

# BOWIE SENIORS COMPUTER CLUB

## Meeting Minutes for May 5, 2016

Through the efforts of Program Chairman Dan Lee, we had Patrick T. Callahan, GIS Manager of the Prince George's County Office of Information Technology as our guest speaker for this meeting. Mr. Callahan's presentation was about Prince George's County's Geographical Information System.

A geographic information system (GIS) is a computer system for capturing, storing, checking, and displaying data related to positions on Earth's surface. These programs can show many different kinds of data on one map (such as: emergency data, environmental data, demographic data, archeological data, etc). This enables government organizations all levels to more easily see, analyze, and understand patterns and relationships. Prince George's County's GIS has been developed with a special emphasis on emergency response capabilities.

Copies of Mr. Callahan's slides are attached.

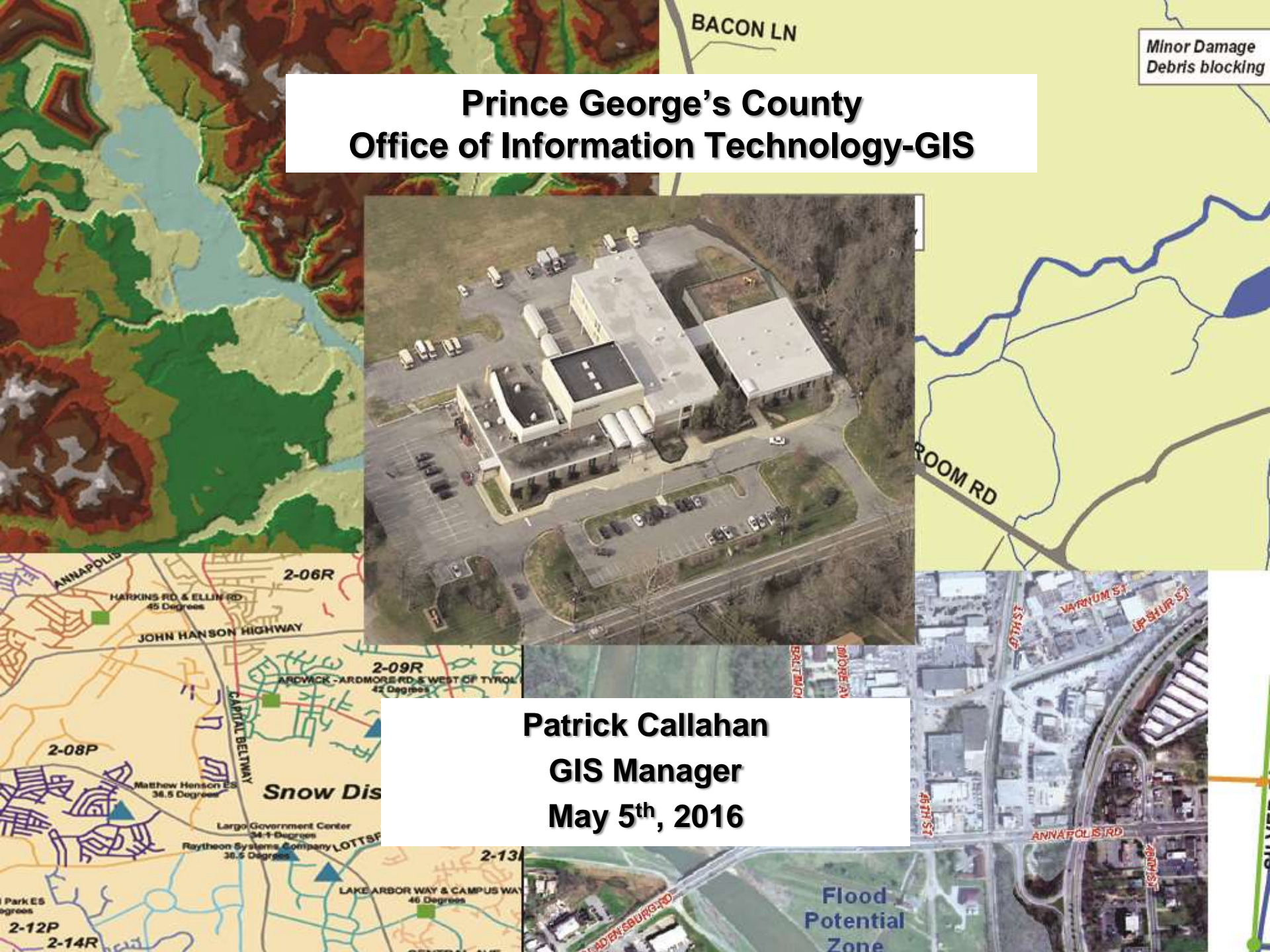
The meeting included an interesting question and answer session. It was very informative and well-attended meeting.

Bill Long,  
Secretary

# Prince George's County Office of Information Technology-GIS



**Patrick Callahan**  
**GIS Manager**  
**May 5<sup>th</sup>, 2016**





Rushern L. Baker, III  
County Executive

# What is GIS?

- Geographic Information Systems (GIS) is a technological field that incorporates geographical features with tabular data in order to map, analyze, and assess real-world problems. The key word to this technology is **Geography** – this means that some portion of the data is spatial, or data that is in some way referenced to locations on the earth. Coupled with this data is tabular data known as attribute data. Attribute data can be defined as additional information about each of the spatial features.

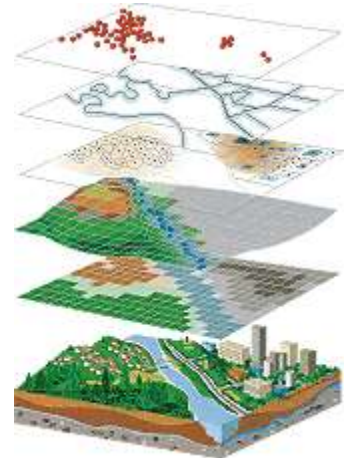




Table						
GISDEV.ADDRESSPOINTS						
OBJECTID *	DELIVERY_ADDRESS	PLACE_NAME	STATE_NAME	ZIP_CODE		
253919	220 HATTIE LANE	CAPITOL HEIGHTS	MD	20743	T	
253920	213 HATTIE LANE	CAPITOL HEIGHTS	MD	20743	T	
253921	207 HATTIE LANE	CAPITOL HEIGHTS	MD	20743	T	
253922	205 HATTIE LANE	CAPITOL HEIGHTS	MD	20743	T	
245130	4200 HATTIES PROGRESS DRIVE	BOWIE	MD	20720	T	
245131	4203 HATTIES PROGRESS DRIVE	BOWIE	MD	20720	T	
245132	4201 HATTIES PROGRESS DRIVE	BOWIE	MD	20720	T	
245133	4214 HATTIES PROGRESS DRIVE	BOWIE	MD	20720	T	
245134	4218 HATTIES PROGRESS DRIVE	BOWIE	MD	20720	T	
245136	4202 HATTIES PROGRESS DRIVE	BOWIE	MD	20720	T	

?

