

# GIS EXCELLENCE AWARDS 2013



Fairfax County, Virginia

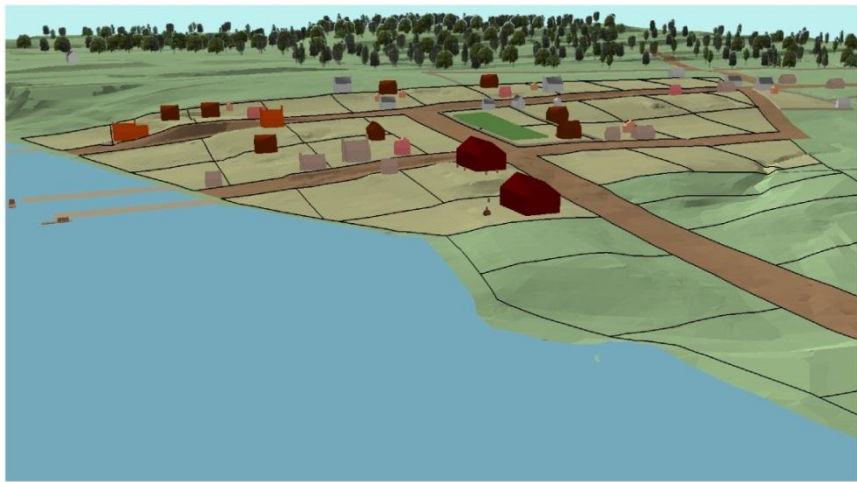
November 21, 2013

# CARTOGRAPHIC CATEGORY

## Third Place

### Virtual Representation of the 18th Century Port Town of Colchester Virginia Marion Constanter

Fairfax County Park Authority



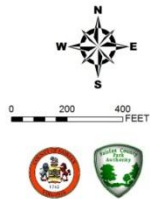
The 18th Century Town of Colchester is located on the Occoquan River with a portion of the town located within the boundaries of Old Colchester Park and Preserve  
3D Triangulated Irregular Network (TIN) Surface created from Fairfax County's 2ft Contour NAVD 88 layer and 2009 NAVD 88 Breaklines.  
Buildings were created in ESRI ArcMap 10.1 as multipatch shapes and scaled and spatially positioned based on archival and archaeological research. Structures  
Town plat is the 1754 George West Survey of Colchester Town. Projection is North American Datum 1983 StatePlane Virginia North FIPS 4501 Feet.  
The 18th Century roads were created from the town plat and Rochambeau's "Camp" a Colchester" 1782 map. Lighter shaded Town lots represent lots that had structures based on archival research.

#### Known Structures from Archival Research and Archaeological Investigations

- Fairfax Arms Lot 19 and 21  
(Only 18th Century Structure Still Standing)
- Alexander Henderson House Lot 15
- John Mills House
- John Mills Chair House
- Metzger House Lot 15
- Morris pound House lot 18 with Vineyard
- House Lot 20
- Outbuilding located on Lot 20
- Lot 39 structure
- Hyde House Lot 25

#### Structures from Archival Research (Locations Approximate)

- Barns and Stables
- Tavern Lot 1
- Tavern Lot 4
- Tobacco Warehouse Lots 29 and 7
- Tobacco Warehouse Brick Funnel
- House Lot 5
- House Lot 14
- 18th Century structures Recorded on Viscomte de  
Rochambeau's 1782 "Camp" a Colchester" Map
- Landing House Lot 38
- Storehouse Lot 3
- House Lot 40
- Smokehouses, Meathouses, Salthouses,  
and Outbuildings
- Storehouses
- Lot 27 buildings
- Tobacco Warehouse administration building Lot 6



