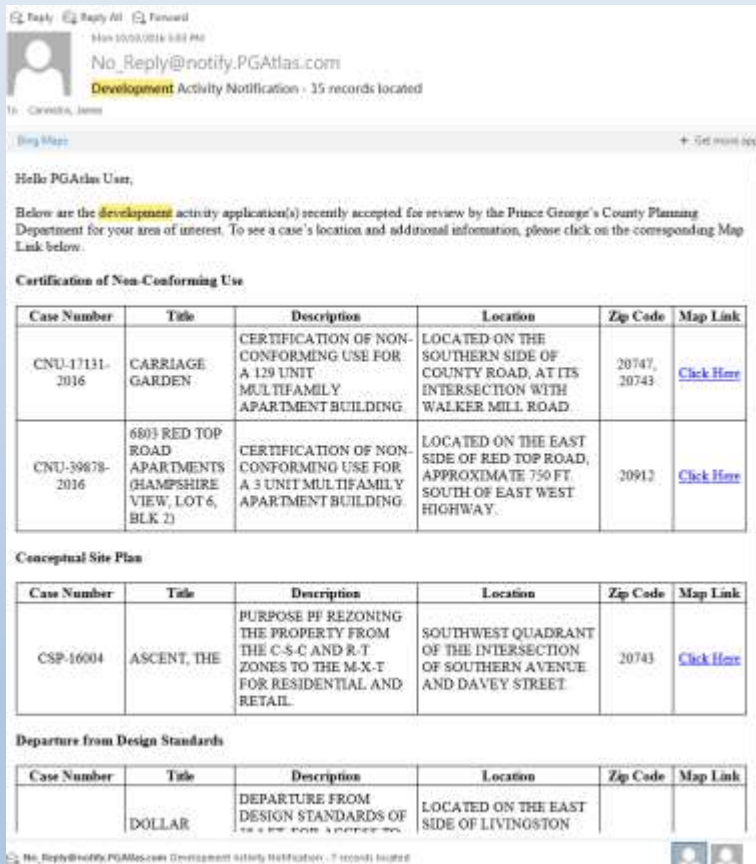
PGAtlas www.pgatlas.com



Query, Map Production, Analysis and Map/Data Export Functionality



PGAtlas Development Activity Notification



Prince George's County Planning GIS Open Data Initiative

IMD enterprise wide GIS - 250 layers

From 1992 July 2015 data available through sales or data license agreement

- Approx. 200 lease agreements/year 2008 -15
- Approx. \$26,700 sales / year since 2010 -15

July 1, 2015 implemented GIS Open Data Program

<http://gisdata.pgplanning.org/metadata/>



Open Data Portal

GIS Open Data
The Prince George's County Planning Department

Home Prince George's Planning Department Prince George's Planning Board Search

Welcome to GIS Open Data Portal

The Prince George's County Planning Department uses comprehensive enterprise GIS. Since its inception the P has web data, custom maps, and products in order to reduce costs of system development and maintenance. Prince George's Planning Department will implement its GIS open data for the distribution of digital data to anyone in the public.

The data, which is available at no cost, includes planimetric, property, zoning, terrain, administrative, census, environmental, historic, infrastructure, facility datasets. It includes those datasets developed and maintained by The Maryland-National Capital Park and Planning Commission, or acquired through partnership with external organizations. Over 200 different datasets are available for use and distribution. A comprehensive list is found here: http://www.pgplanning.org/Resources/Tools-On-line/Mapping/Tools/GIS_Data-Inventory.html

- CADD file export (.lxb) - for planimetric and topographic datasets only
- ESRI file Geodatabase (.gdb)
- Orthorectified (.tif format)
- ESRI Shapefile (.shp)

* Click on any link to open up the directory and download .Zip file

The Maryland-National Capital Park and Planning Commission
Prince George's County Planning Department
Information Management Division
14741 Governor Glenn Bowie Drive
Upper Marlboro MD 20772
For more information, call 301.962.3916

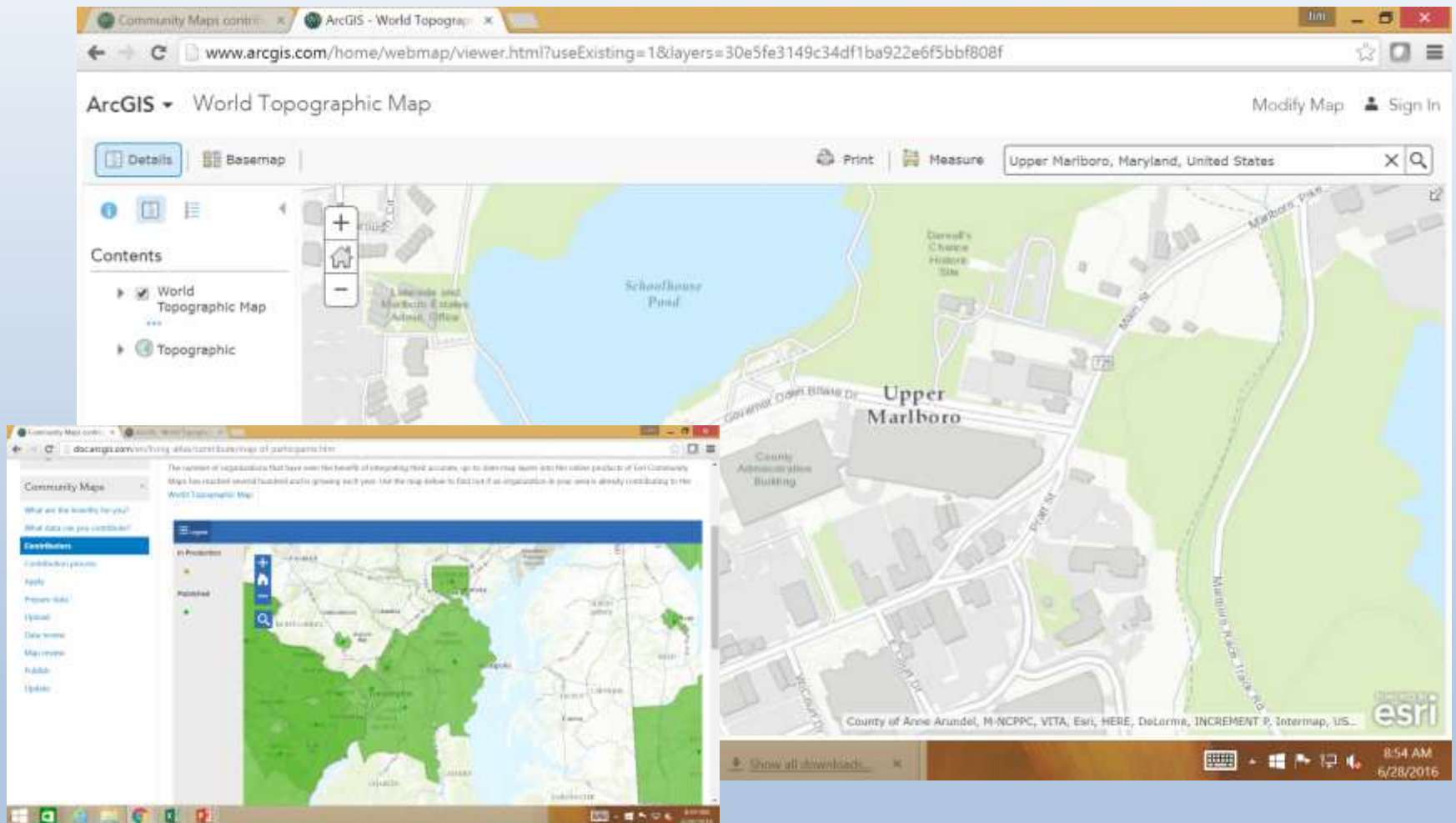
| | | |
|---|-------------------|--------------------------------------|
| CADD file export (.lxb) - for planimetric and topographic datasets only | | |
| ESRI file Geodatabase (.gdb) | | |
| ReadMe.html | File Size: 1 KB | Last Modified: 6/1/2015 8:26:45 AM |
| ReadMe.txt | File Size: 1 KB | Last Modified: 6/1/2015 8:26:41 AM |
| Advance_Land_Py.zip | File Size: 27 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Aerial_Index_1965_Pt.zip | File Size: 34 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Aerial_Index_1968_Pt.zip | File Size: 40 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Aerial_Index_1972_Pt.zip | File Size: 39 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Aerial_Index_1996_12FT_Py.zip | File Size: 30 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Aerial_Index_1996_1FT_Py.zip | File Size: 60 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Aerial_Index_1996_3FT_Py.zip | File Size: 36 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Aerial_Index_2014_Pt.zip | File Size: 99 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Airport_Pt.zip | File Size: 25 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Alternative_Compliance_Py.zip | File Size: 152 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Alternative_Develop_Tech_Py.zip | File Size: 29 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Archaeological_Survey_Bnd_Py.zip | File Size: 156 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Athletic_Facility_Pt.zip | File Size: 62 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Auto_Dealership_Pt.zip | File Size: 41 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Auto_Rental_Pt.zip | File Size: 30 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Aviation_Policy_Area_Ln.zip | File Size: 49 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Aviation_Policy_Area_Py.zip | File Size: 52 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Bank_Pt.zip | File Size: 40 KB | Last Modified: 5/27/2015 10:54:45 AM |
| Boys_Girls_Club_Py.zip | File Size: 240 KB | Last Modified: 5/27/2015 10:54:45 AM |