124638

GISDEV.ADDRESSPOINTS

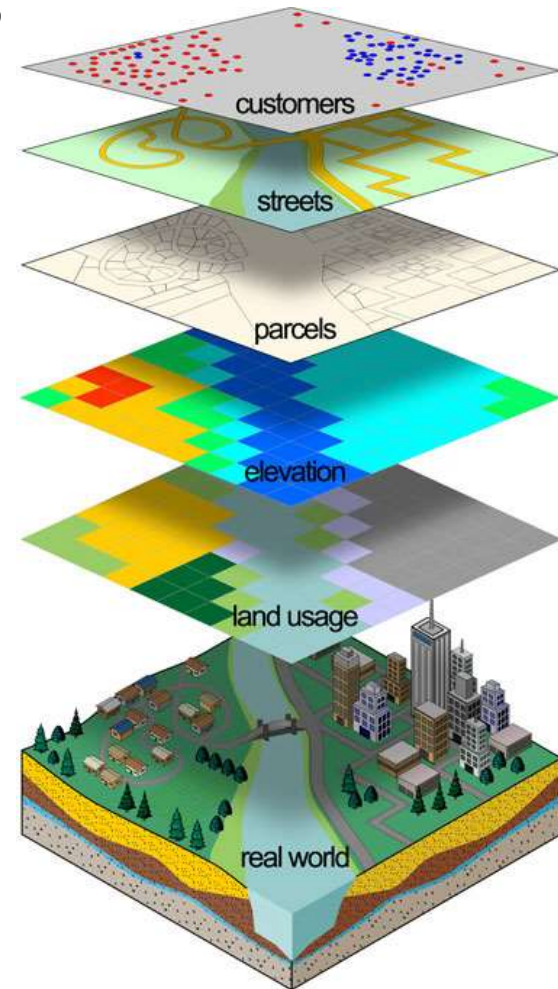




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County Executive

# So, What is GIS?

- Simple Terms:
  - Links databases and maps
  - Manages information about places
  - Helps answer questions such as:
    - Where is it?
    - What else is nearby?
    - Where is the highest concentration of 'X'?
    - Where can I find things with characteristic 'Y'?
    - Where is the closest 'Z' to my location?





# Why use GIS in Local Government?

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County Executive

- 80% of Local government activities estimated to be geographically based
  - plats, zoning, public works (streets, water supply, sewers), garbage collection, land ownership and valuation, public safety (fire and police)
- A GIS provides an efficient method for the maintenance and storage of maps.
- Patterns, trends and relationships are identified and spatially analyzed.







# Prince George's County GIS Uses

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County Executive

Table

OBJECTID *	CALL_DISPATCH_DATE	CALL_NO	UNIT_ID	LOCATION_ADDRESS	CALL_TYPE_FINAL	UNIT_DISPATCH_TIME
1	6/10/2012	F121620077	A831	NB BALTIMORE WASHINGTON PKY NB AFTER NB LAUREL BOWIE RD	PIAH	43511
13	1/17/2012	F120170005	A823	DOWER HOUSE RD/BUTTERCUP LN	PIA	4153
14	3/9/2012	F120690230	A827	NB ALLENTOWN RD/LEON ST	BLS	154250
15	3/29/2012	F120890253	A821	2098 MADISON DR	APTF	163704
16	3/30/2012	F120900082	FM151	2094 MADISON DR	SERV	85052
17	4/11/2012	F121020088	A825	6720 OLD ALEXANDRIA FERRY RD	ALS1	83722
18	4/23/2012	F121140141	A823	MARLBORO PIKE/DOWER HOUSE RD	BLS	94056
19	6/17/2012	F121690174	A827	MARLBORO PIKE/DOWER HOUSE RD	PIA	122921
20	7/27/2012	F122090132	A825	7102 OLD ALEXANDRIA FERRY RD	PIAT	90300
21	7/31/2012	F122130318	A827	DOWER HOUSE RD AT MARLBORO PIKE	PIAH	184005
22	8/11/2012	F122240128	A827	DOWER HOUSE RD AT MARLBORO PIKE	PIA	104651
23	8/16/2012	F122290060	E823	DOWER HOUSE RD W/LEAPLEY RD	WIREDN	44511
24	8/19/2012	F122320236	A827	LEAPLEY RD/DOWER HOUSE RD W	PIA	154236
25	8/20/2012	F122330158	E825	6720 OLD ALEXANDRIA FERRY RD	LOC	114328
26	10/5/2012	F122790140	A825	6720 OLD ALEXANDRIA FERRY RD	BLS0	113433
27	10/23/2012	F122970160	A823	MARLBORO PIKE/DOWER HOUSE RD	BLS1	122241
28	10/25/2012	F122990264	A823	1832 ROBERT S BOND DR	BLS	174356
29	12/4/2012	F123390055	A827	DOWER HOUSE RD/OLD MARLBORO PIKE	PIAT	34203
33	6/12/2012	F121640344	A855	NB BLADENSBURG RD/NB BLADENSBURG RD OFRP NB BALTIMORE AVE	BLS1	201906
946	1/1/2012	F120010324	A830	5999 EMERSON ST	BLS1	173356
947	1/1/2012	F120010170	A809	5999 EMERSON ST	ALS1	70627
948	1/1/2012	F120010288	A830	5000 TOWNSEND WAY	ALS1	152903
949	1/1/2012	F120010312	A809	4202 58TH AVE	ALS1	165118
950	1/1/2012	F120010129	E809	4209 58TH AVE	SERV	44234
951	1/1/2012	F120010287	A809	4115 51ST ST	BLS1	152724
952	1/1/2012	F120010111	A807	5103 TILDEN RD	SUI	42016
953	1/2/2012	F120020132	E809	4309 57TH AVE	INVEST	133421
954	1/2/2012	F120020284	A809	5101 57TH AVE	ALS2	223106
955	1/3/2012	F120030164	A809	5416 ANNAPOLIS RD	ALS1	124533
956	1/3/2012	F120030361	A809	4202 58TH AVE	MALRM	222736
957	1/3/2012	F120030147	A809	4200 57TH AVE	ALS	115927
958	1/3/2012	F120030368	E809	SB KENILWORTH AVE BEFORE EB ANNAPOLIS RD	AUTOF	224628



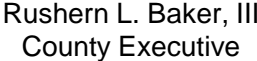
# Prince George's County GIS Uses

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1. Convert that text file into a spatial feature class  
How? Geocoding...



