

GIS Advancements to Support Planning Activities

James Cannistra, GISP, CP
Planning Division Chief – Information Management
Maryland-National Capital Park and Planning Commission

James.Cannistra@ppd.mncppc.org



The Maryland-National Capital Park & Planning Commission

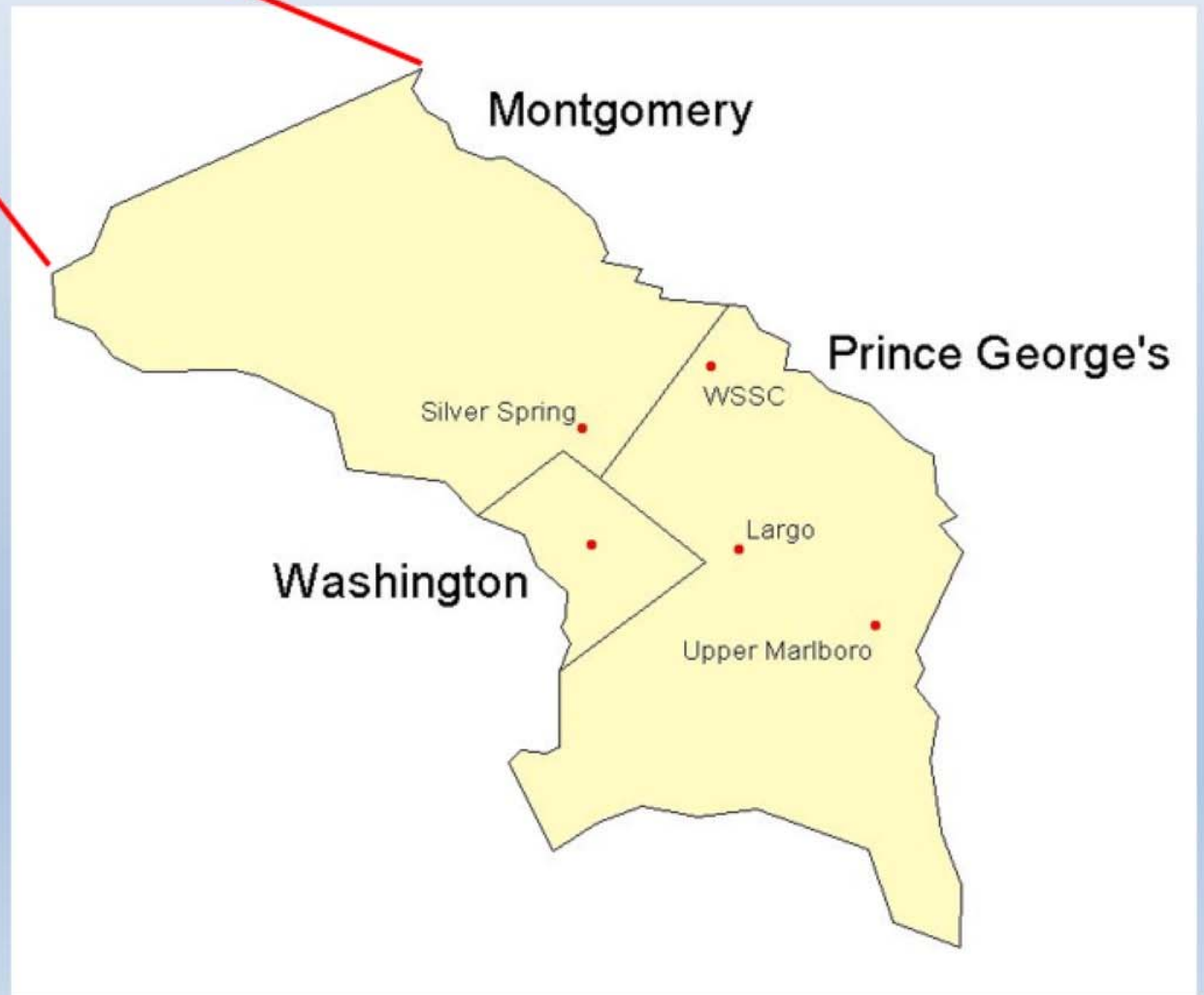
- “*created by the Maryland General Assembly in 1927 to develop and operate public park systems and provide land use planning for the physical development of the great majority of **Montgomery** and **Prince George's Counties**, and to operate the public recreation program in Prince George's County.*”



Maryland



Where are you located?



Background

- Population – 909,536
- Size – 499 sq. miles
- Median Household Income - \$73,447
- 290,000 parcels



Information Management Division (IMD)

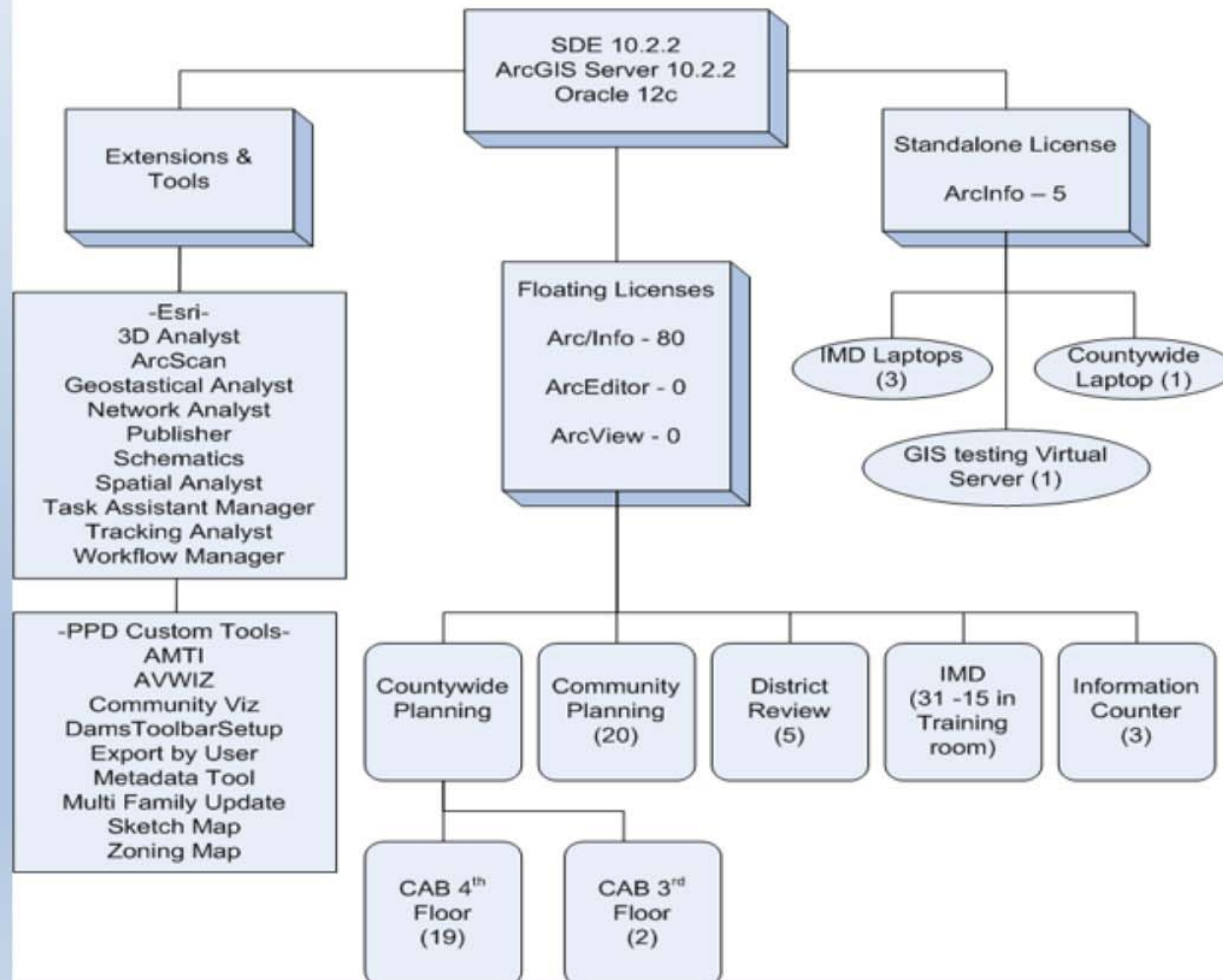
- Information Management (25 persons)
 - Network and Technology Services Section
 - Data Systems Section
 - GIS Section
 - GIS Specialists
 - Planning Analyst
 - Demographic Data Analyst



ESRI Installation

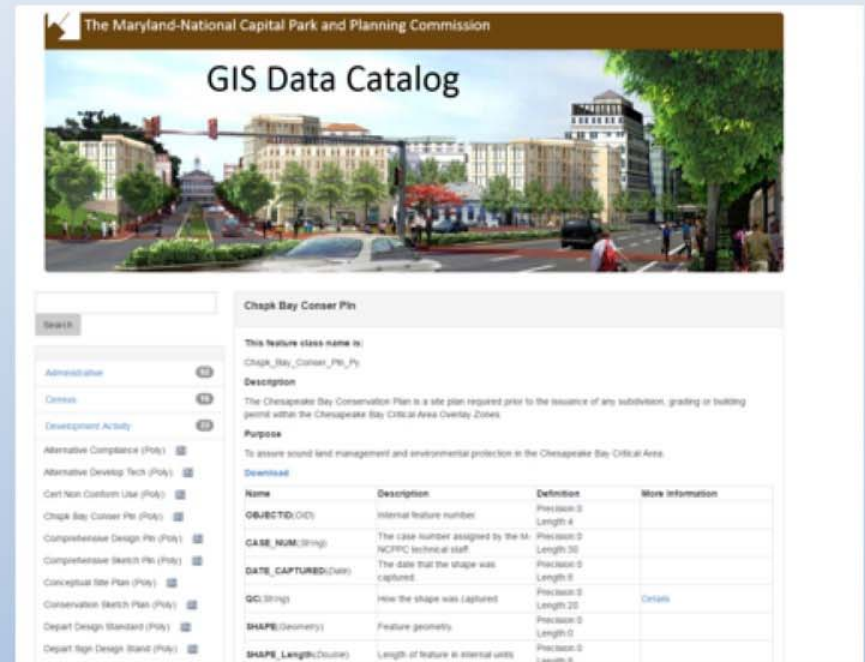
GIS/ESRI Software Documentation

Version, Quantity, Location
Updated: May 18, 2015



GIS Layer Maintenance

- Over 250 Layers Maintained
- Enterprise SDE
- Property, Zoning, Planimetrics, Address Points are key
- Data Hosted
 - Internally
 - Internal (selected map services)
 - External (map services)