#### VIRTUAL REPRESENTATION OF THE 18TH CENTURY PORT TOWN OF COLCHESTER VIRGINIA

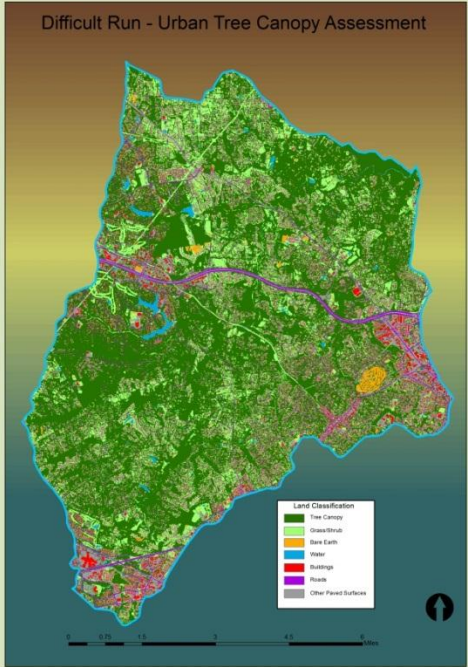
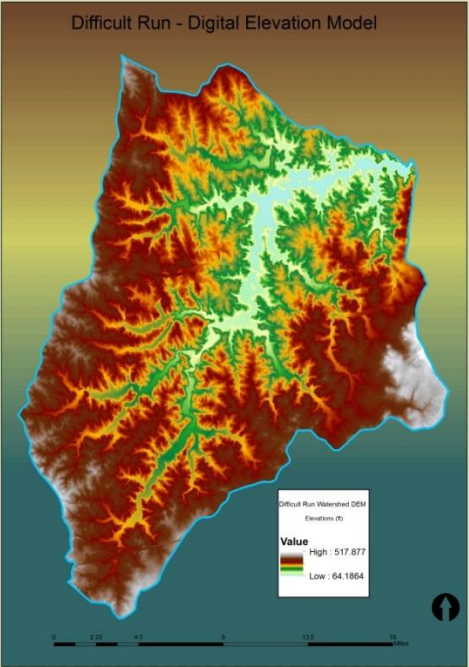
Author: Marion Constanter, Fairfax County Park Authority, Cultural Resource Management and Protection Branch



# CARTOGRAPHIC CATEGORY



## i-Tree Hydro Analysis for Difficult Run Watershed



**Second Place**

i-Tree Hydro Analysis for the Difficult Run Watershed

Frank Finch,  
Nick Drunasky,  
Joan Allen,  
Mike Knapp

Urban Forest Management Division of the Department of Public Works and Environmental Services

### What is i-Tree Hydro?

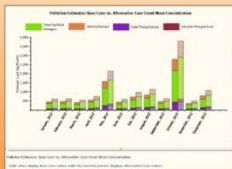
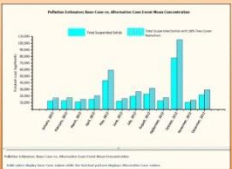
i-Tree Hydro, developed by the USDA Forest Service, is the first vegetation-specific urban hydrology model. It is designed to model the effects of changes in urban tree cover and impervious surfaces on hourly stream flows and water quality at the watershed level.

### Hydro Inputs

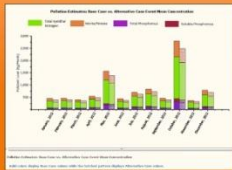
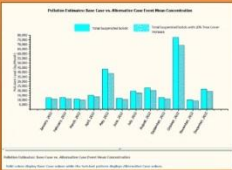
- Hourly stream flow data (USGS gage data)
- Hourly weather data
- Digital elevation model for the desired watershed
- Land cover parameters:
  - Tree and shrub cover (evergreen and deciduous)
  - Leaf area index
  - Water cover
  - Impervious cover
  - Soil cover