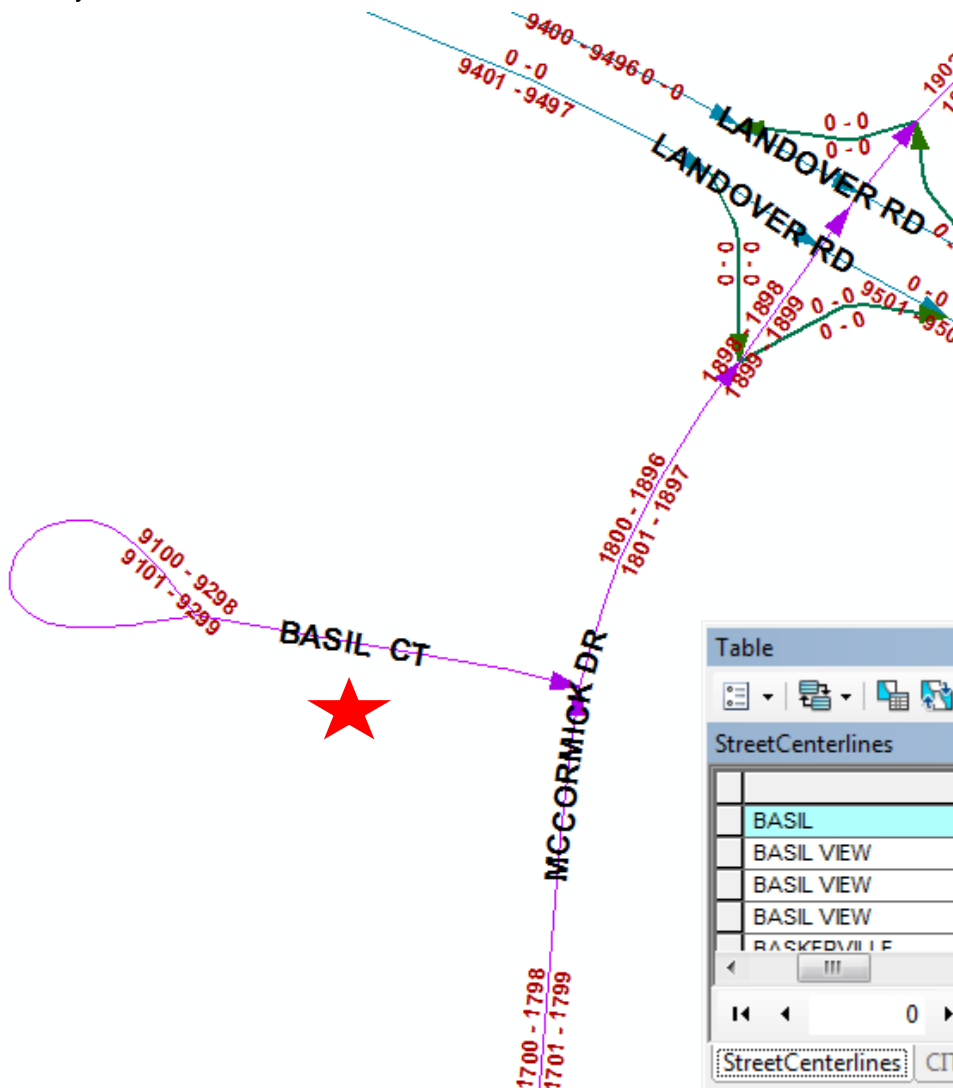




# Geocoding

taking any geographic  
Zip Code) and spatially

il Court, Largo, MD 20774



Table

StreetCenterlines

	NAME	TYPE	SUFFIX	LLEFT	HLEFT	LRGT	HRGT
	BASIL	CT		9100	9298	9101	9299
	BASIL VIEW	WAY		11500	11598	11501	11599
	BASIL VIEW	WAY		11400	11498	11401	11499
	BASIL VIEW	WAY		11600	11612	11601	11613
	BASKEDVILLE	DI		8700	8708	8701	8709

(1 out of 43405 Selected)

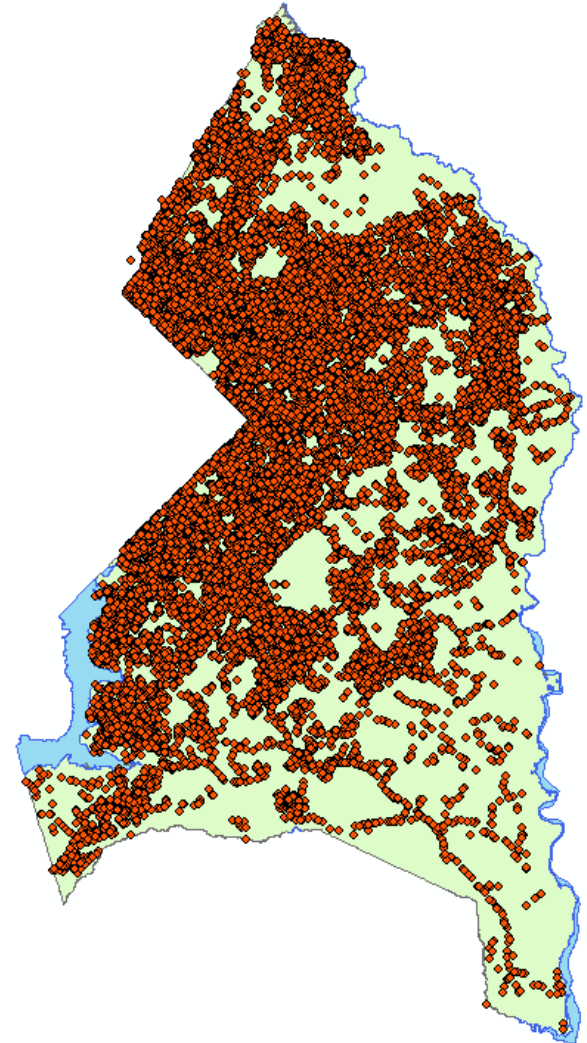
StreetCenterlines CITY Fireboxes



# Prince George's County GIS Uses

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1. Convert that text file into a spatial feature class
2. Density (Hotspot) Map