The Maryland-National Capital Park and Planning Commission

GIS Data Catalog

Search

Administrative 62

Conservation 62

Development Activity 62

Alternative Compliance (Poly) 62

Alternative Develop Tech (Poly) 62

Cart Non Conform User (Poly) 62

Chesapeake Bay Conser Pin (Poly) 62

Comprehensive Design Pin (Poly) 62

Comprehensive Sketch Pin (Poly) 62

Conceptual Site Plan (Poly) 62

Conservation Sketch Plan (Poly) 62

Depart Design Standard (Poly) 62

Depart Sign Design Stand (Poly) 62

Chesapeake Bay Conser Pin

This feature class name is:
Chesapeake Bay Conser Pin

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

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

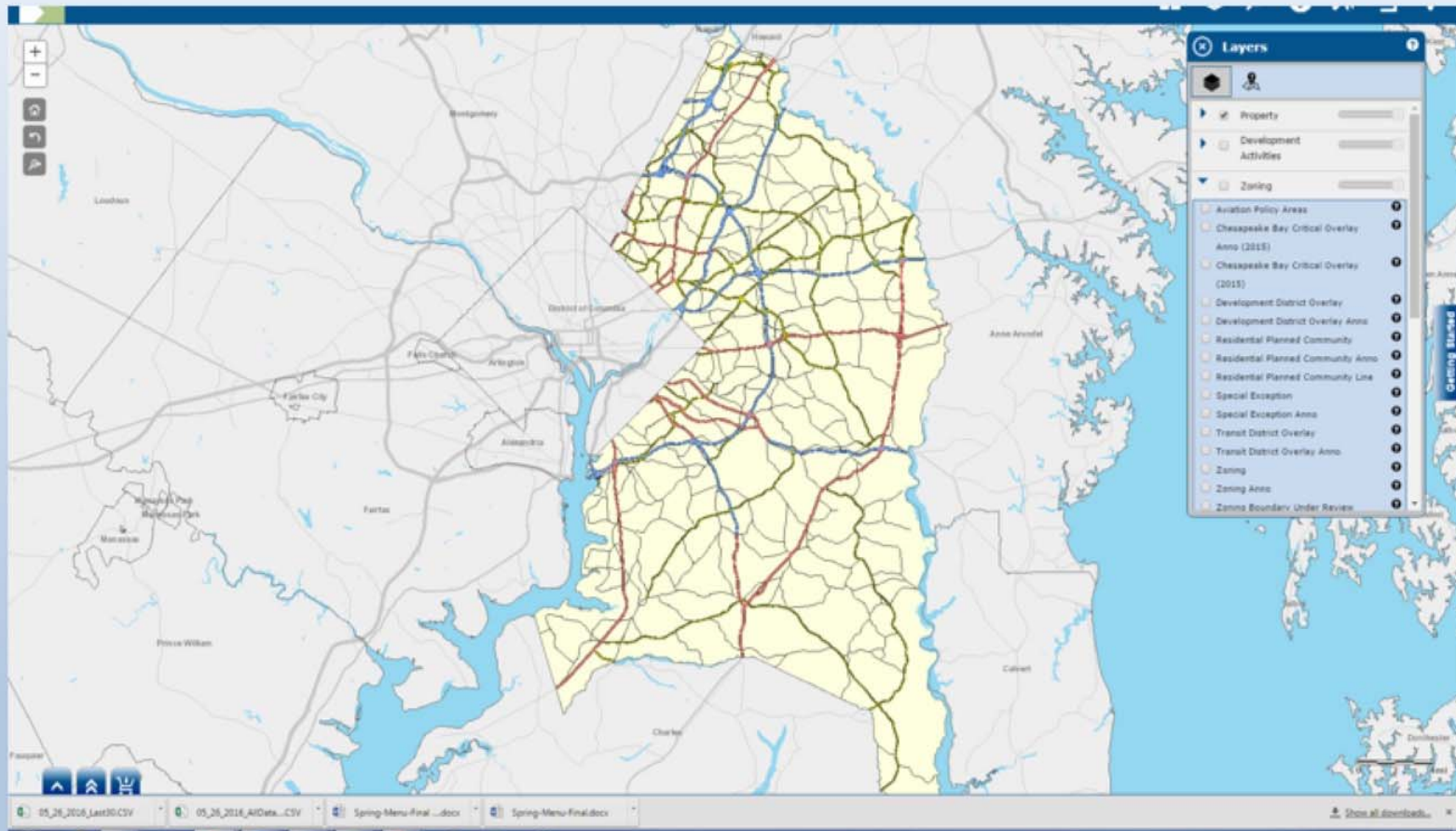
[Download](#)

Name	Description	Definition	More Information
OBJECTID:OID	Internal feature number	Precision:0 Length:4	
CASE_NUM:String	The case number assigned by the M-NCPPC technical staff	Precision:0 Length:10	
DATE_CAPTURED:Date	The date that the shape was captured	Precision:0 Length:8	
QQ:String	How the shape was captured	Precision:0 Length:20	Details
SHAPE:Geometry	Feature geometry	Precision:0 Length:0	
SHAPE_Length:Double	Length of feature in internal units	Precision:0 Length:8	