39,500 file downloads: Since 7/1/15
1,861 files w/in past 30 days

<http://gisdata.pgplanning.org/opendata/>



ESRI Community Base Map Program



Included 2014 planimetric, and current parcel data



<http://www.arcgis.com/home/webmap/viewer.html?useExisting=1&layers=30e5fe3149c34df1ba922e6f5bbf808f>

Resource Protection & Green Infrastructure

A story map by M-NCPPC

Tree Canopy Coverage Prince George's County

The maps linked below display tree canopy coverage statistics across Prince George's County, Maryland. The information is divided by a variety of political and environmental boundaries. Detailed charts and canopy data are accessible by clicking on map areas. Users may explore the information by:

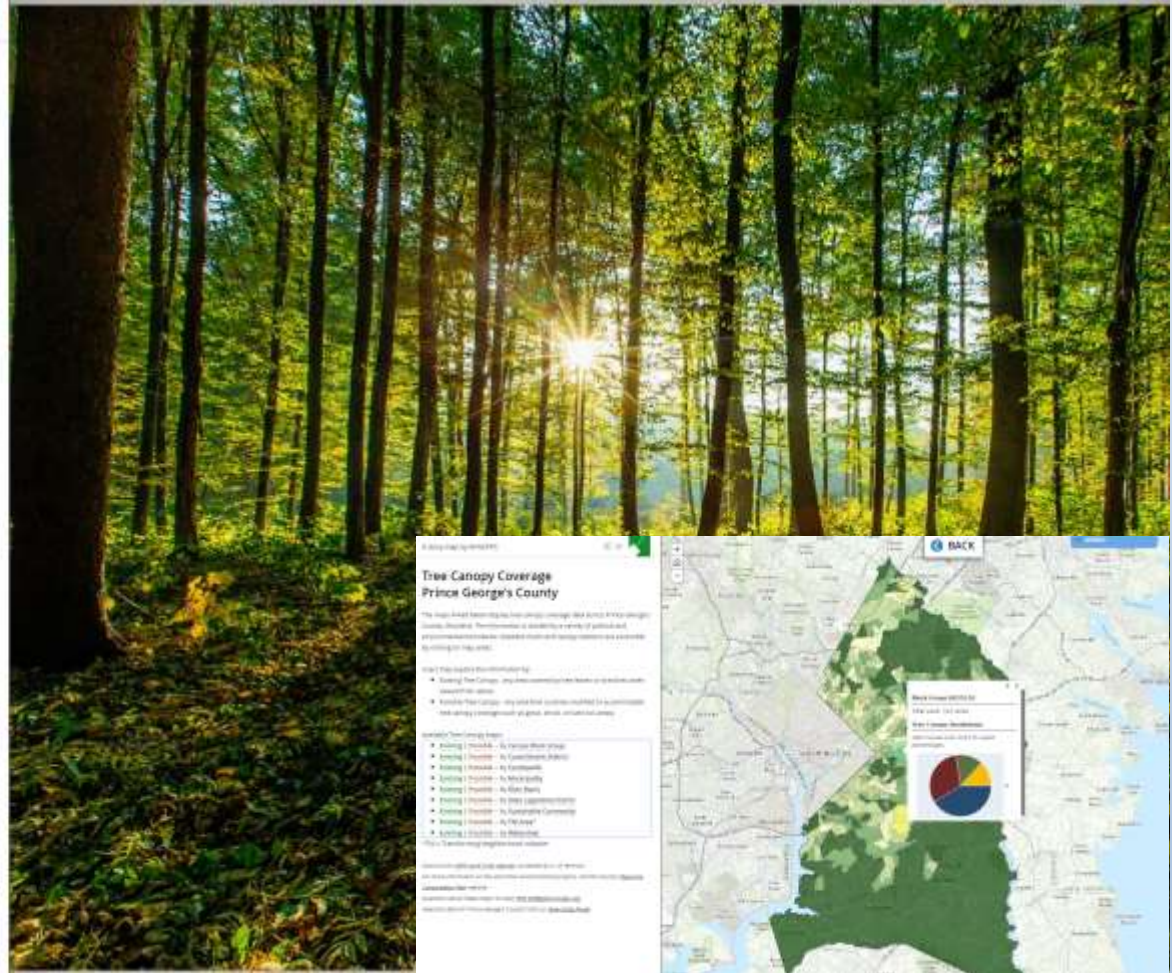
- Existing Tree Canopy - any portion of the ground that is covered by tree leaves or branches when viewed from above
- Possible Tree Canopy - any area that could be modified to accommodate tree canopy coverage (such as grass, shrub, or bare soil areas)

Available Tree Canopy Maps:

- Existing | Possible - by Census Block Group
- Existing | Possible - by Councilmatic District
- Existing | Possible - by Countywide
- Existing | Possible - by Municipality
- Existing | Possible - by River Basin
- Existing | Possible - by State Legislative District
- Existing | Possible - by Sustainable Community
- Existing | Possible - by THI Area*
- Existing | Possible - by Watershed

*THI = Transforming Neighborhood Initiative

Data Source: 2009 Land Cover dataset, processed by U.S. of Vermont
For more information on this and other environmental projects, visit the County's [Biodiversity Conservation Plan](#) website.
Questions about these maps? Contact ESD-GIS@pg.mnccppc.org
Need GIS data for Prince George's County? Visit our [Open Data Portal](#)