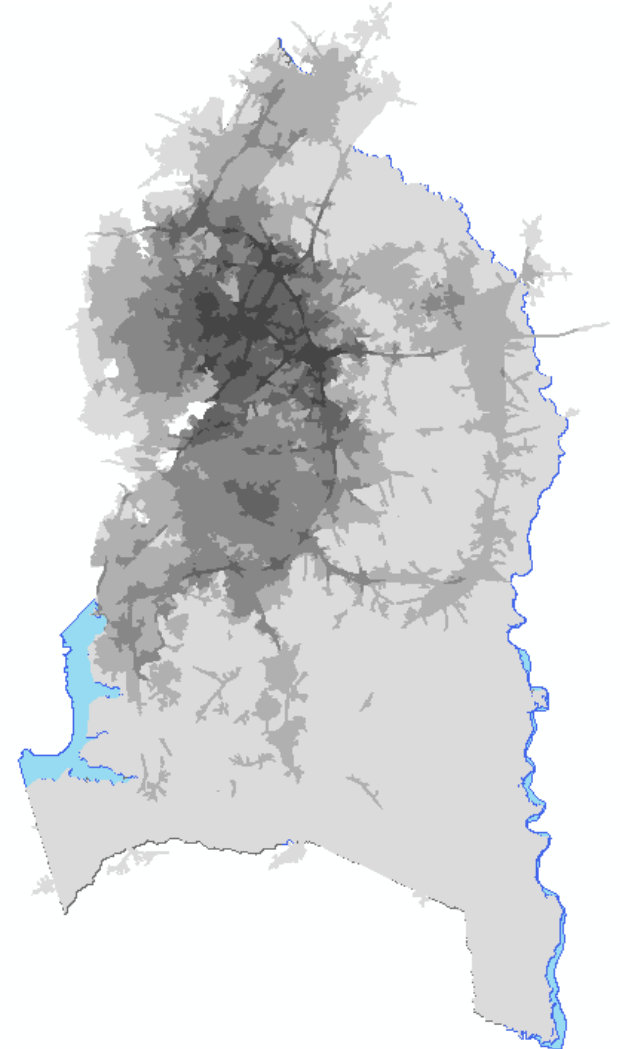




# Prince George's County GIS Uses

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1. Convert that text file into a spatial feature class
2. Density (Hotspot) Map







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## Fire Department Coverage:

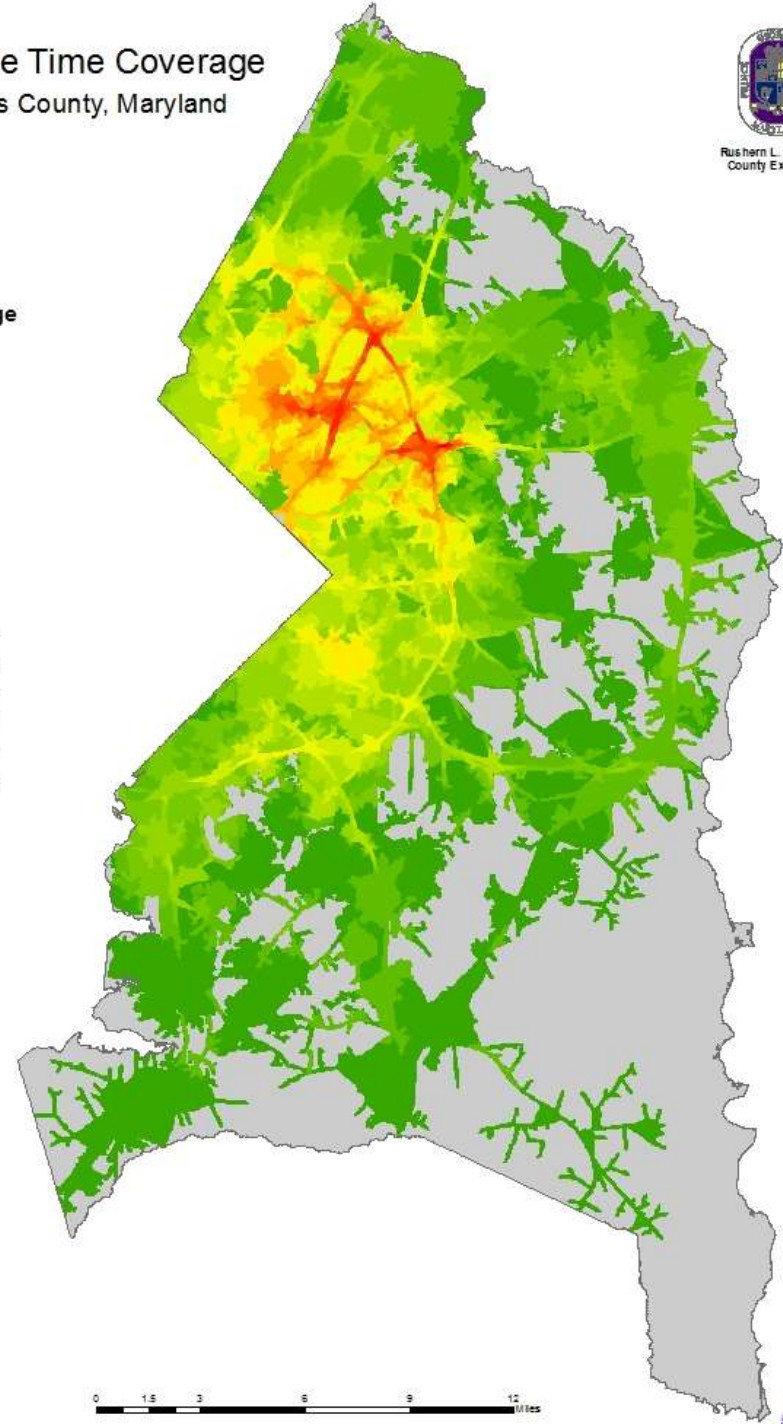
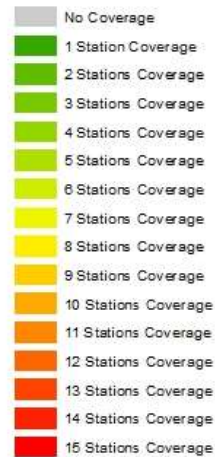
- 7 minute drive time from each fire station
- Gray – No coverage
- Green – 1 Station
- Red - 15 Stations