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

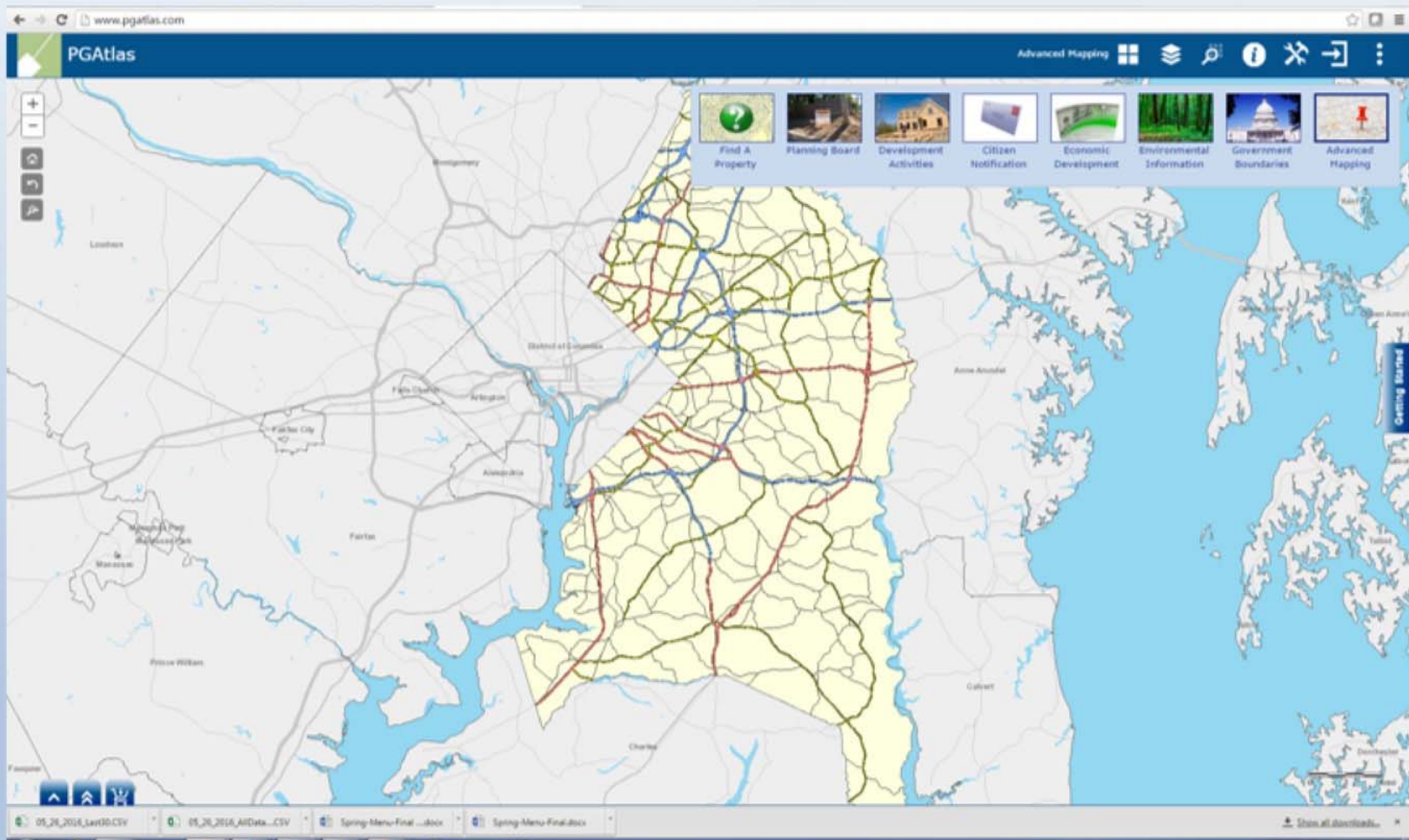


PGAtlas www.pgatlas.com



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

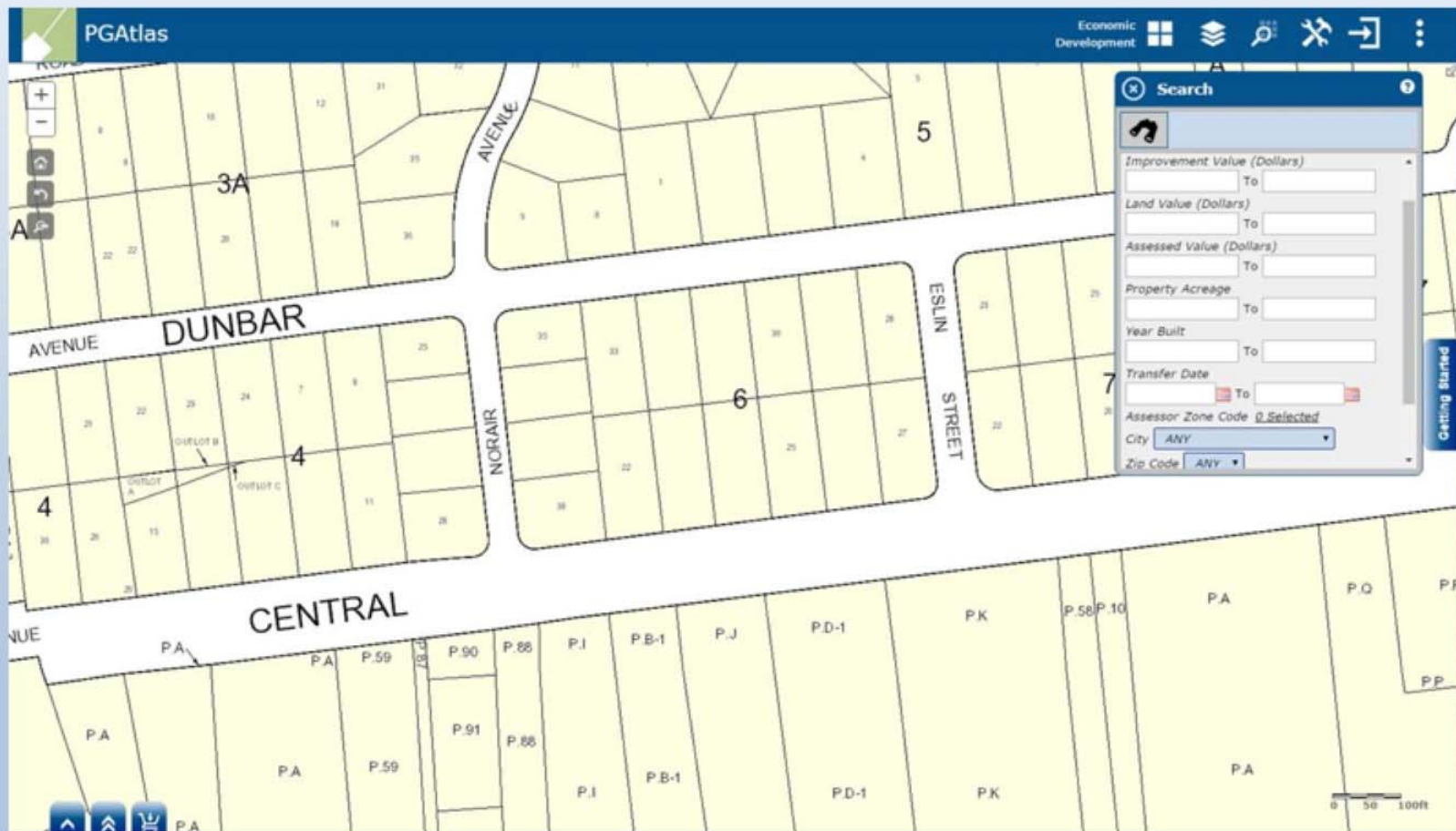


PGAtlas www.pgatlas.com

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



PGAtlas www.pgatlas.com



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



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/>



GIS Open Data Components

Over 250 datasets available at “no cost”

Data available in multiple formats (GIS, CAD, Images)

Data also available as map services

Unrestricted use (with attribution)

Custom products and data sets available for a fee

PGAtlas will continue to be supported/enhanced

<http://www.pgplanning.org/GISMappingTools.htm>



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 a comprehensive enterprise GIS. Since its inception the Department has sold data, custom maps, and products in order to recoup costs of system development and maintenance. Beginning in 2015, the Planning Department will implement its GIS open data portal 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, and facility datasets. It includes those datasets developed and maintained by The Maryland-National Capital Park and Planning Commission, as well as those acquired through partnership with external organizations. Over 200 different datasets are available for use and distribution. A comprehensive list of datasets can be found here: http://www.pgplanning.org/Resources/Tools/On-line/Mapping/Tools/GIS_Data_Inventory.htm

- CADD file export (.dxf) - for planimetric and topographic datasets only
- ESRI file Geodatabase (.gdb)
- Orthomaps (.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 Oden Bowie Drive
Upper Marlboro MD 20772
For more information, call 301.962.3918

CADD file export (.dxf) - for planimetric and topographic datasets only

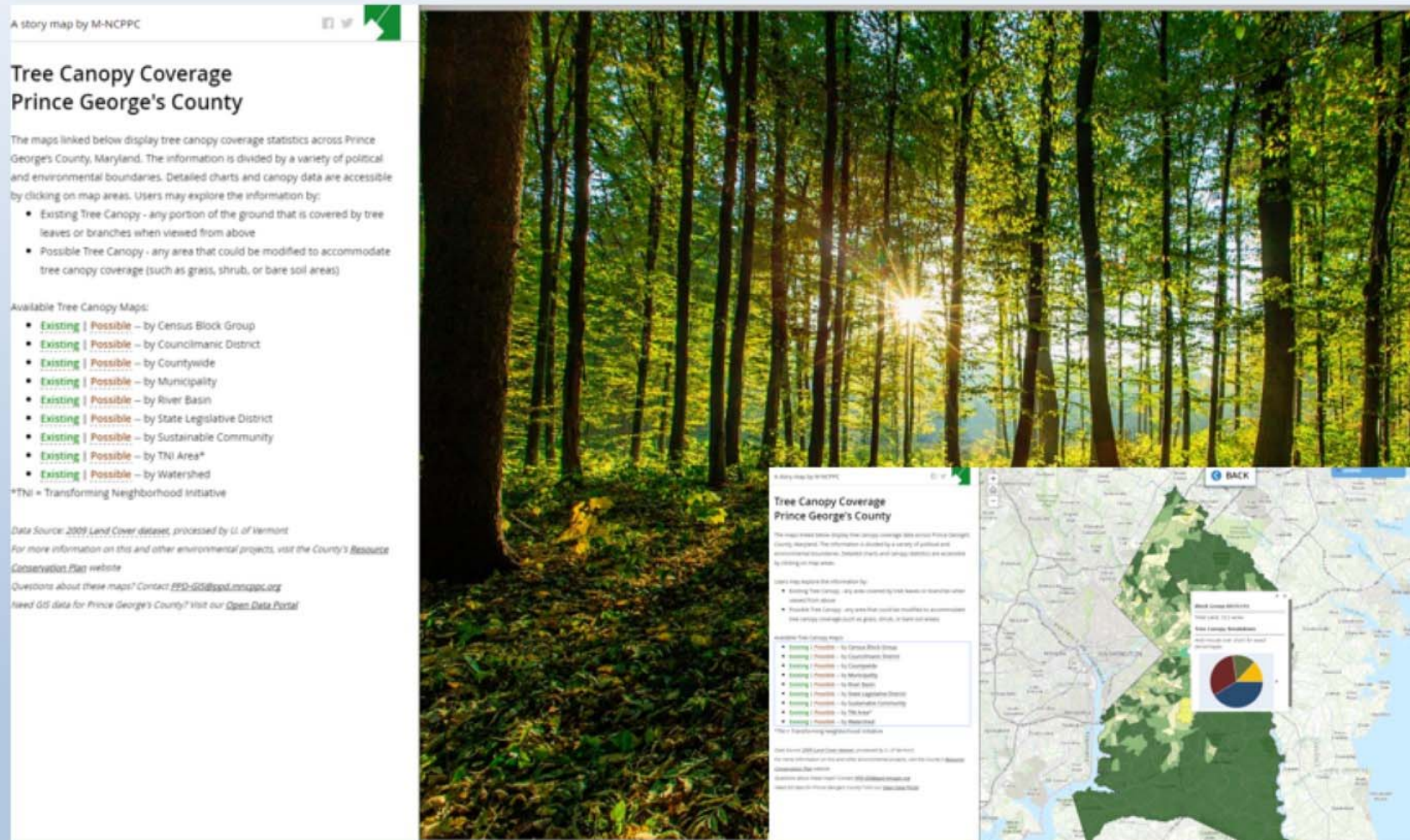
ESRI file Geodatabase (.gdb)

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 8:25:41 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_1998_12FT_Py.zip	File Size: 30 KB	Last Modified: 5/27/2015 10:54:45 AM
Aerial_Index_1998_1FT_Py.zip	File Size: 80 KB	Last Modified: 5/27/2015 10:54:45 AM
Aerial_Index_1998_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
Archeological_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