Display of Tree Canopy statistics across various geographies



3D Mapping and Visualization

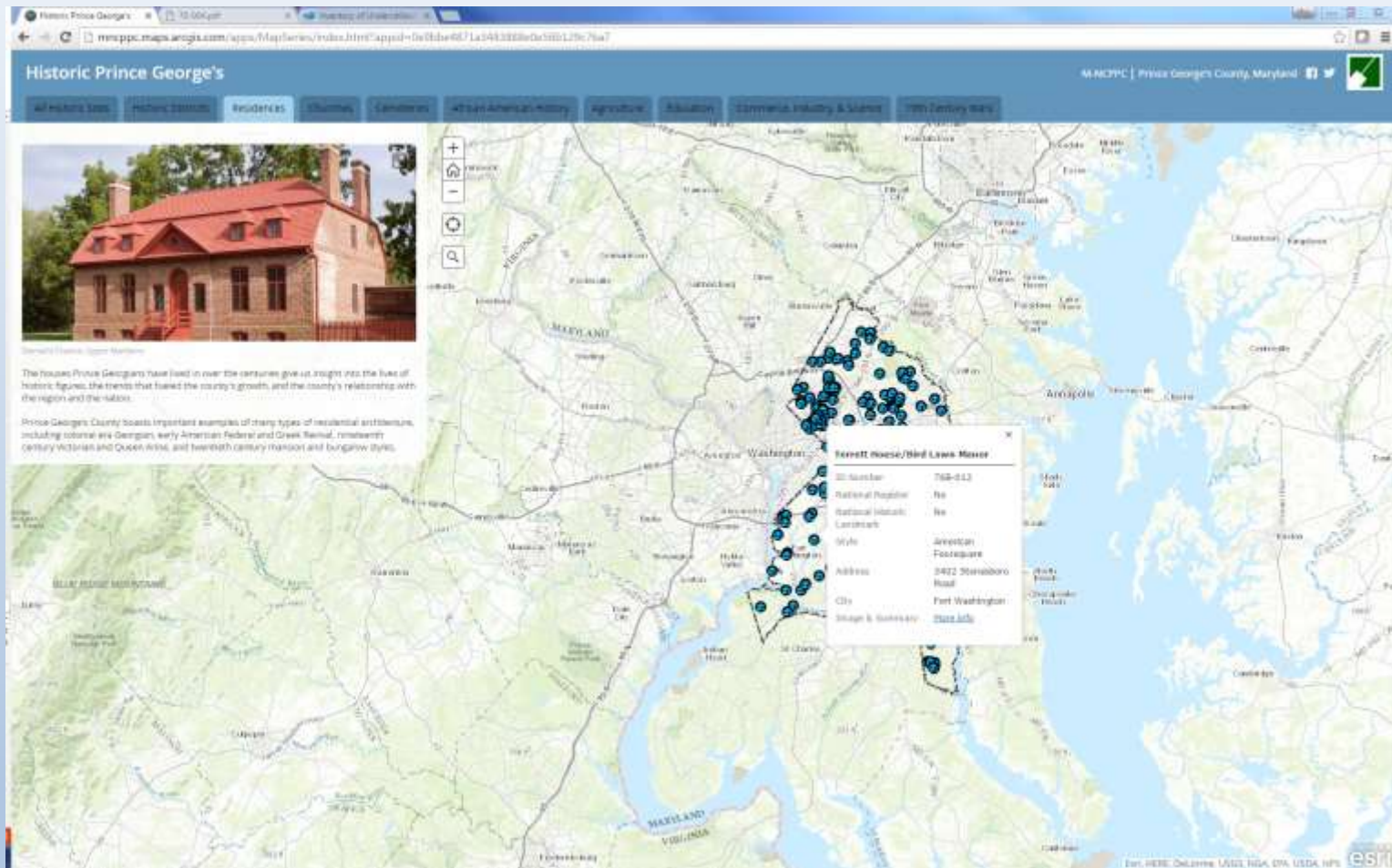


3D Models presented to the Planning Board to visualize development. Content created using Trimble Sketch up, Google, Earth, ArcGIS



<http://www.pgplanning.org/Page42517.aspx>

Historic Resource Inventories

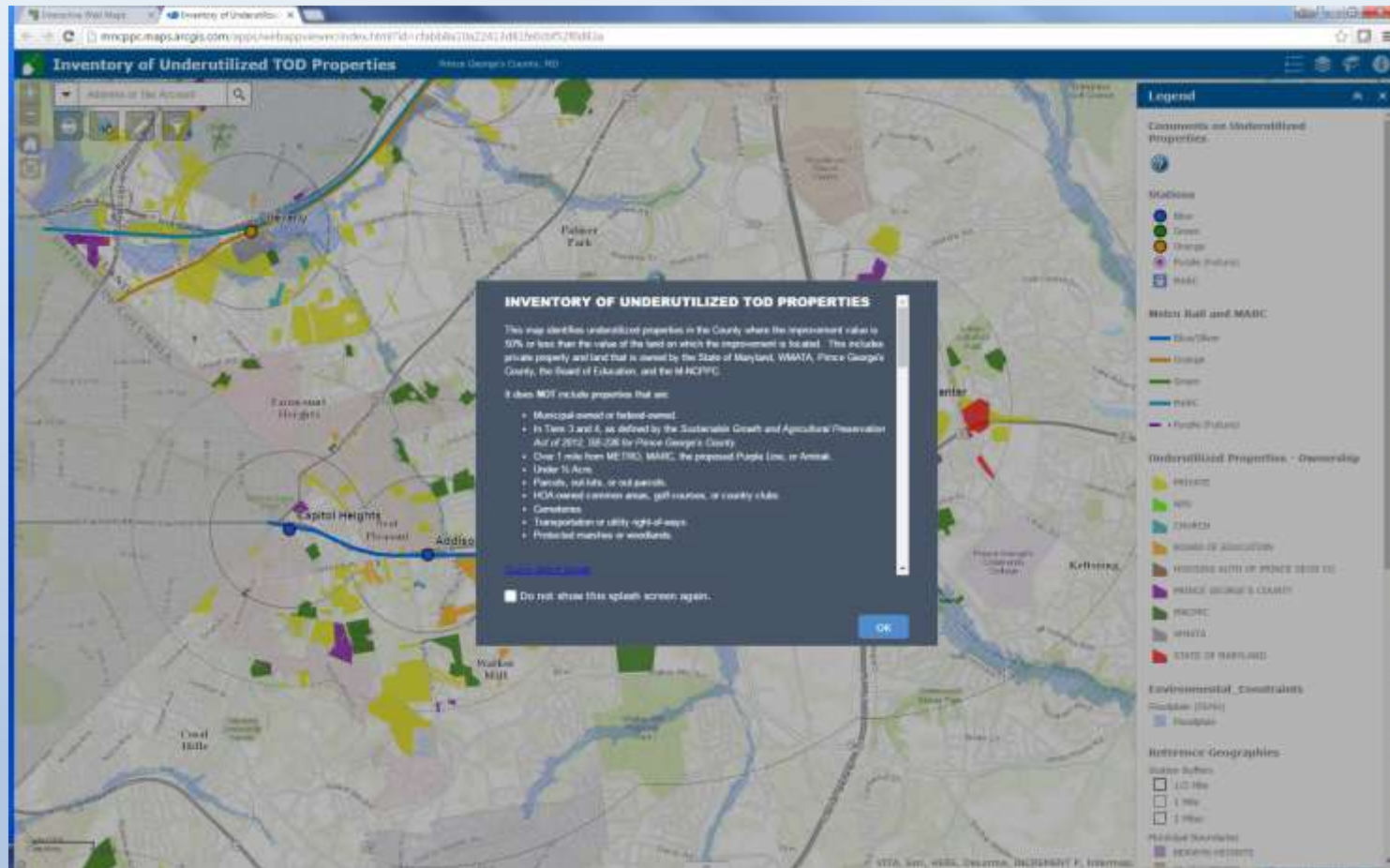


Exploration of Historic resources, including residences, churches, cemeteries, historic districts, etc.



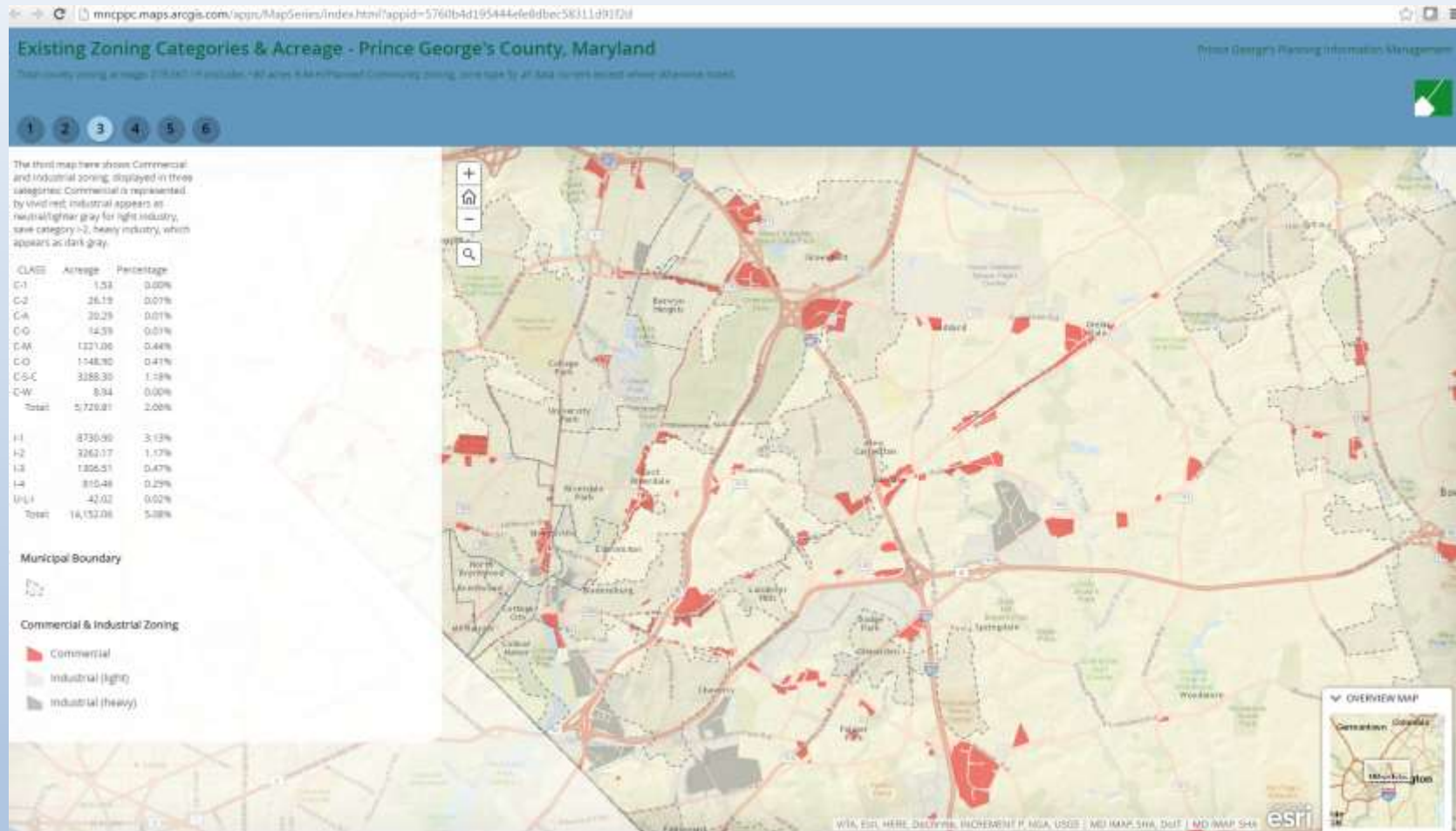
<http://www.pgplanning.org/Page42517.aspx>