## 7 Minute Drive Time Coverage Prince George's County, Maryland



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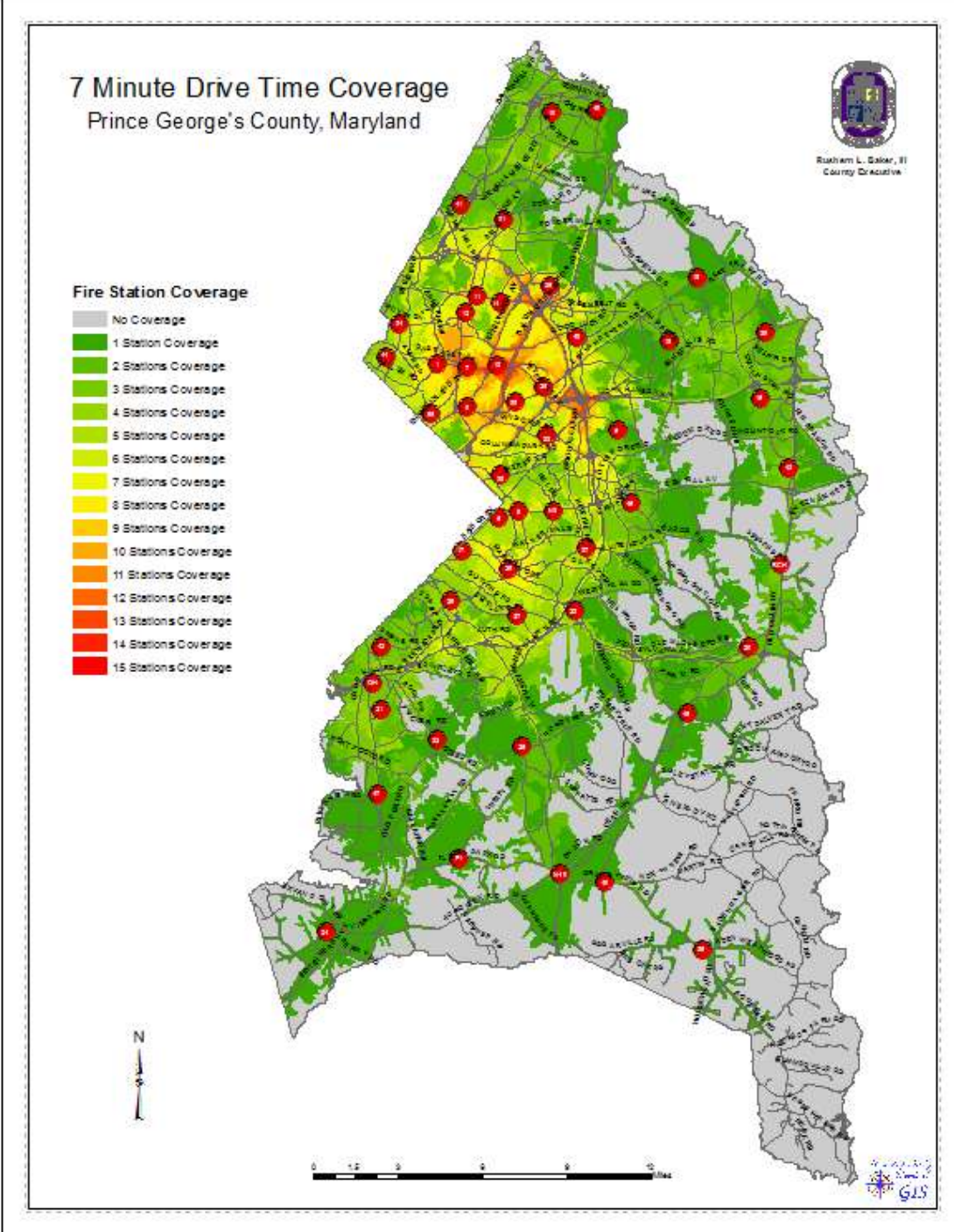
### Fire Station Coverage





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Firebox	Population	Number of Calls
0101	1309	227
0102	3279	361
0103	3080	332
0104	466	86
0105	1740	238
0106	748	50
0107	913	426
0108	321	177
0109	1064	77
0110	0	104
0111	1762	135
0112	48	126
0113	427	23
0114	269	162
0115	1568	303
0116	1143	124
0117	823	58
0117	0	0
0118	814	52
0119	572	22
0120	168	12
0121	627	59
0122	1140	391
0123	827	57
0501	759	184
0502	485	148
0503	501	220
0504	398	73
0505	692	101
0506	86	95
0507	0	54
0508	1281	120
0509	0	7
0509	25	0
0510	78	0
0510	0	89
0510	0	0
0511	1701	395
0601	1134	143
0602	1901	187





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# Prince George's County GIS

- County has disseminated GIS Enterprise structure
  - 4 person OIT-GIS team (Core GIS)
    - GIS Manager
    - 2 GIS Web and Applications Developers
    - GIS Database Administrator
  - Agency GIS (Specialty GIS)
    - Users in the different agencies use GIS as a tool to help them in their core business
      - GIS Specialists in their field
      - 400 GIS users in the agencies
      - MNCPPC has it's own GIS department and system, which is separate from OIT-GIS







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# Core GIS

- Central repository for all GIS data
- Manage the GIS Enterprise infrastructure
- Point of contact for all GIS related projects
  - County agency projects
  - Regional projects (INDEX, Geospatial Data Exchange, MEMA incident exchange, ICBN)
- Provide new GIS technology solutions
  - Map and web services
  - Mobile applications
  - GPS technology





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# Core GIS

- Provide GIS support to agencies without GIS trained staff
  - 75 map projects with over 300 maps a year
  - 18 Map Applications (Internal/External users)
  - Data analysis
    - Fire/EMS run time maps
    - Low to moderate income level location analysis
    - Foreclosure rate maps
    - Proposed and Approved CIP Budget Books
  - Homeland Security/Public Safety
    - GIS is a core product of the 911 system
    - EOC support during emergencies





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# Core GIS

- Point of Contact for Regional and Statewide Events
  - Maryland State Geographic Information Committee (MSGIC): Executive Committee Member
  - MWCOCG CIO Committee: GIS Subcommittee Executive Member
    - INDEX and Geospatial Data Exchange Executive member
  - FEMA Region III Regional Interagency Steering Committee(RISC): GIS Subcommittee member