### Hydro Outputs

10% decrease in tree cover



10% increase in tree cover



# CARTOGRAPHIC CATEGORY

## First Place

Migration to and from the Fairfax-Falls Church Area

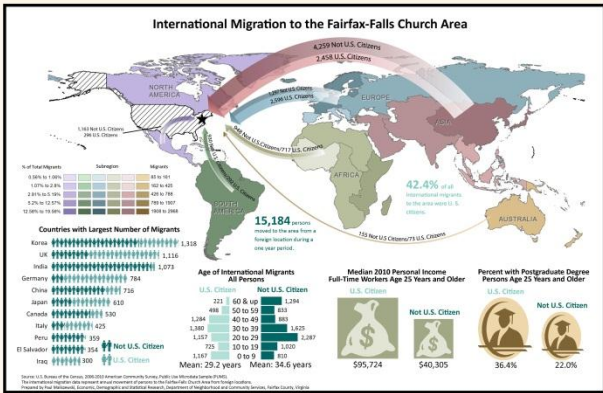
Paul Maliszewski

Neighborhood and Community Services



## Migration to and from the Fairfax-Falls Church Area

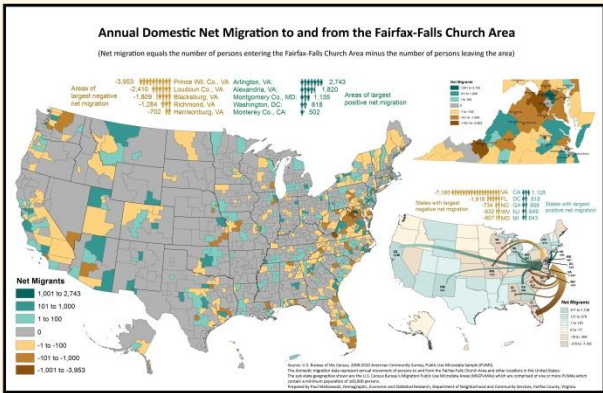
Paul Maliszewski, Neighborhood and Community Services, Fairfax County Government



Migration constitutes nearly 30% of the population growth in the Fairfax-Falls Church Area

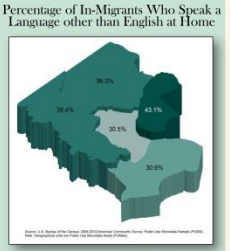
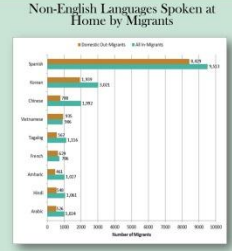
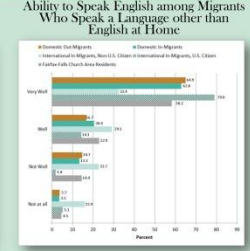
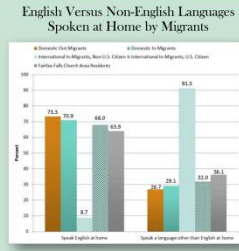
Over 40% of all domestic migrants moved to or from an adjacent jurisdiction

28,570 in-migrants spoke a language other than English at home



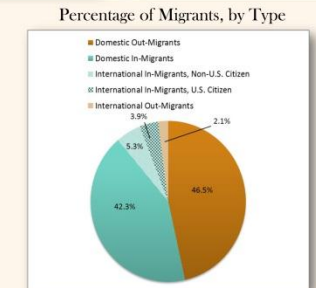
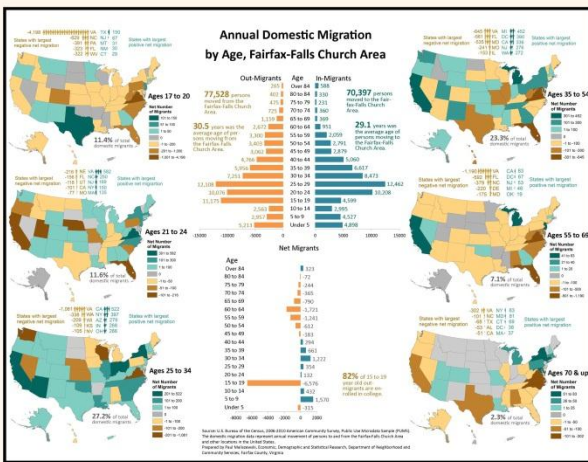
International non-U.S. citizen in-migrants are more likely to be older, female, not in the labor force, and lower income