21,862 file downloads: Since 7/1/15
2,500 files w/in past 30 days

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

Resource Protection Planning



Display of Tree Canopy statistics across various geographies



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

3D Mapping and Visualization

Catalog of 3D Planning Projects

Prince George's County Planning Department

A story map by M-NCPPC

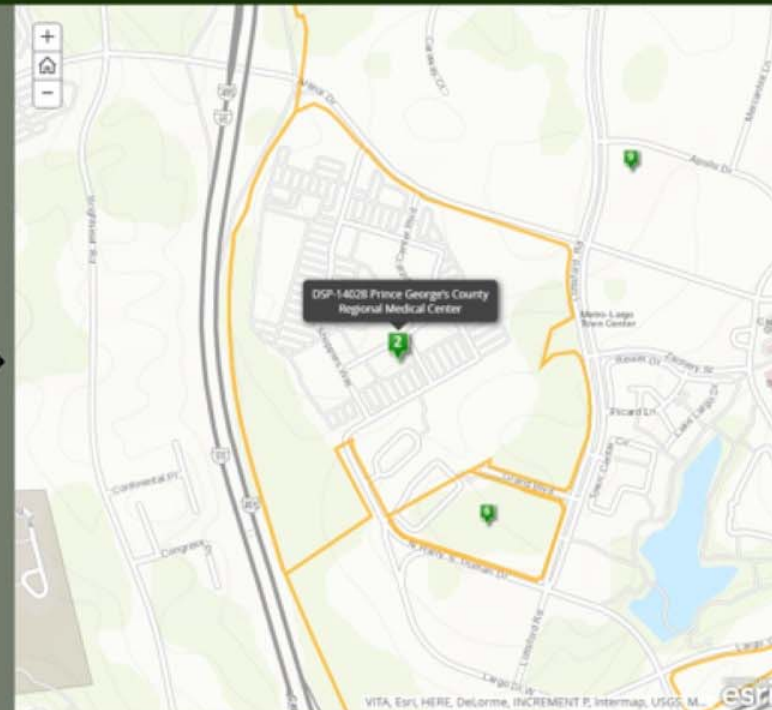


DSP-14028 Prince George's County Regional Medical Center

Planning Board Date: 6/18/2015

Dimensions Healthcare System with the University of Maryland Medical System, the State of Maryland, and Prince George's County has worked diligently to develop a new Regional Medical Center in Prince George's County.

The new Regional Medical Center will be state-of-the-art. It is being constructed as part of a strategy to transform the County's healthcare system into one which will support the improvement of the health of the residents of Prince George's County and the Southern Maryland region.

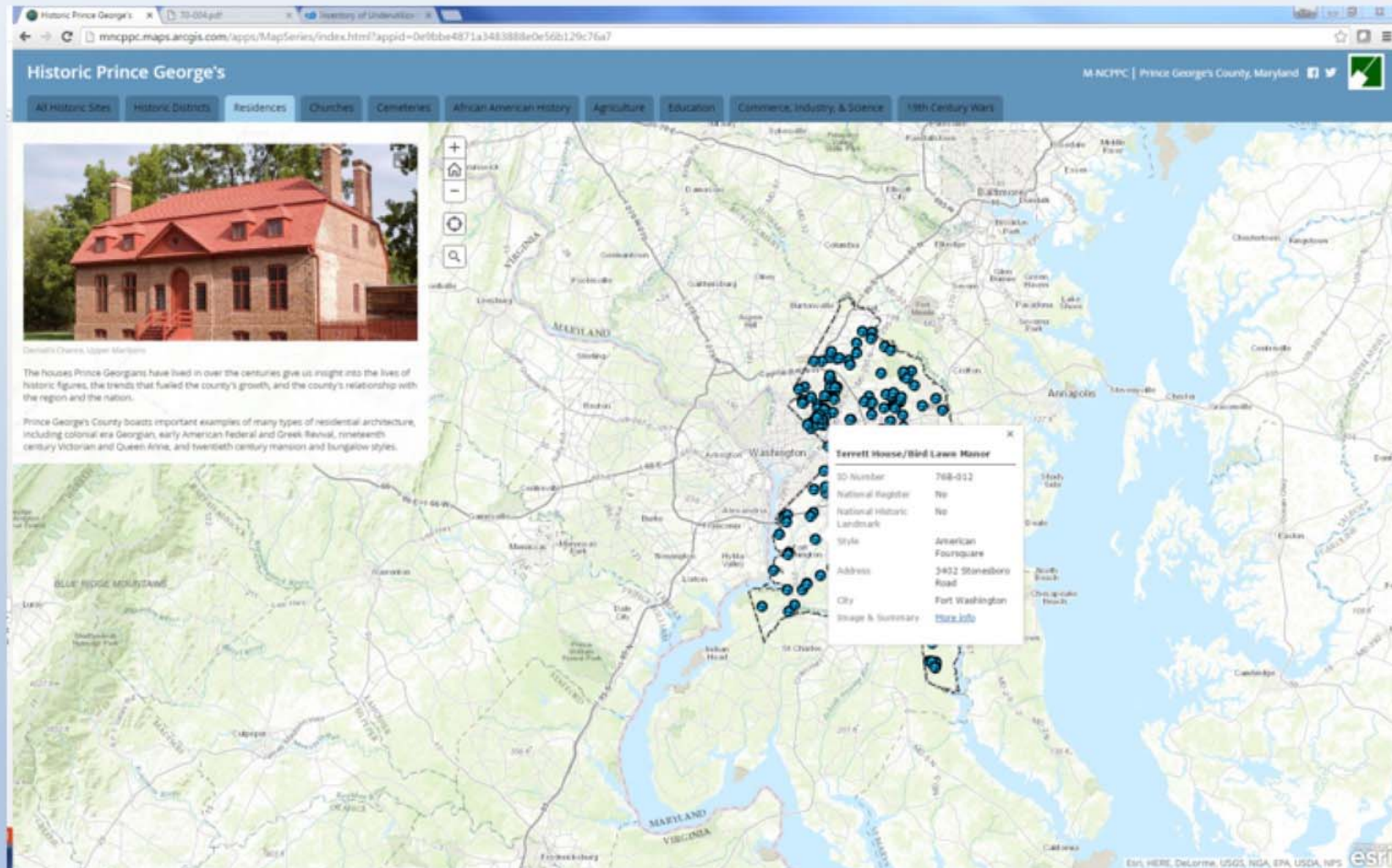


3D Models presented to the Planning Board to visualize development. Content created using Trimble Sketch up, Google, Earth, ArcGIS



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

Historic Resource Inventories

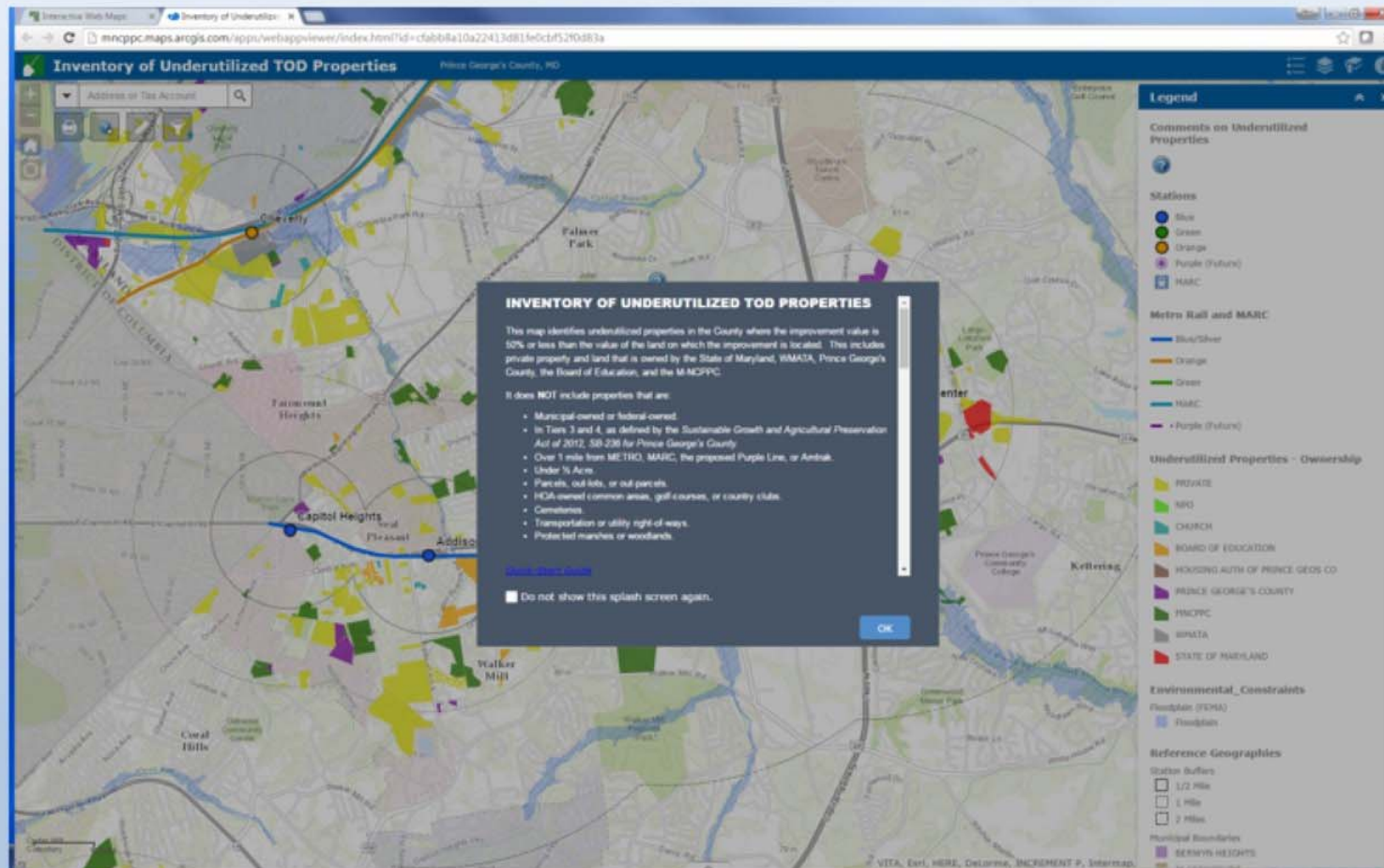


Exploration of Historic resources, including residences, churches, cemeteries, historic districts, etc.