FEMA



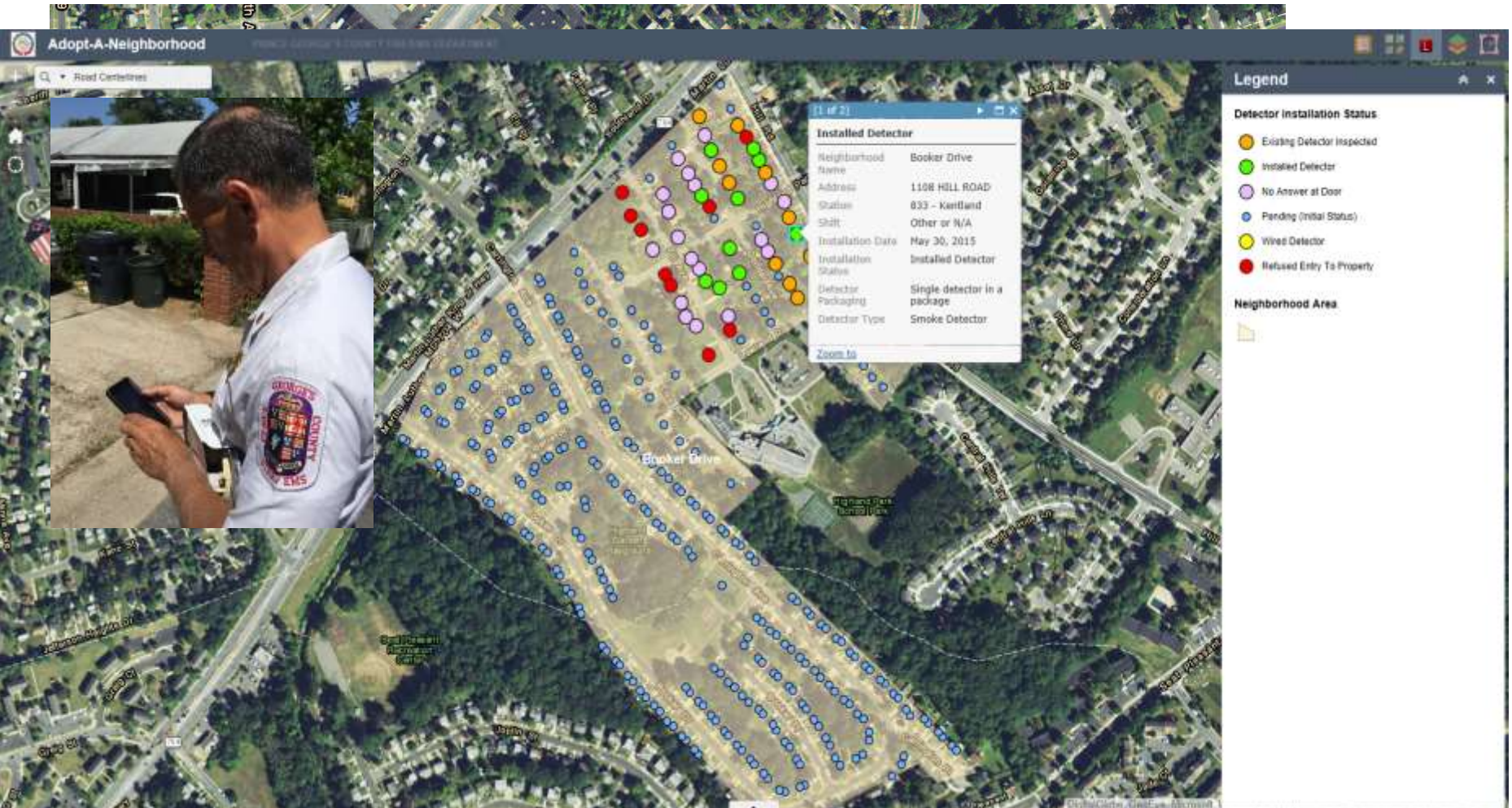




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# Recent GIS Projects

## Fire/EMS: Adopt A Neighborhood Program





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# Recent GIS Projects

## DPWT: Snow Plow Inspection Application

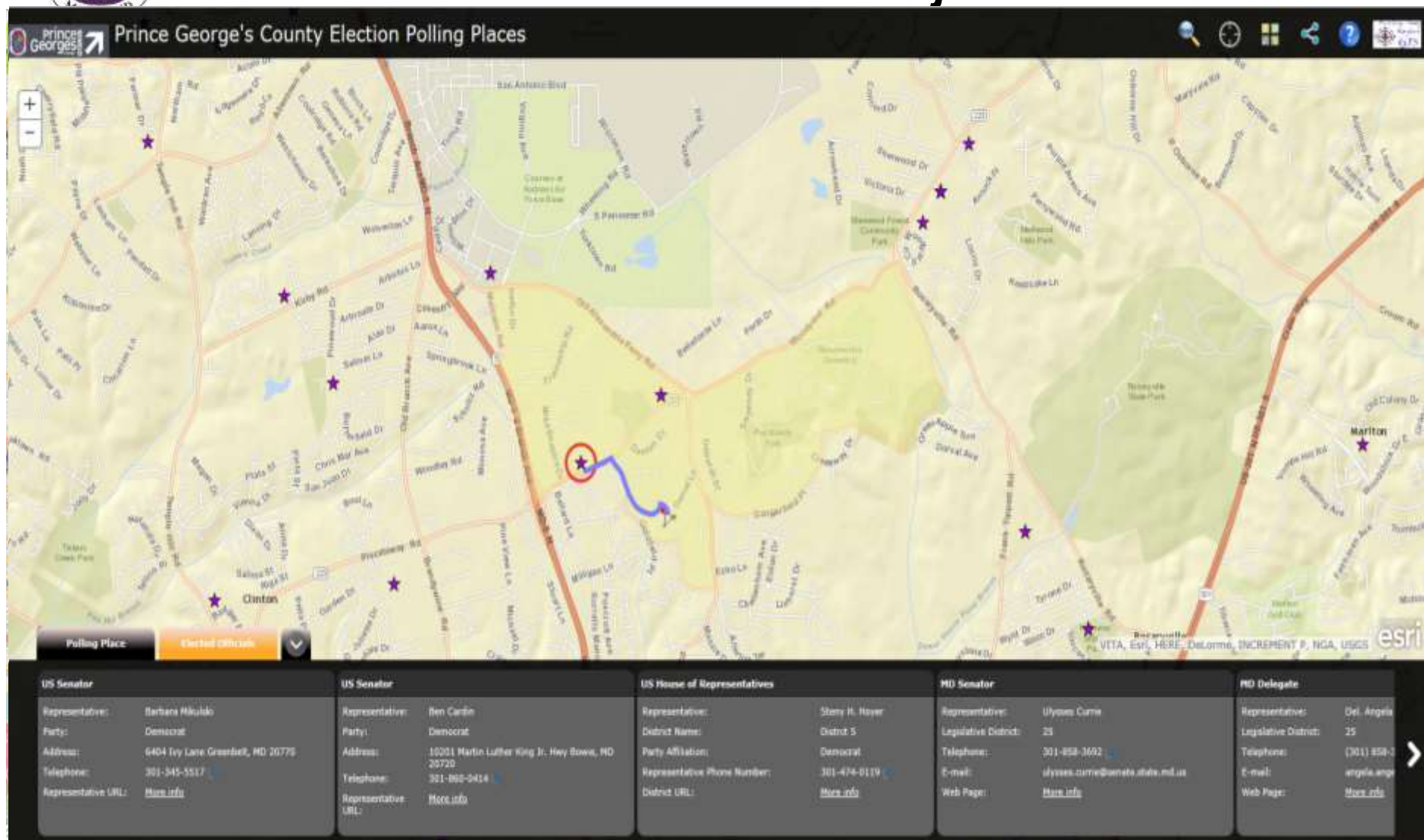
The screenshot displays the DPWT: Snow Plow Inspection Application interface. On the left, a map shows a road network with a red line indicating a snow plow route. The map includes labels for 'Lory Ln' and 'New Carillon Park'. A search bar at the top of the map area is labeled 'Place or Address'. In the center, a photo of a snow-covered road is shown, with a white van in the foreground and a snow plow in the distance. The photo is titled 'D2IIIPhotos\_ -1\_0\_ArcGISApp\_1424551837155.jpg'. To the right of the photo, a list of inspections is displayed, including details such as 'CREATED\_USER kthornton', 'CREATED\_DATE 2/21/2015 03:50 PM', and 'COMMENTS lory ln just before lois ln....wash gas truck impede'. The list also includes a table of inspection records with columns for 'inspections', 'conditions', and 'inspections'.