Underutilized Properties Near Transit Sites



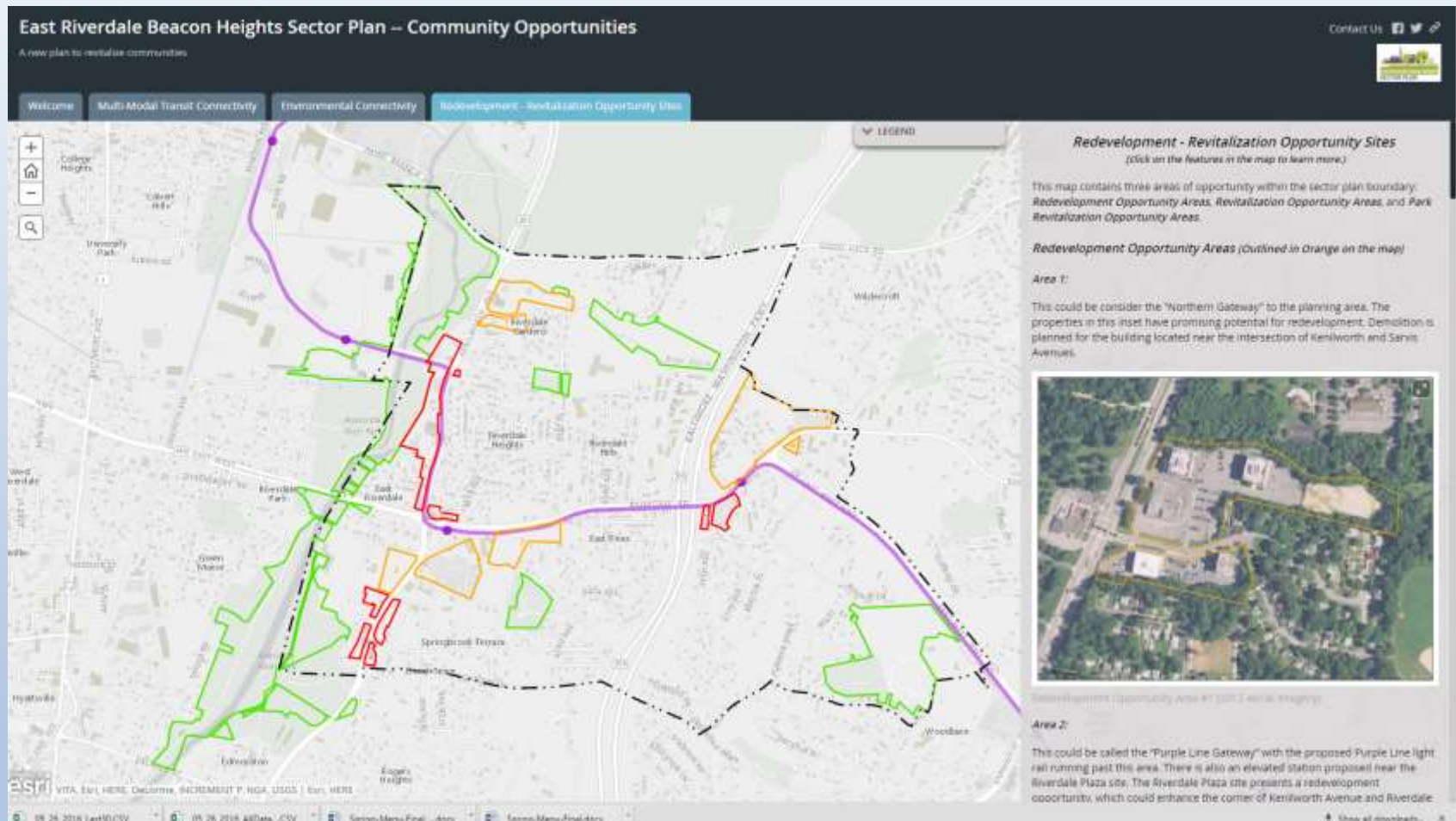
Identifies underutilized properties where the improvement value is 50% or less than the land value.

Zoning Rewrite Analysis



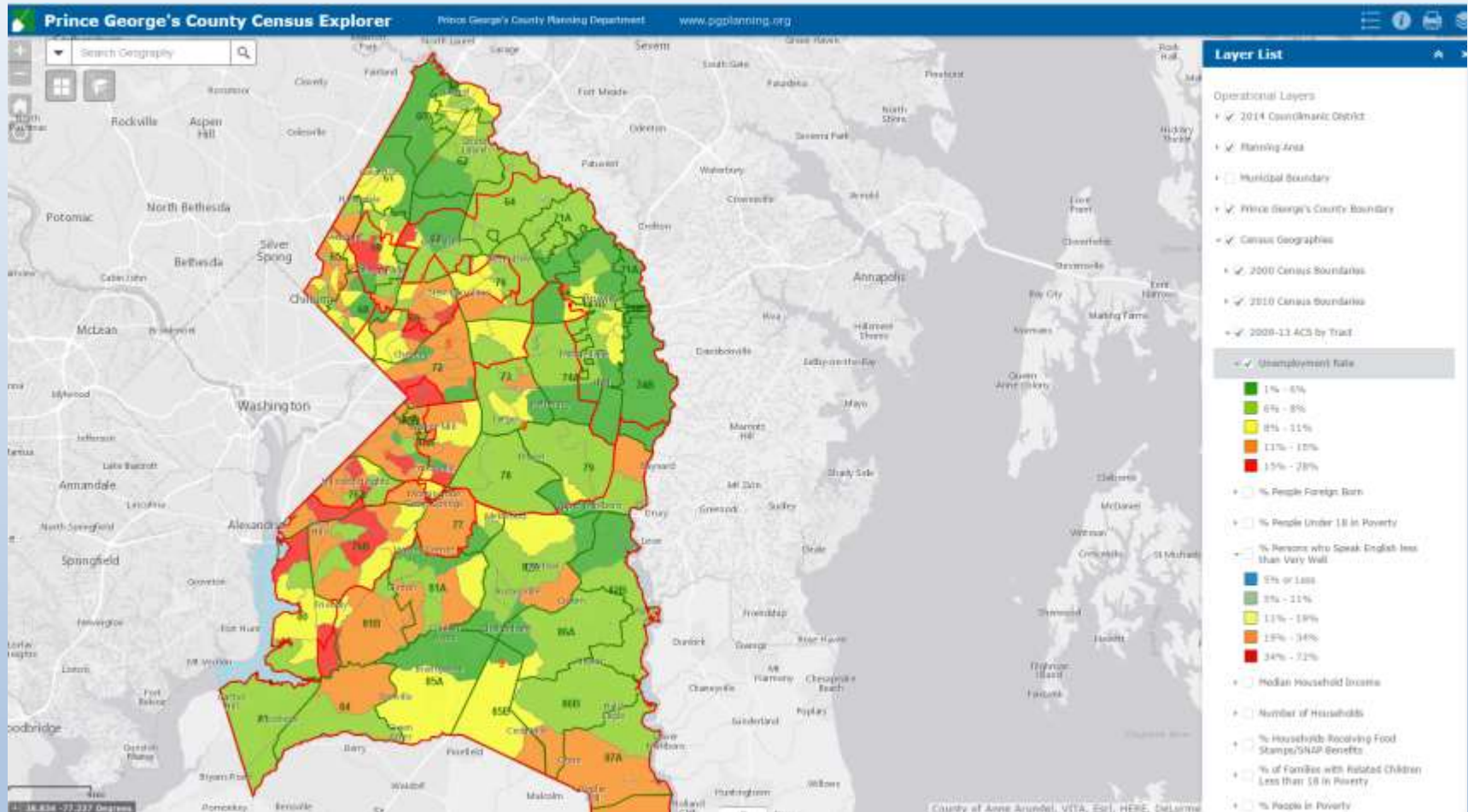
Analysis of existing zoning categories and acreages to support County Zoning Rewrite Initiative

Community Planning



Story maps developed to support planning and outreach for various Sector Plans. Identification of transit, environmental, redevelopment issues and opportunities.