Migration has not increased the poverty rate for the Fairfax-Falls Church Area

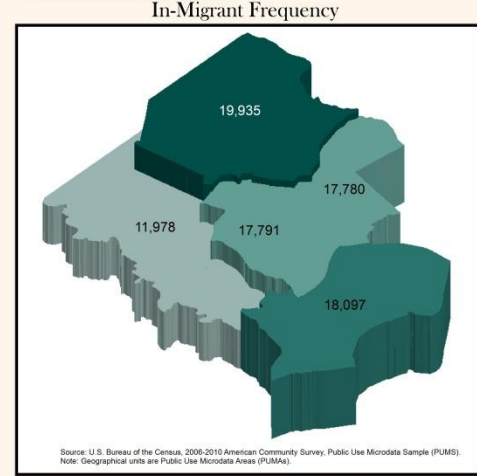


The average in-migrant was under 30 years of age and highly educated (61% of all in-migrants 25 years and older had a bachelor's degree or higher)

Net in-migration made the area's population slightly younger (about 1 week)



College-Age Migrant Frequency	
	All Ages
Domestic in-migrants	4,625
College-enrolled	2,958
Percent college-enrolled	64.0%
Domestic out-migrants	12,231
College-enrolled	10,425
Percent college-enrolled	85.2%



Source: U.S. Bureau of the Census, 2006-2010 American Community Survey, Public Use Microdata Sample (PUMS). Note: Geographical units are Public Use Microdata Areas (PUMAs).