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

Underutilized Properties Near Transit Sites

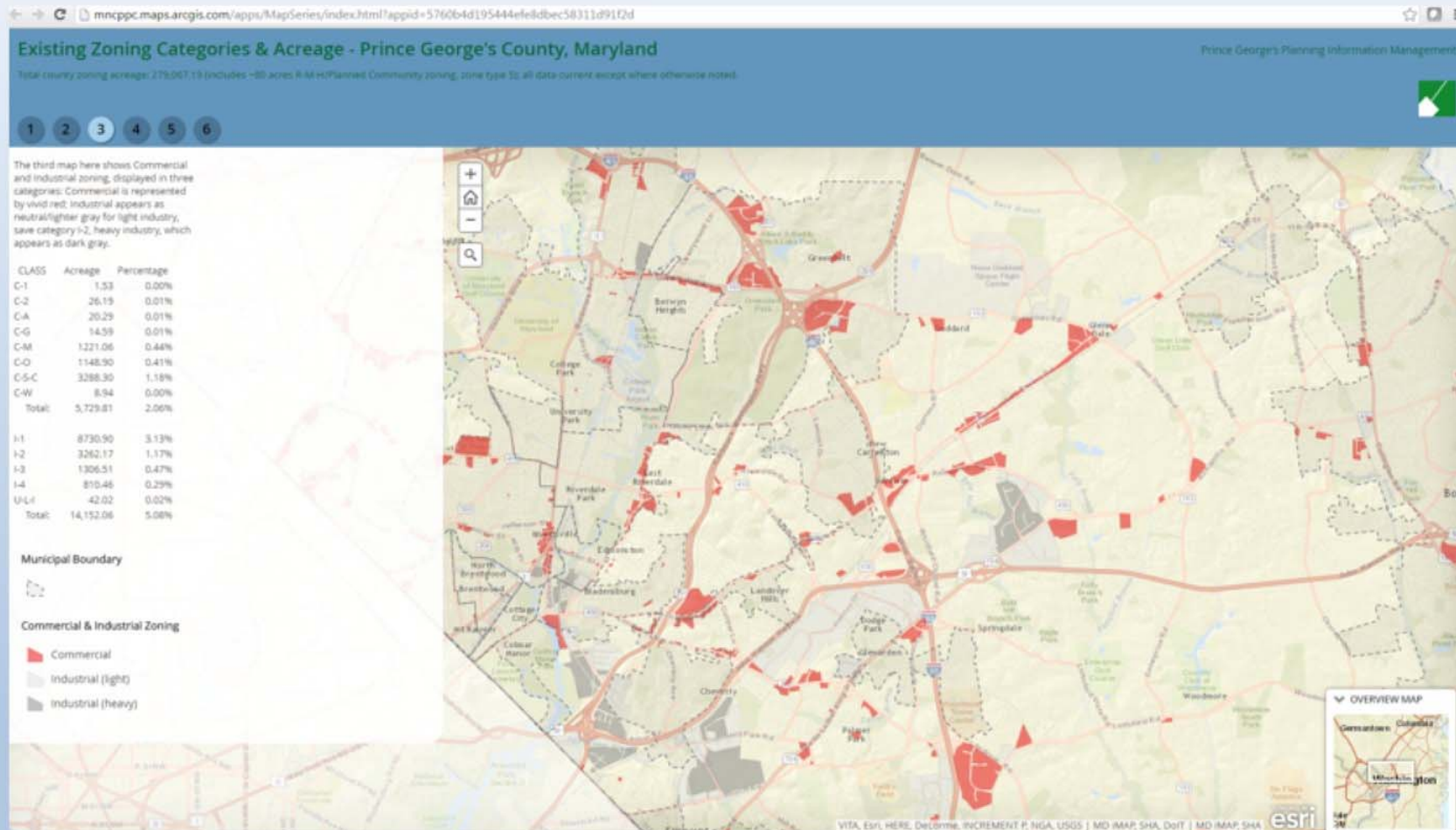


Identifies underutilized properties where the improvement value is 50% or less than the land value.



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

Zoning Rewrite Analysis

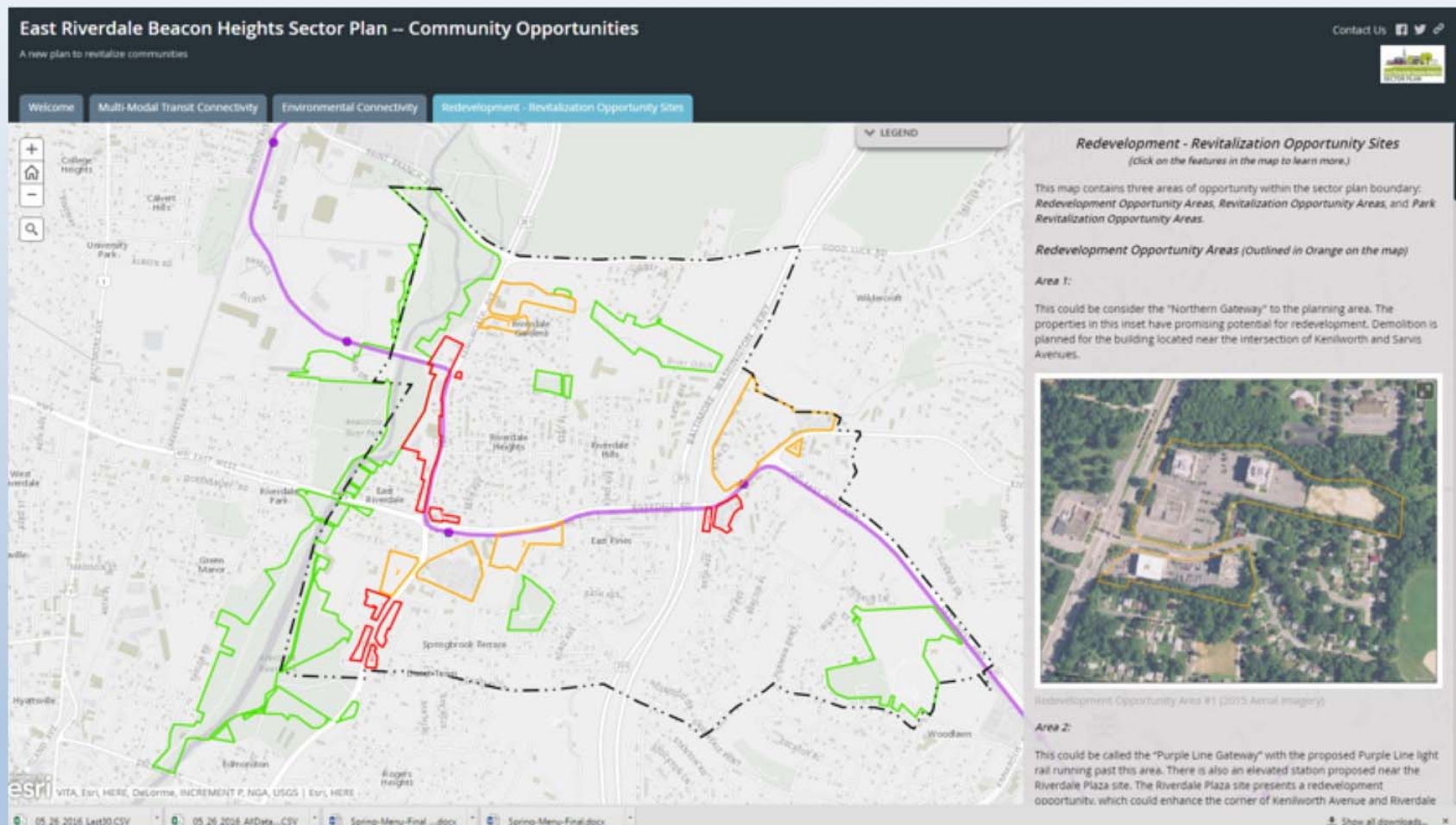


Analysis of existing zoning categories and acreages to support County Zoning Rewrite Initiative