Demographic Analysis

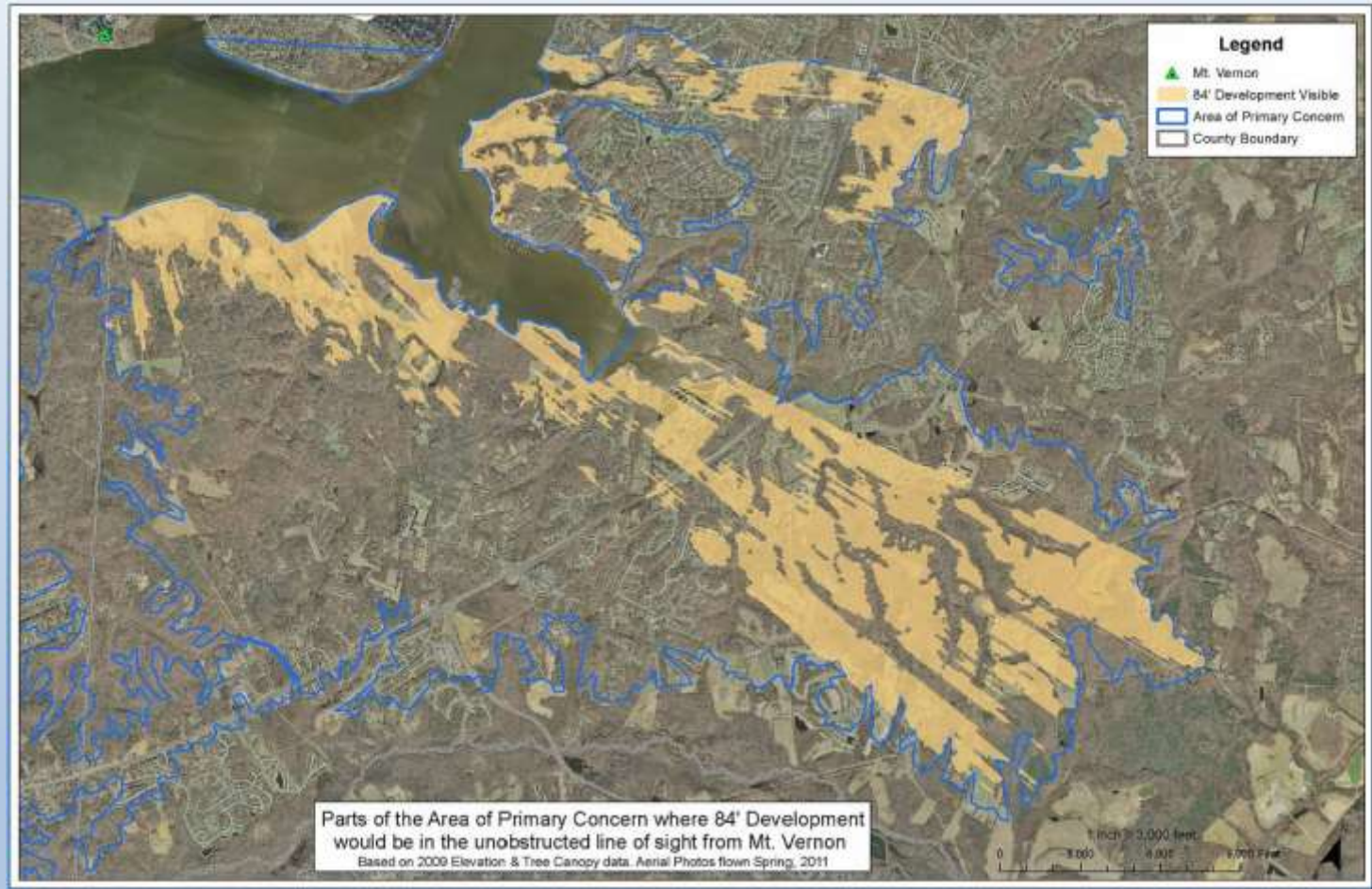


Application to support viewing of census geographies, Census data and multiple vintages of American Community Survey datasets



<http://www.pgplanning.org/Page42517.aspx>

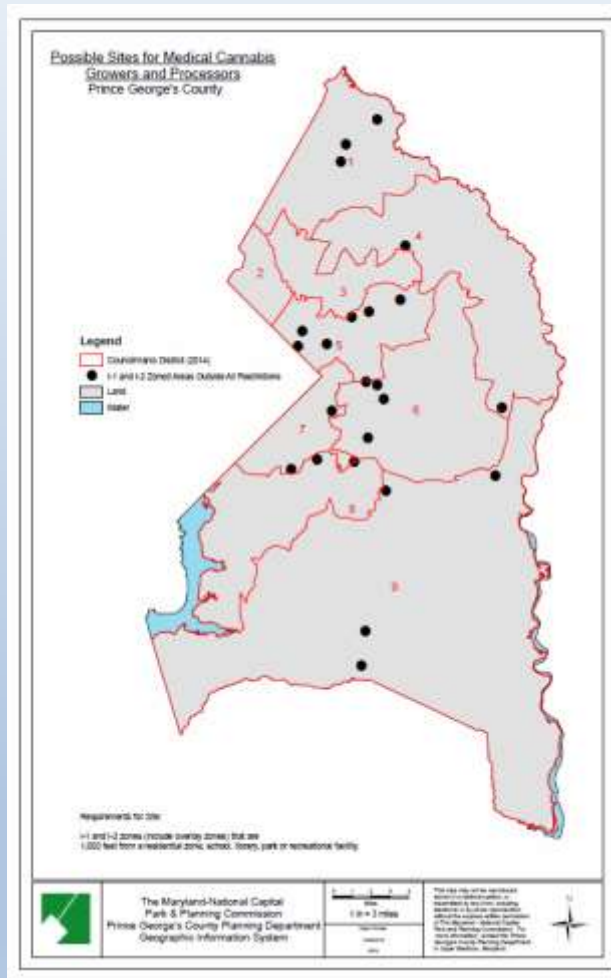
Viewshed Analysis



Viewshed Analysis to support protection of Mt. Vernon view shed

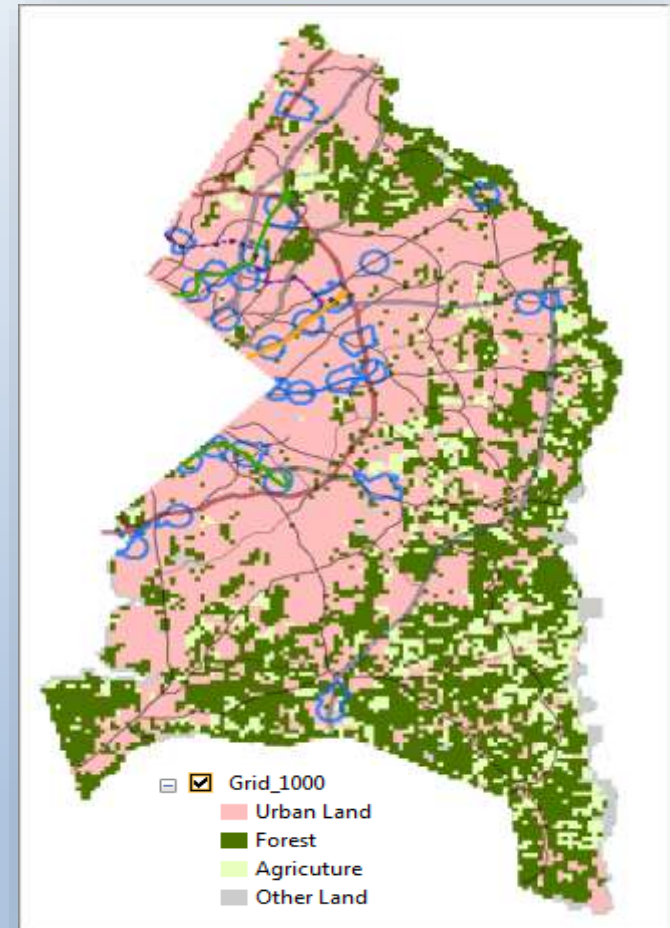


Site Analysis Cannabis Mapping



Over 300 maps produced to support legislative analysis for cannabis related legislation. Note – maps are draft/representative only