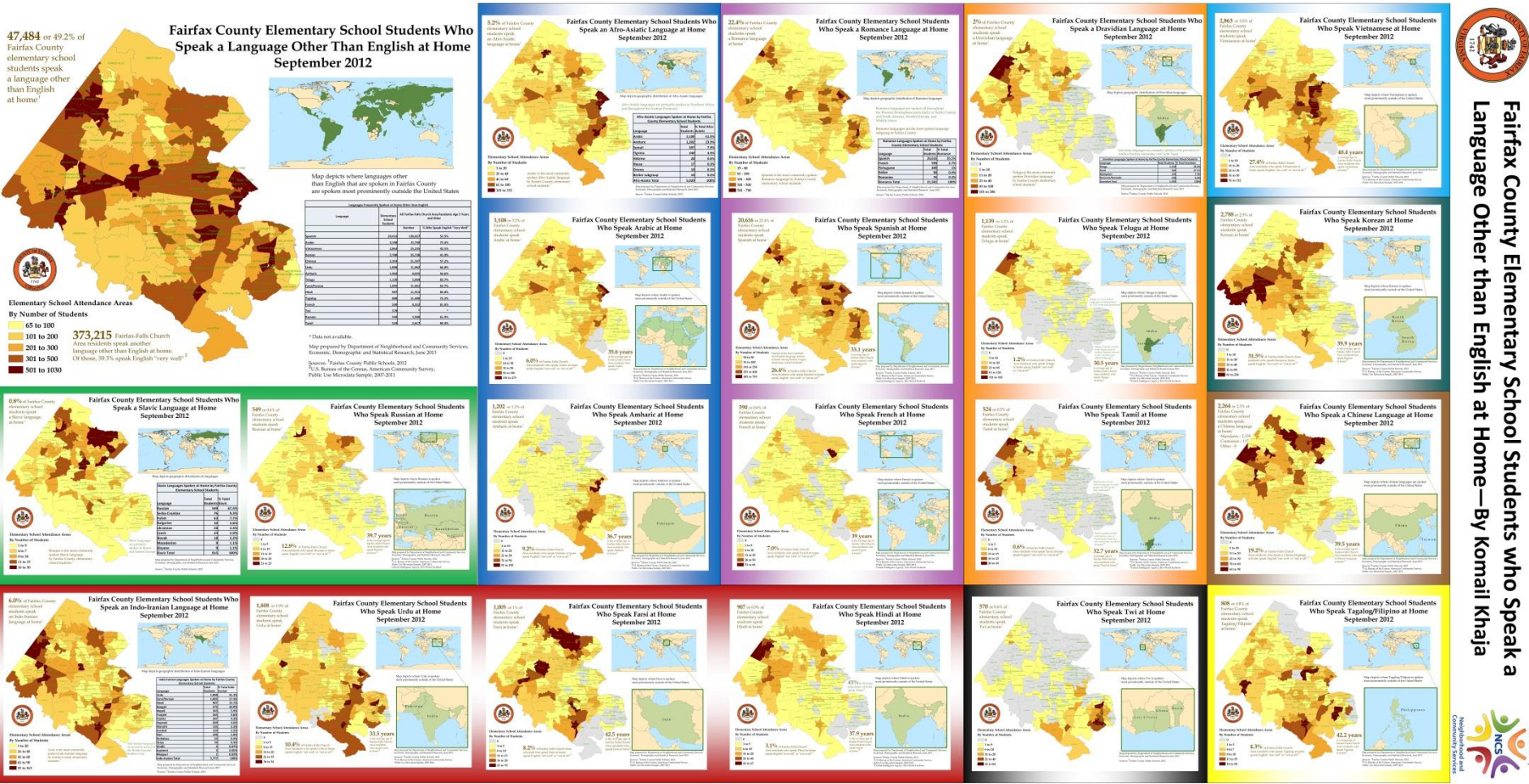
# ANALYTIC CATEGORY

Third Place

## Fairfax County Elementary School Students who Speak a Language Other than English at Home

Komail Khaja

Department of Neighborhood and Community Services



Fairfax County Elementary School Students who Speak a Language Other than English at Home—By Komail Khaja