inspections	conditions	inspections
section 2 SnowInspectorH	2/21/2015 08:14	
section 2 SnowInspectorH	2/21/2015 08:06	
section 2 SnowInspectorH	2/21/2015 07:58	
inspections		
r8 kthornton	2/21/2015 10:02 PM	
NTS 203r8 kthornton	2/21/2015 10:02 PM	
r7 kthornton	2/21/2015 10:00 PM	
rn ave needs plow kthornton	2/21/2015	
n ave needs 4x4 plow kthornton	2/21/2015	
kthornton	2/21/2015 08:07 PM	
21/2015 09:08 PM		
21/2015 09:00 PM		
21/2015 08:56 PM		





# Recent GIS Projects







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County Executive

# Current GIS Projects

- National Pollutant Discharge Elimination System (NPDES)
  - Permit for discharging of “Pollutants” into waters of the United States
  - Monitoring and Inspection system for Stormwater Management
  - GIS Based reporting system
- Transforming Neighborhood Initiative (TNI): Story Map
  - Allows the public to see and learn more of the 6 TNI locations the County Executive has chosen to focus Government resources

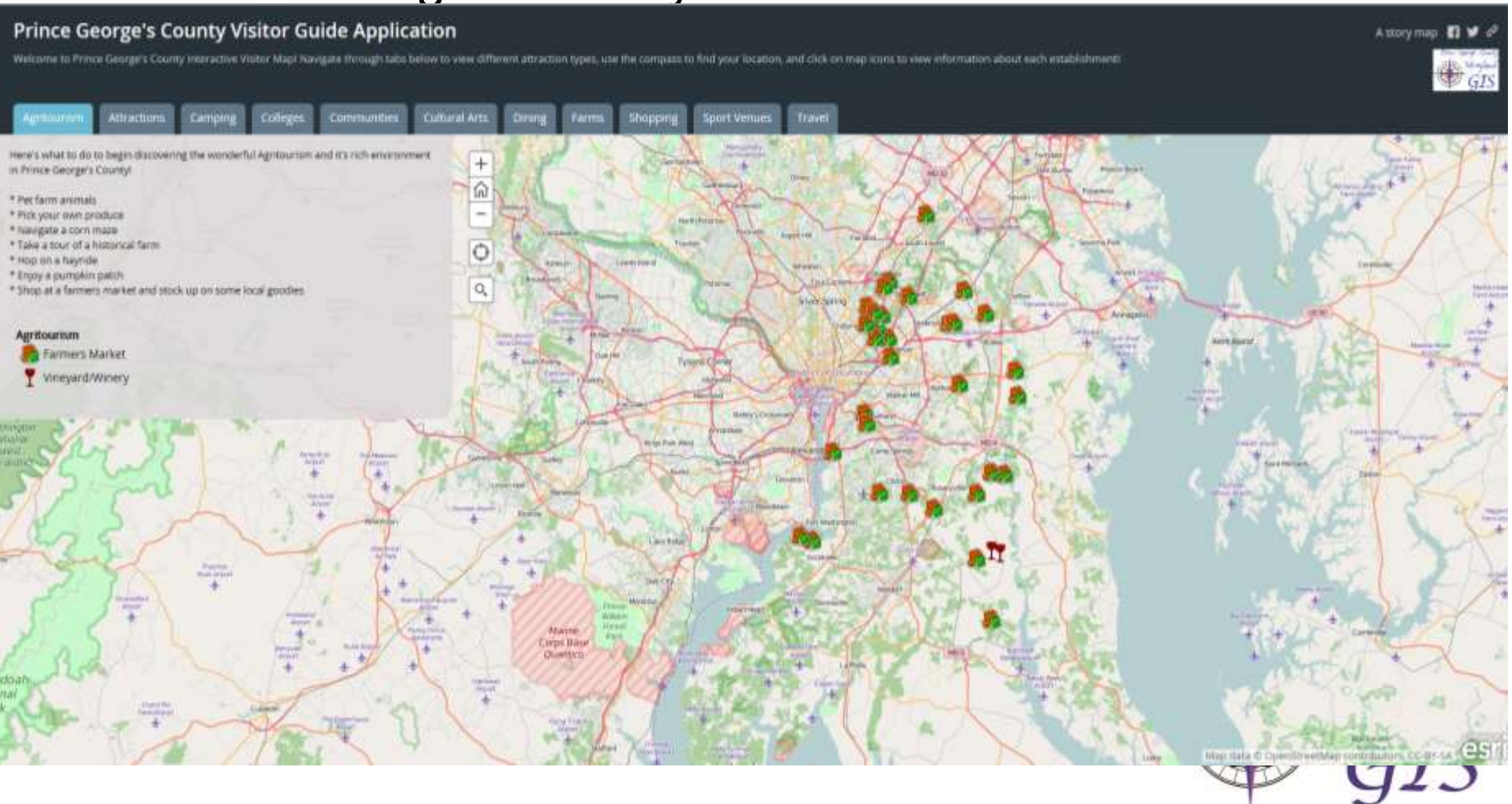




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# Current GIS Projects

## – Prince George's County Visitor's site:








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# County Website

Prince George's County Website <http://www.princegeorgescountymd.gov/>


**Prince George's**  
county

DigitalPGC

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**Information Technology**


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Information Technology > Services > Geographic Information Systems (GIS) > Map Depot