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

Community Planning

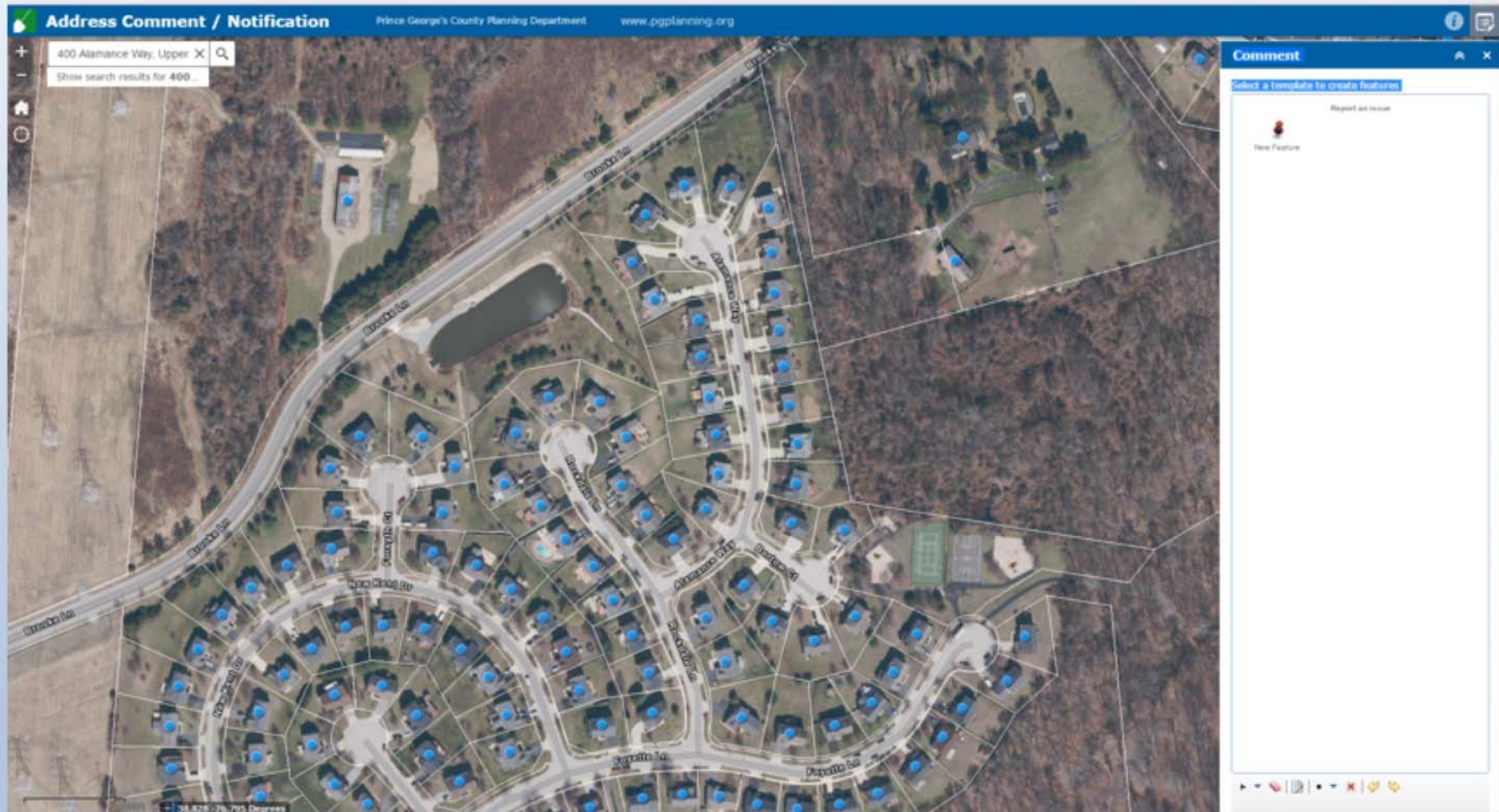


Story maps developed to support planning and outreach for various Sector Plans. Identification of transit, environmental, redevelopment issues and opportunities.



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

Address Data Maintenance

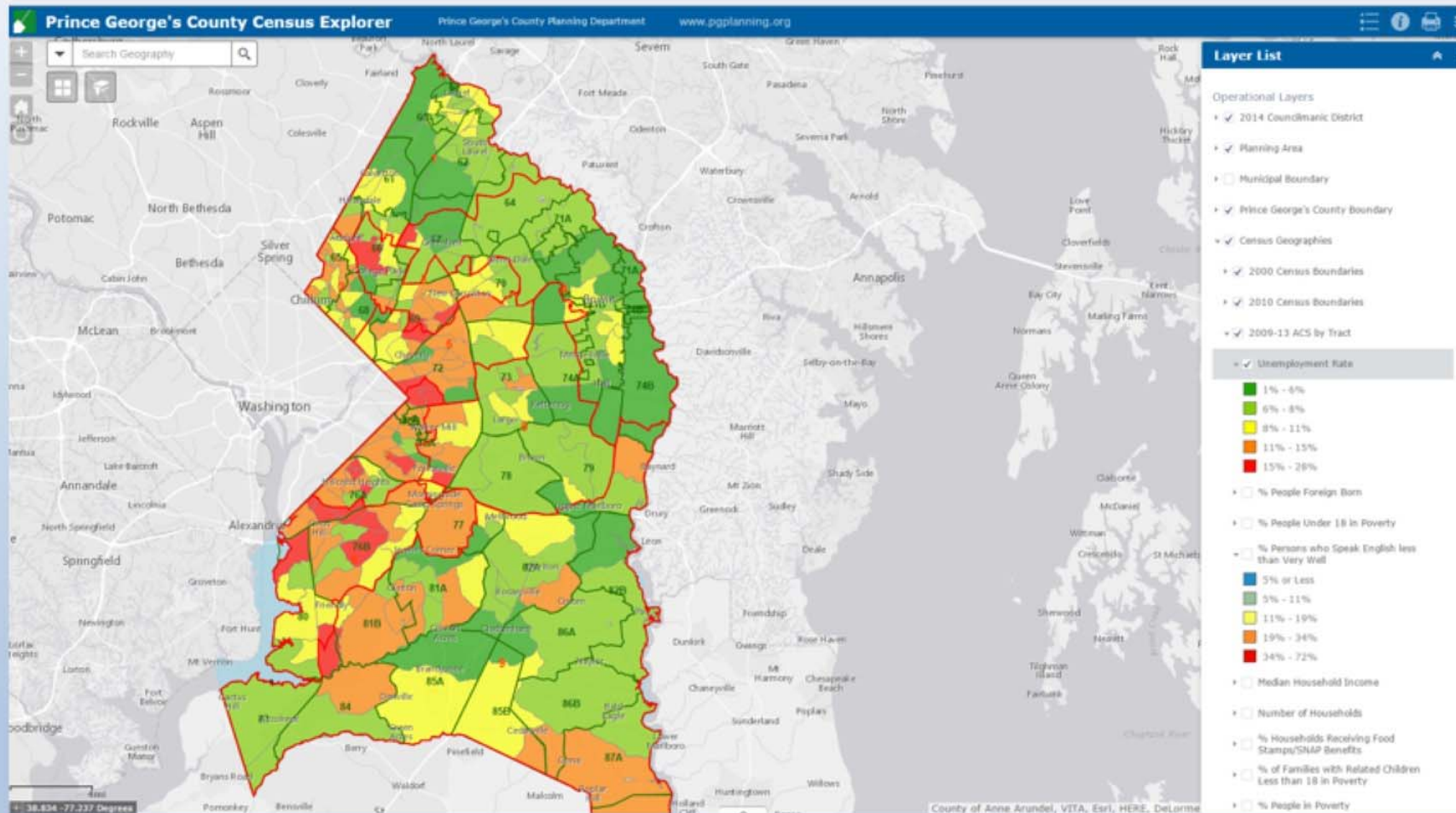


Application to support corrections of address points database



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

Demographic Analysis

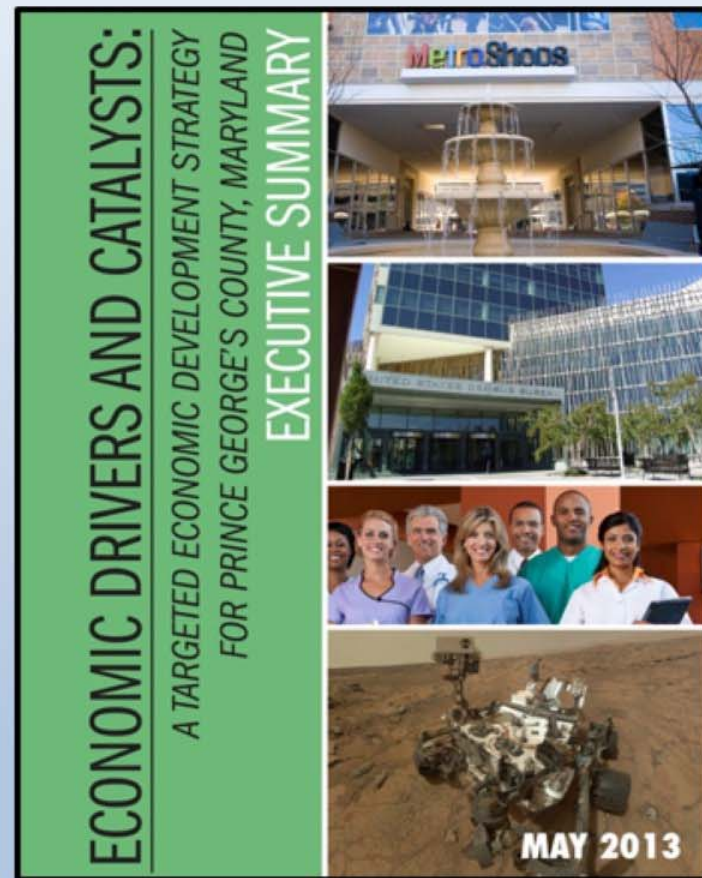
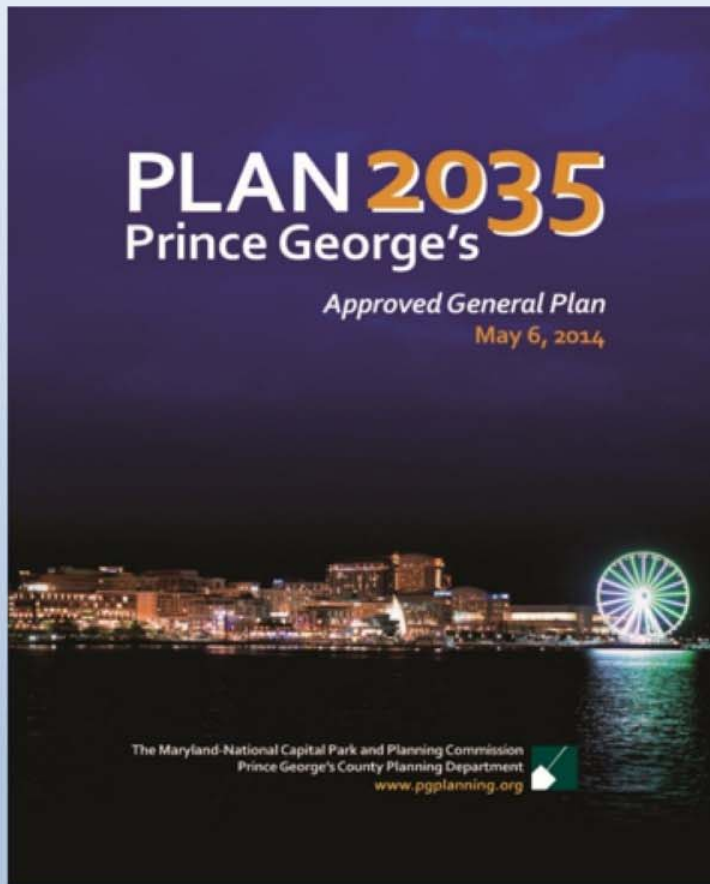