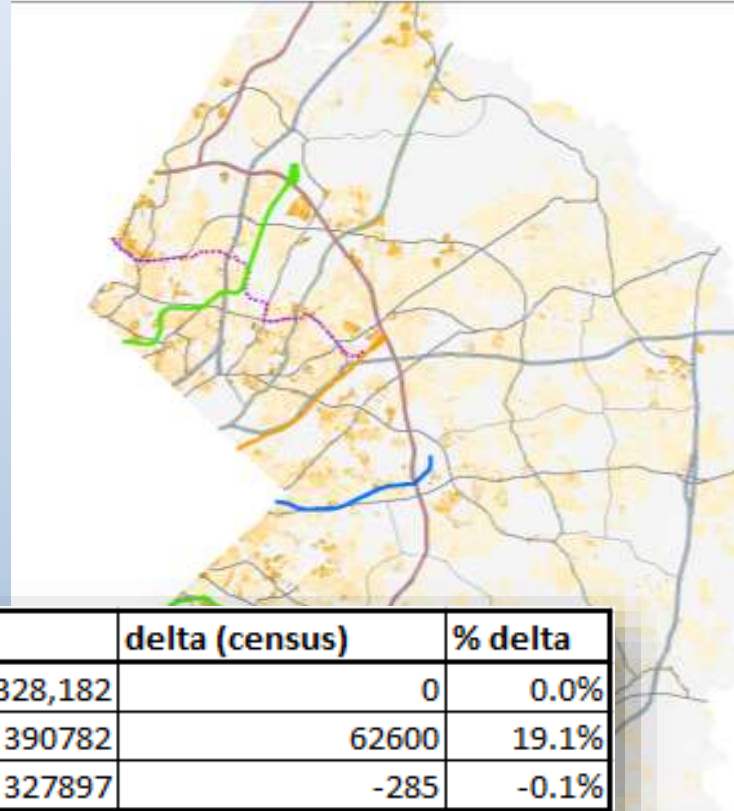
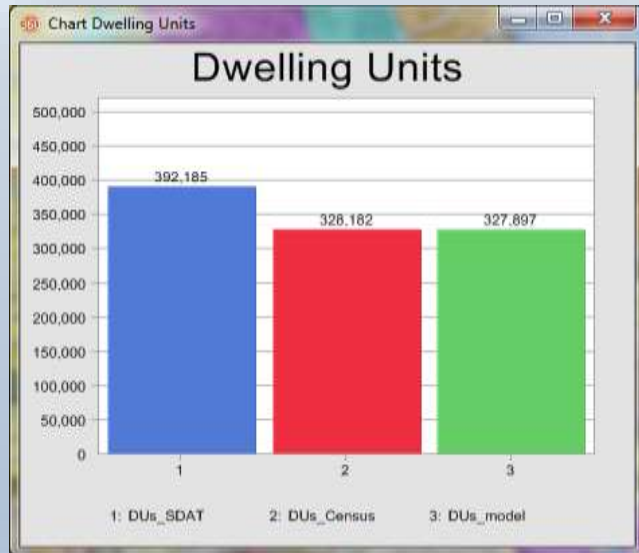
Land Consumption and Development Capacity Analysis



Annual update of development capacity models for provision to State.
Analysis performed using CommunityVIZ software



Dwelling Unit Analysis

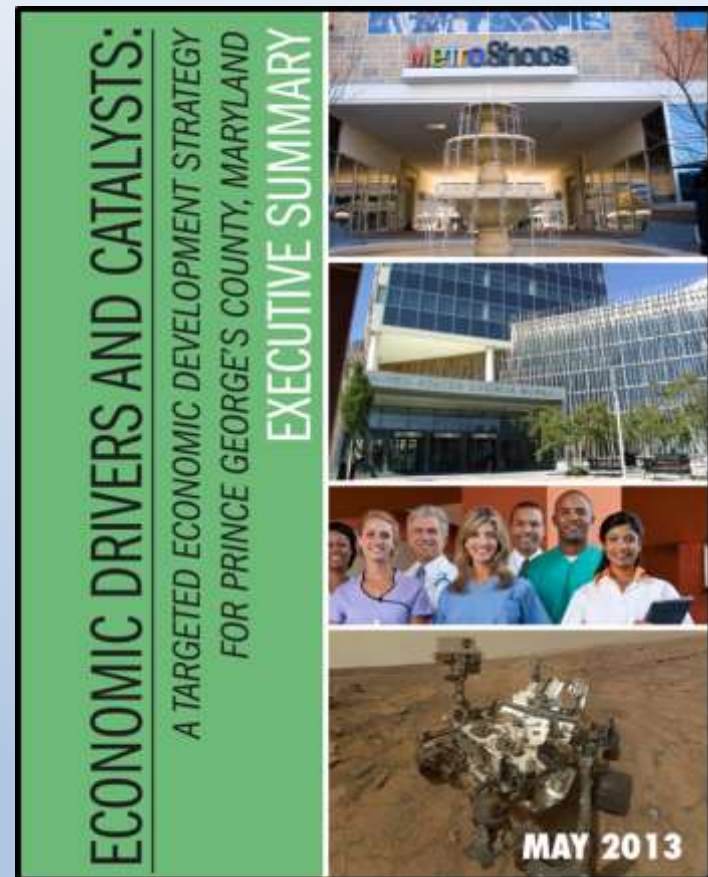
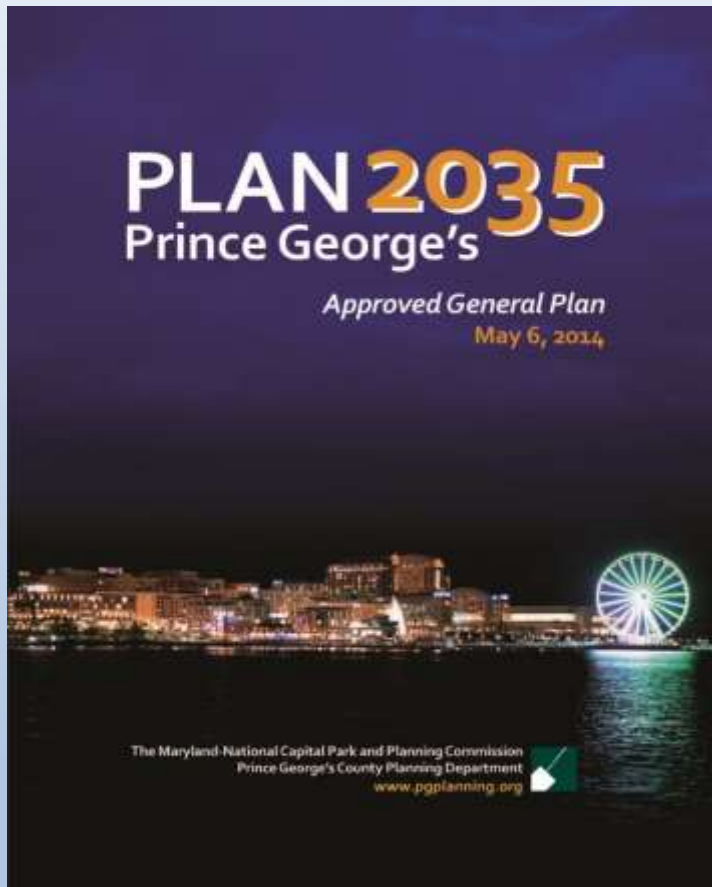


| Source | DUs | delta (census) | % delta |
|-------------|---------|----------------|---------|
| Census | 328,182 | 0 | 0.0% |
| SDAT DUs | 390782 | 62600 | 19.1% |
| Cleaned DUs | 327897 | -285 | -0.1% |