**Map Depot**


**PGAtlas** PGAtlas The Maryland National Capital Park and Planning Commission provides a series of mapping applications showing Property Information, Planning and Development Activities, Economic Development, and other planning activities through their PGAtlas web site.


**Elections** This interactive map will allow you to find your polling place and precinct information and provide driving directions to the polling place base off an address you type in. You can also find all of your Federal, State, and County officials that represent that address. Looking to vote early? The site will provide you the closest Early Voting site and directions to the location.


**Clean Water Map** The Department of the Environment Clean Water Map is an interactive map to access environmental information regarding county watersheds, restoration projects, and water quality information.

**Economic Development** Geographic Development Incentives

**Golf Courses** County Map with Golf Course locations.

**Farmers Market** An interactive map that allows you to find farmers markets, pick your own farms, and wineries in Prince George's County. You can also provide a street address or you mobile device location to receive driving directions to the closest market or farm.

**Crime Incidents** The Prince George's Police Department interactive mapping website available to the citizens of Prince George's County.

**Download Maps** Download GIS PDF Maps.


**News**

Headline	Date
New Polling Place and Elected Officials Locator Tool Released	10/1/2015 12:30:00 AM
Prince George's County earns National Achievement Award for Employment and Training for County Residents	7/2/2015 2:15:00 PM
Suggest a Dataset for Data Prince George's	5/5/2015 2:55:00 PM

More News

**Top Links**

Cable Television Commission  
Geographic Information Systems (GIS)  
GIS Map Depot  
Consulting and Technical Services (CATS)  
GIS Glossary  
Technology Strategic Plan



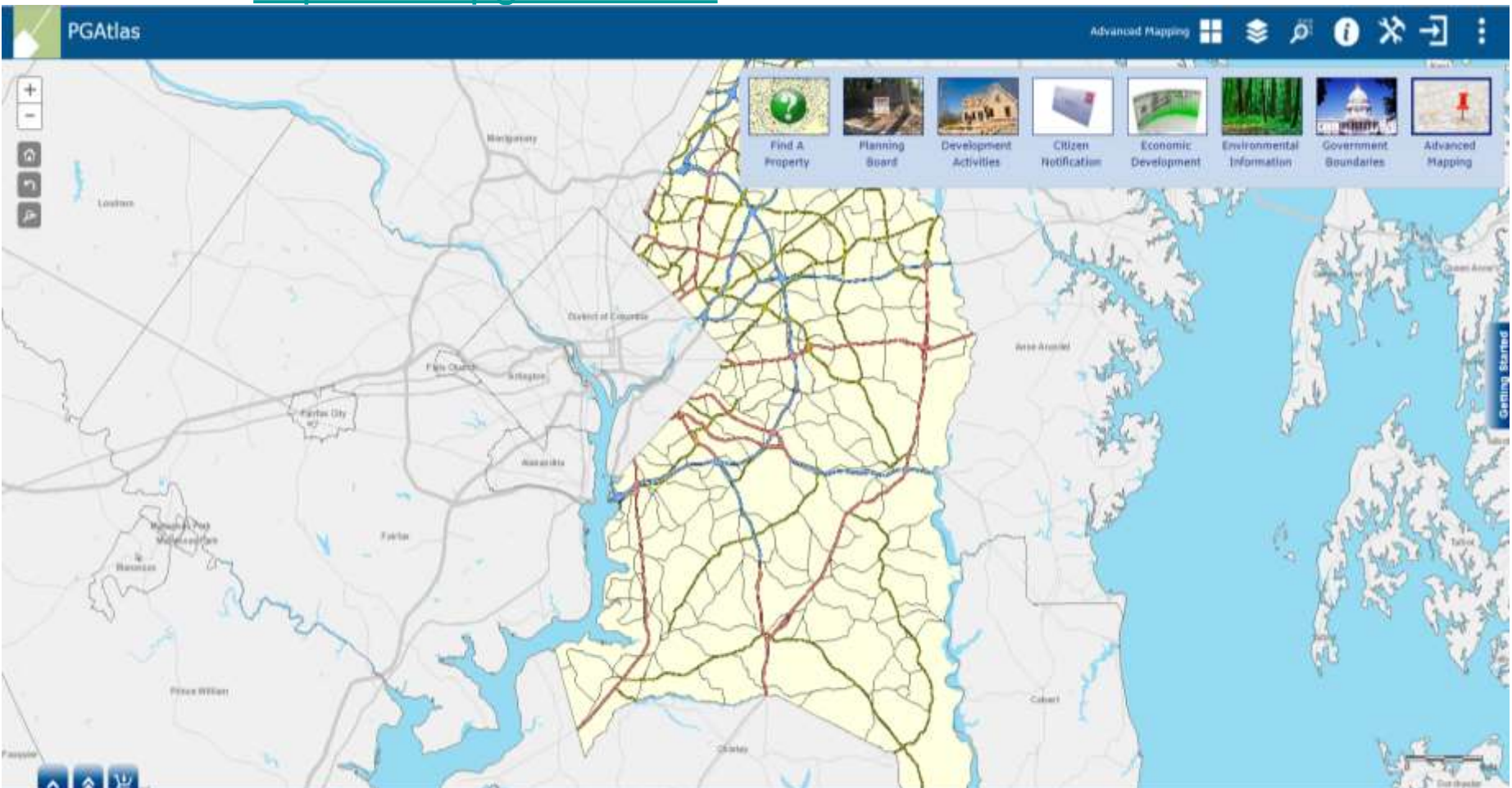




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# MNCPPC PGAtlas

- Maryland National Capital Park and Planning Commission PGAtlas  
Site: <http://www.pgatlas.com/>





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# Questions?