Application to support viewing of census geographies, Census data and multiple vintages of American Community Survey datasets



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

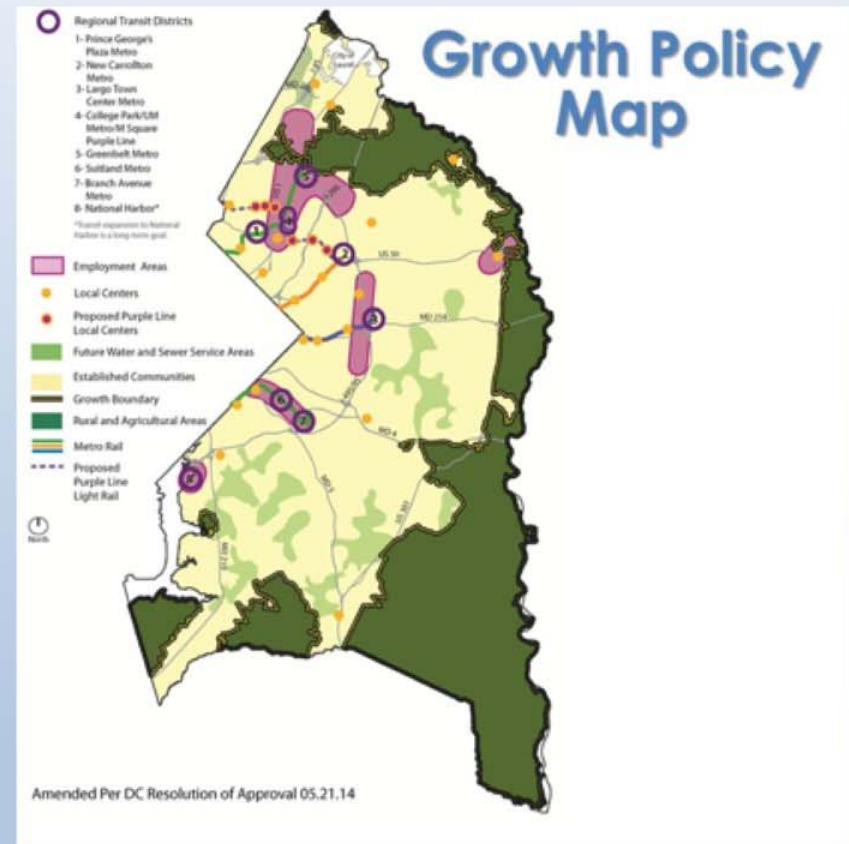
General Plan



Extensive map production and analysis to support general plan



General Plan

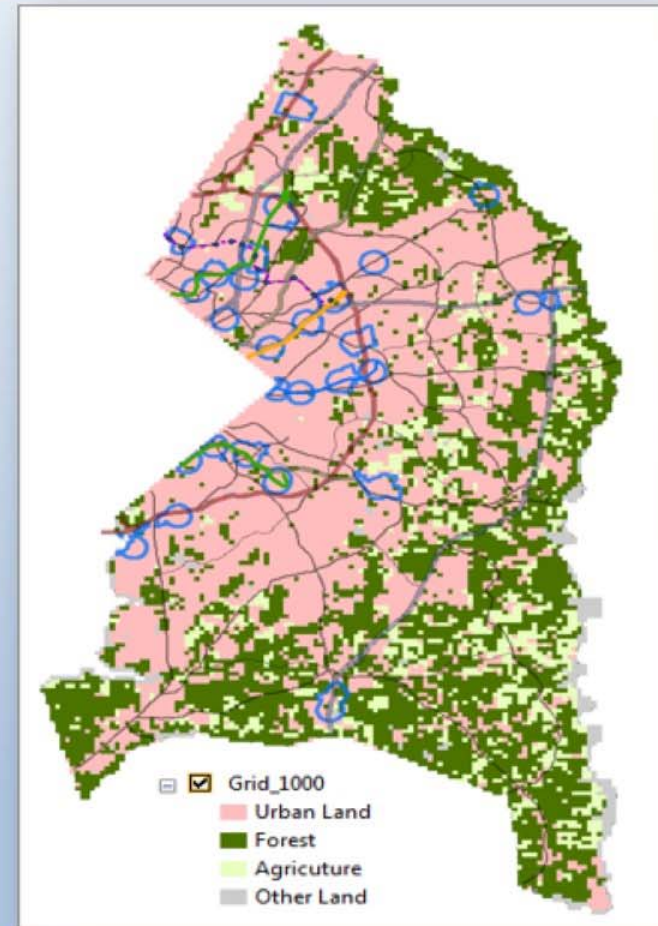


Extensive map production and analysis to support general plan



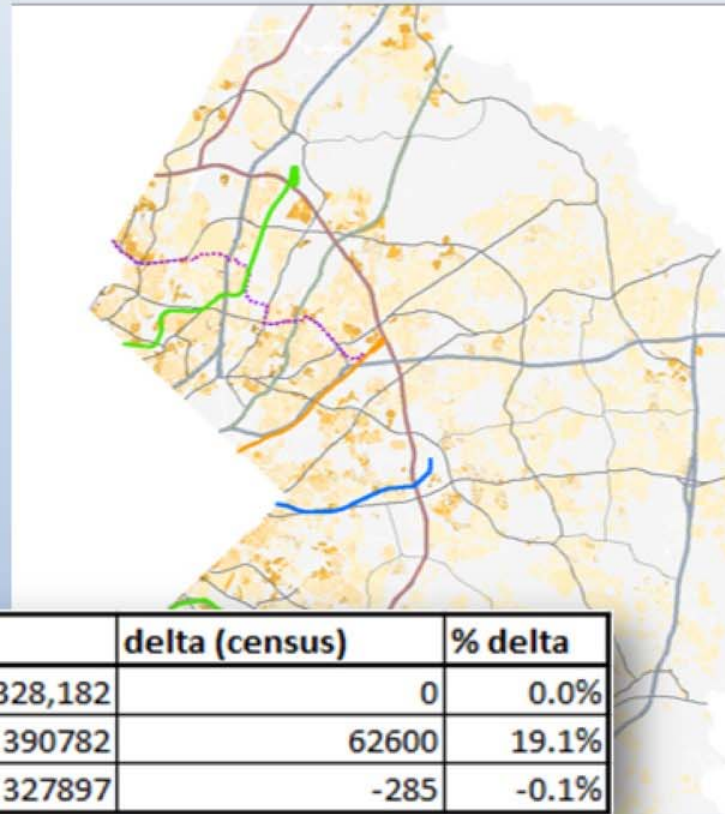
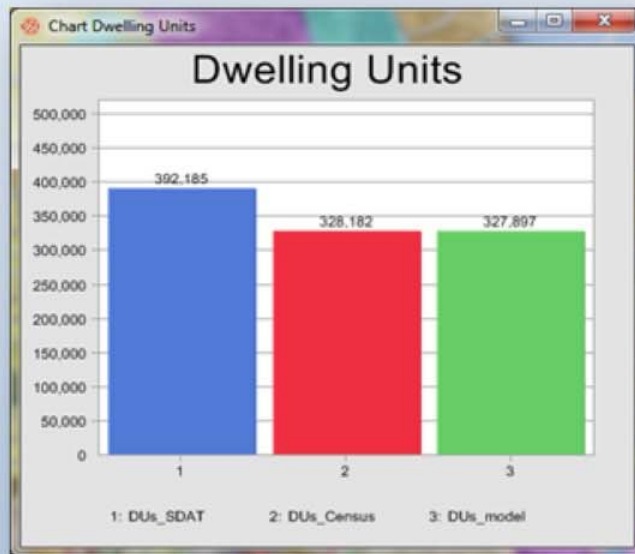
<http://www.planpgc2035.com/>

Land Consumption and Development Capacity Analysis



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

Dwelling Unit Analysis

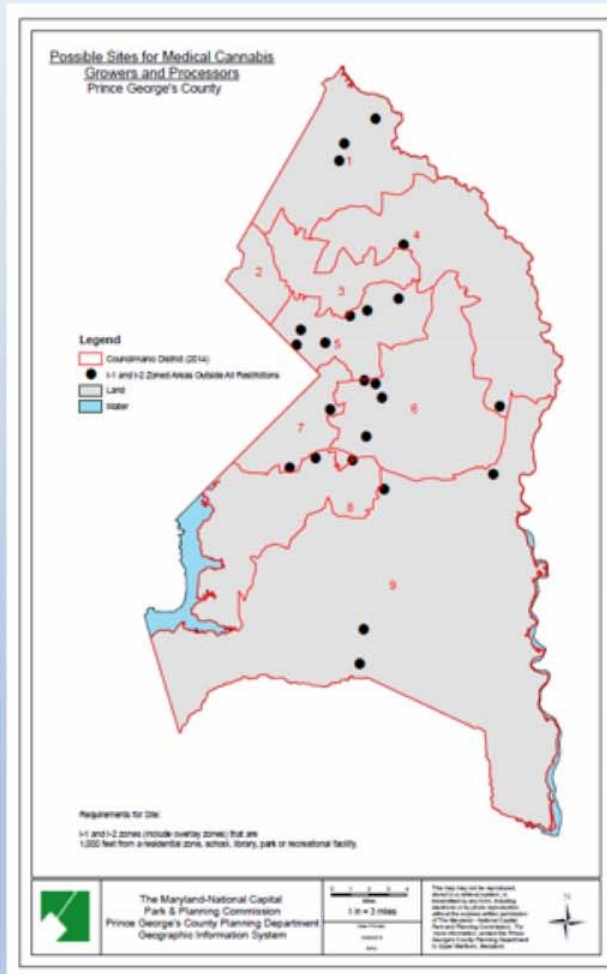


Source	DUs	delta (census)	% delta
Census	328,182	0	0.0%
SDAT DUs	390782	62600	19.1%
Cleaned DUs	327897	-285	-0.1%