Annual update of development capacity models for provision to State.
Analysis performed using CommunityVIZ software



General Plan

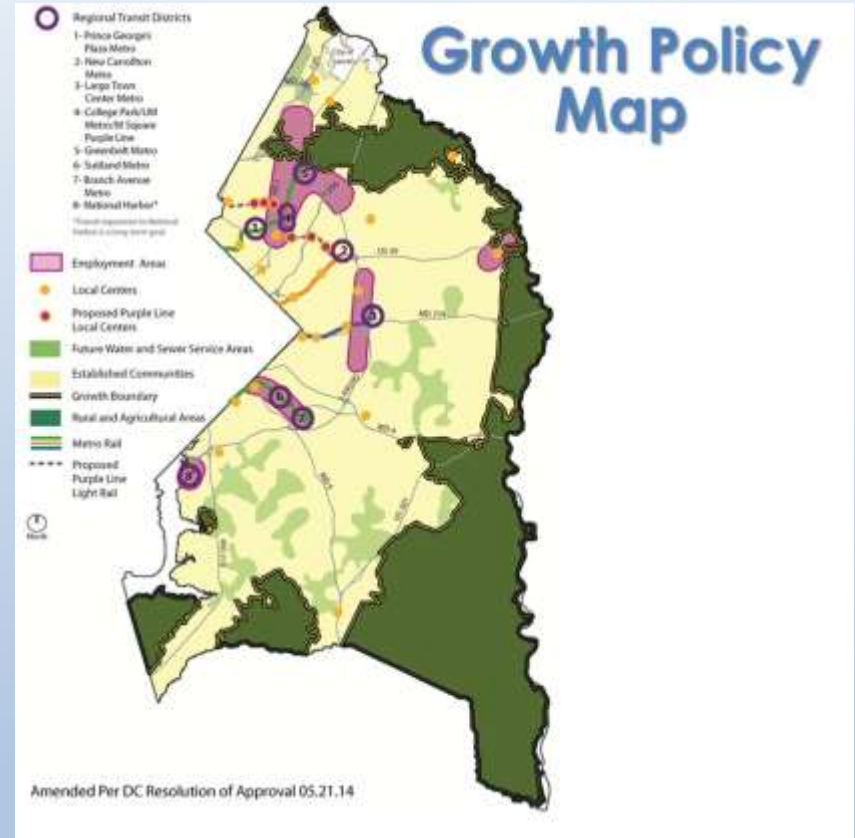
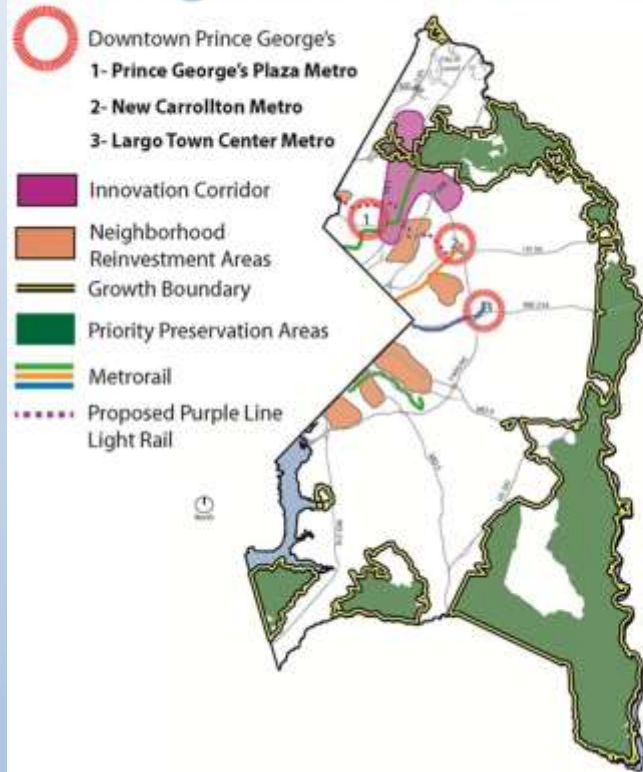


Extensive map production and analysis to support general plan



General Plan

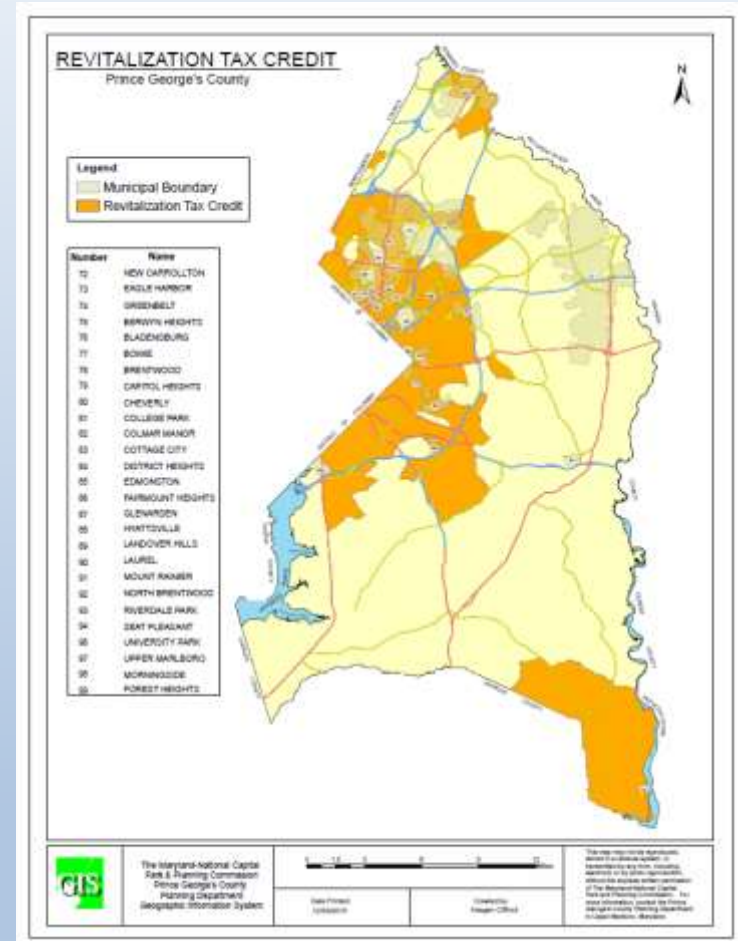
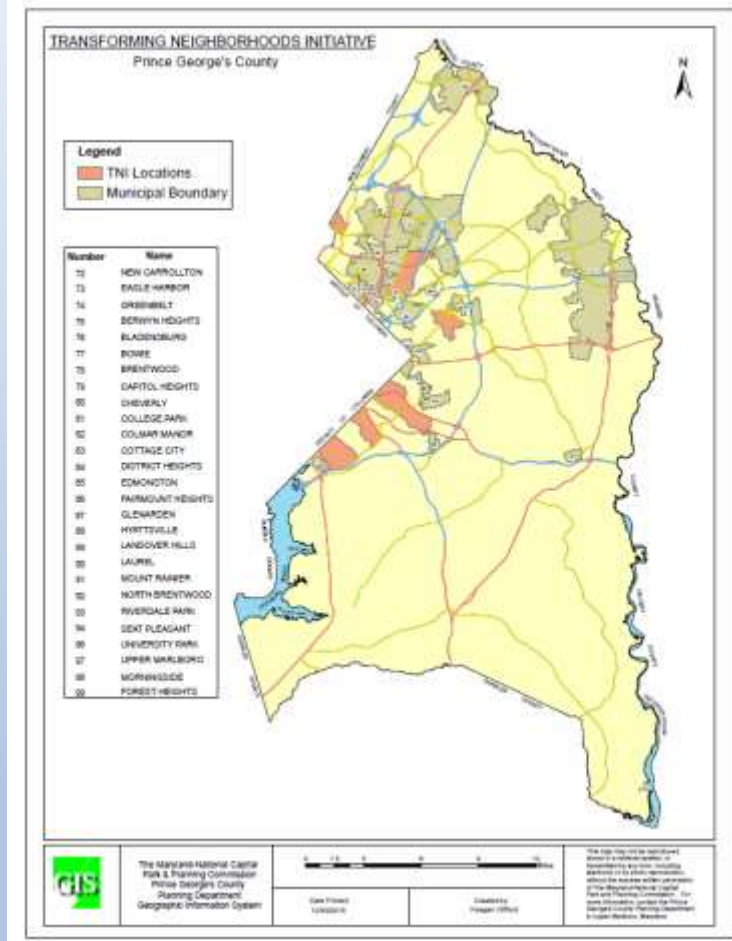
Strategic Investment Program



Extensive map production and analysis to support general plan



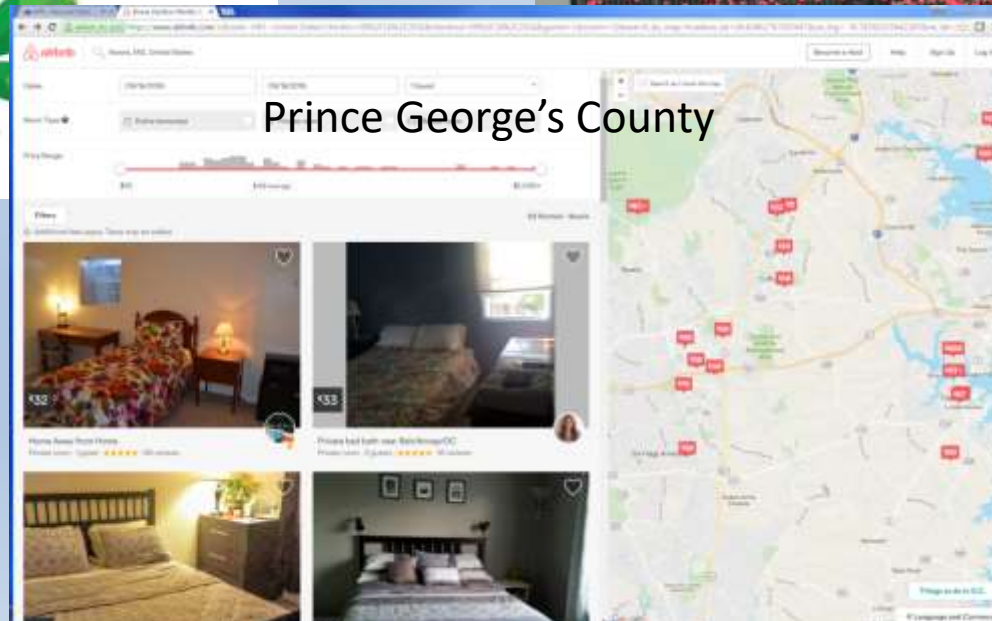
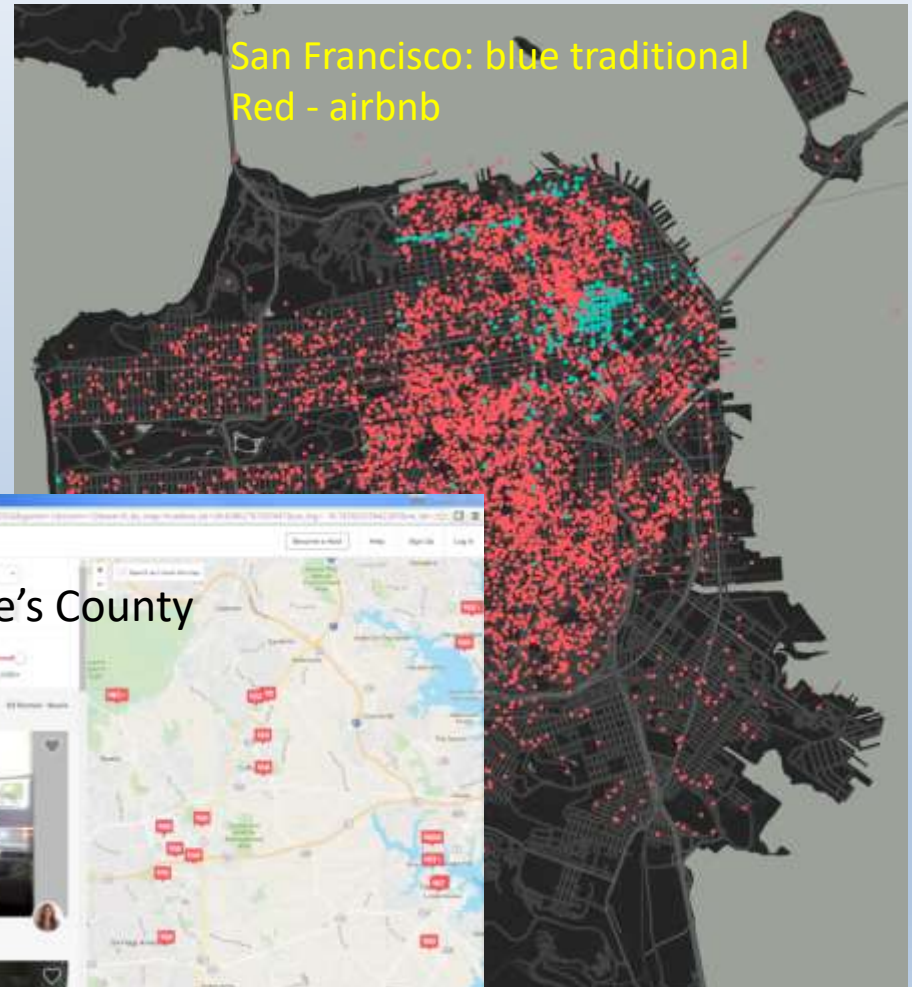
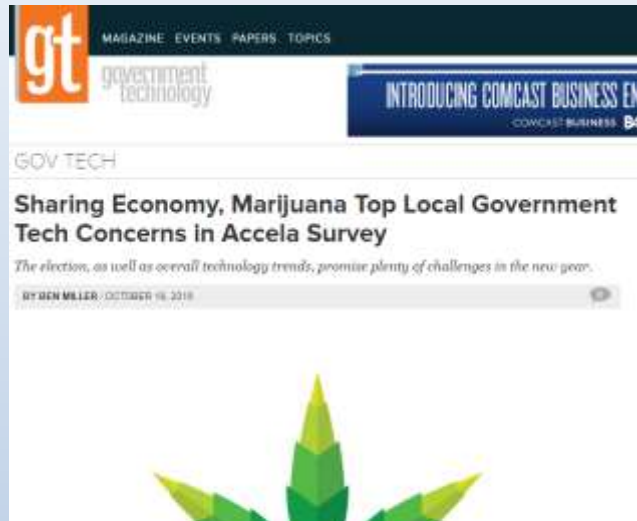
Economic Development



Web maps and display maps showing economic investment zones



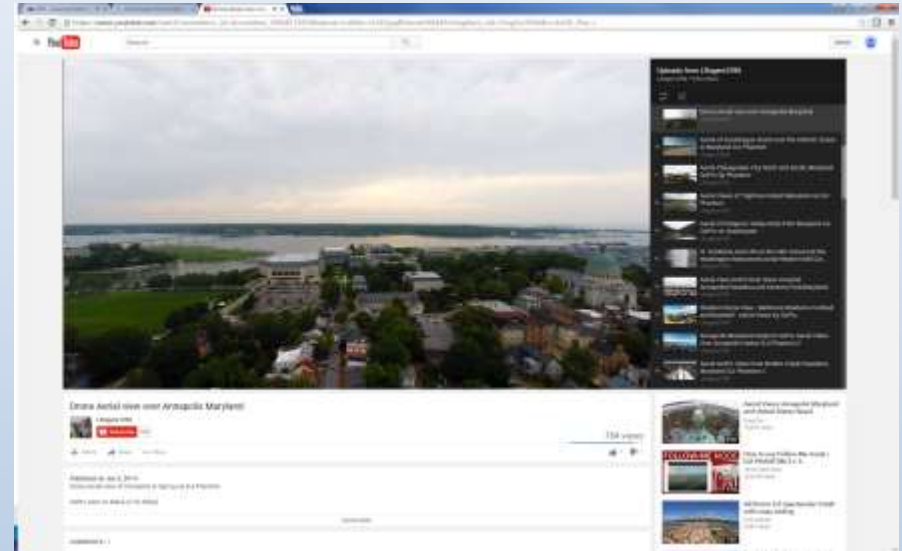
New Technologies: Sharing Economy



New Technologies: Drone Tools

Implementation Ideas

- 3D scene for each preliminary plan at application and completion
- Fly through an visualization
- Master plan visualization
- Redevelopment visualization
- Emergency response



Thank you !

Questions ?