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

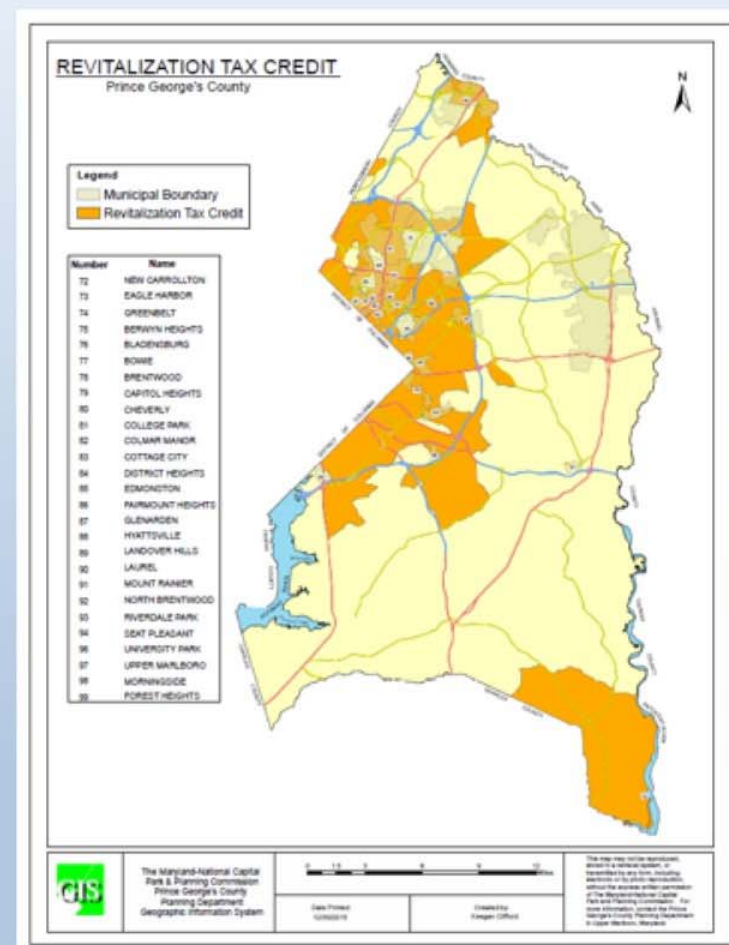
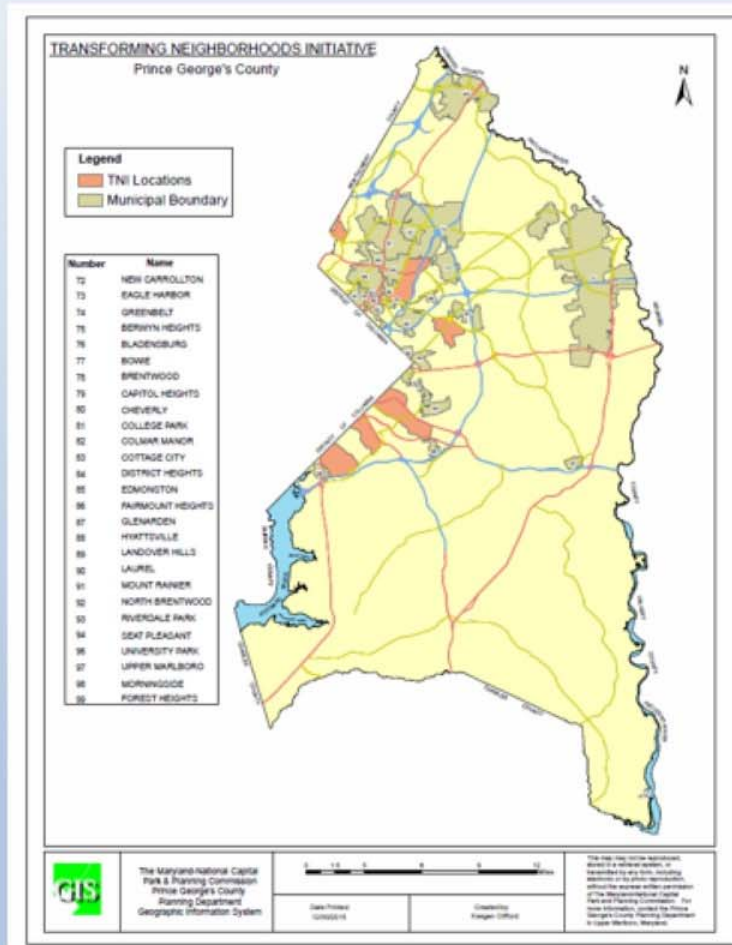


Site Analysis



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

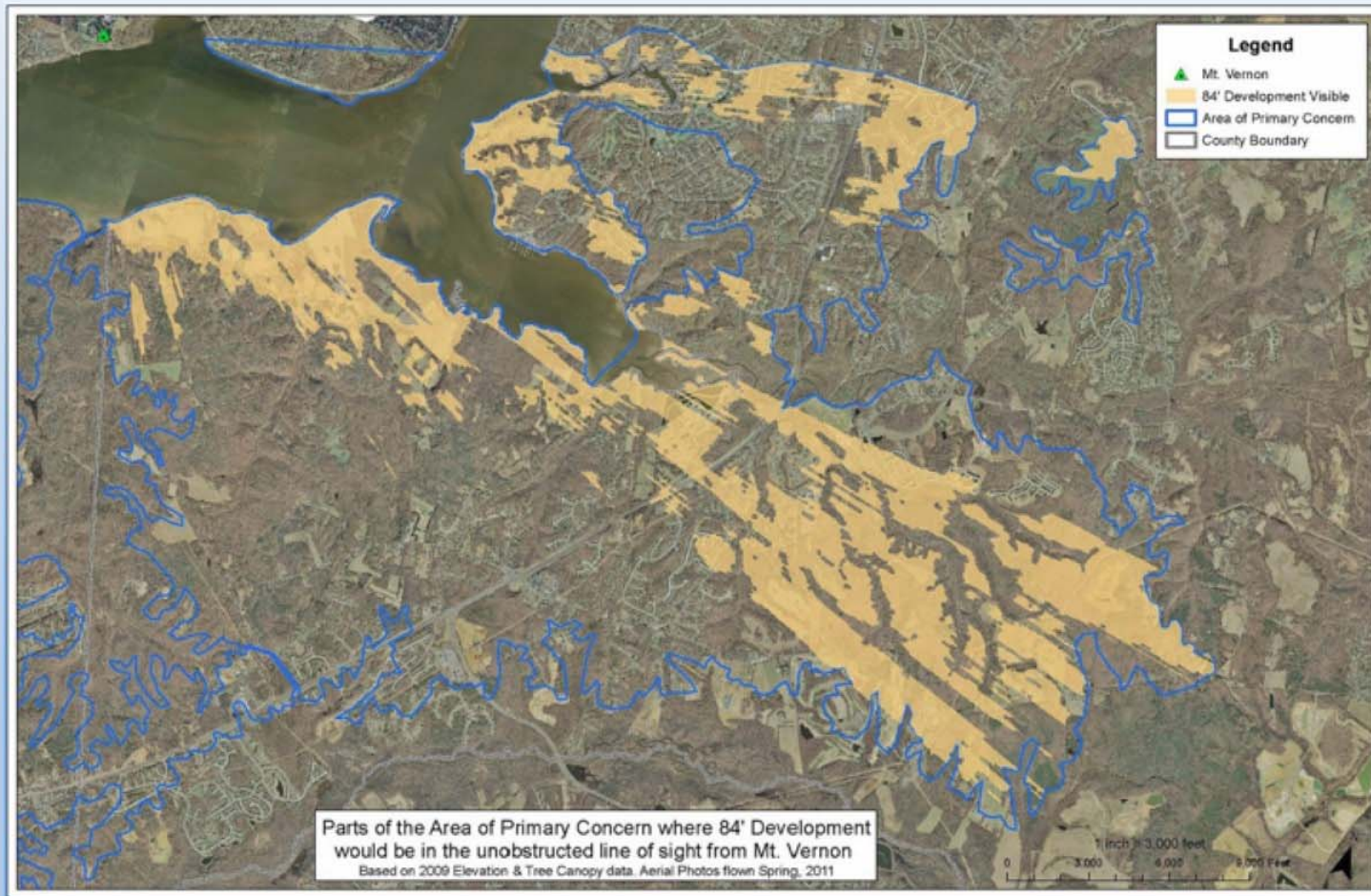
Economic Development



Web maps and display maps showing economic investment zones



Viewshed Analysis



Viewshed Analysis to support protection of Mt. Vernon view shed



Going Forward....

- Additional Applications
 - Robust mailing list generator
 - Community notification
 - Zoning rewrite
- Native Mobile Parcel Viewer Application
- Community Base Map
- Evaluation of ArcGIS Pro, internal data hosting, new technologies



Thank you !

Questions ?