NCSC

Neighborhood and Community Services





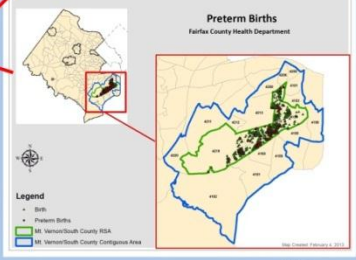
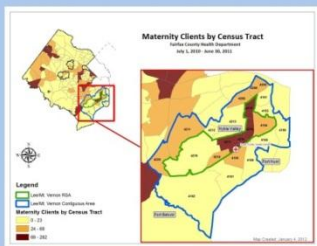
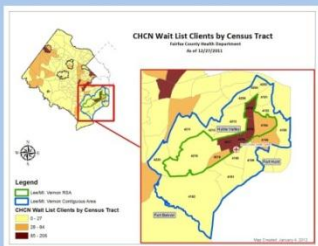
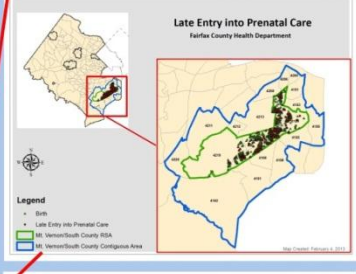
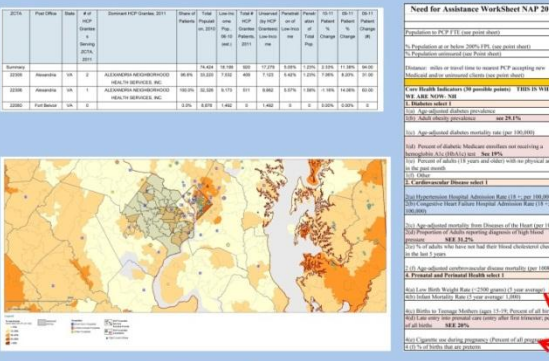
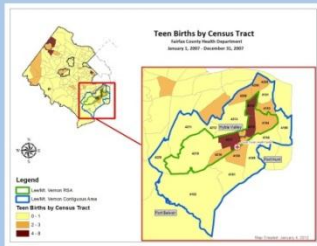
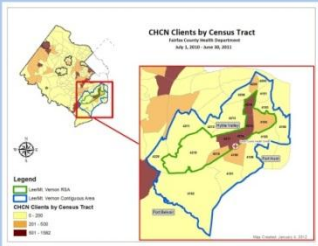
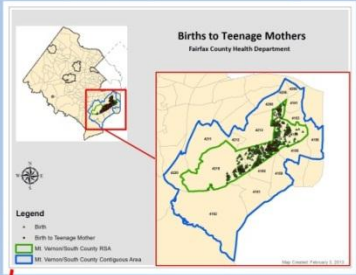
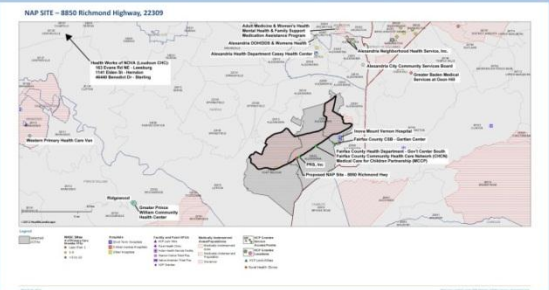
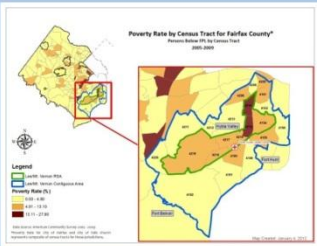
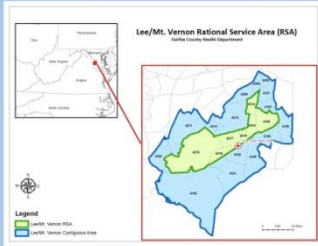
# Fairfax County Health Care Program New Access Point (NAP)



These maps show some of the background work that was done in 2012 to identify areas of the county that were medically underserved. GIS was used to validate that poor health outcomes, including quality of life needs, are disproportionately concentrated in sub-county geographic areas. Based on this work, a Governor's Exceptional MUP designation was granted for the population living in this area.

The screen shots below were taken from the UDS Mapper product. The UDS Mapper is a mapping and decision-support tool driven primarily from data within the Uniform Data System (UDS), previously not publicly accessible at the local level. The UDS Mapper is designed to help inform users about the current geographic extent of U.S. federal Health Center Program (HCP) grantees and look-alikes, and was largely designed for service area analysis.

As part of the Health Resources and Services Administration (HRSA) grant application process, a variety of public health data was collected and mapped. The data was then analyzed geographically in order to complete the Need for Assistance Worksheet. The maps below are examples of some of this data.

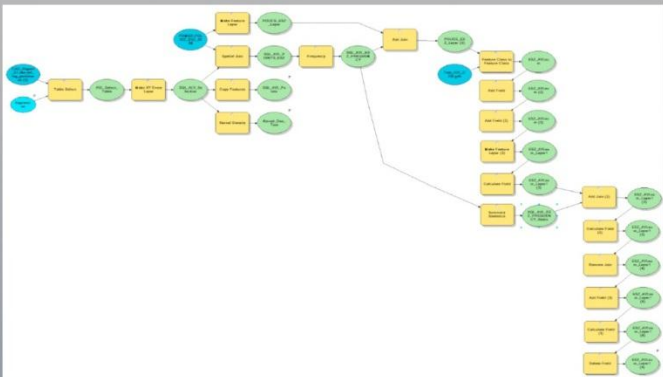


The net result of this effort was the recent announcement that over \$2.4 million has been authorized from the Health Service and Resource Administration to fund a permanent service delivery site in south Fairfax County. This access point will increase access to comprehensive, culturally competent, quality primary health care services.

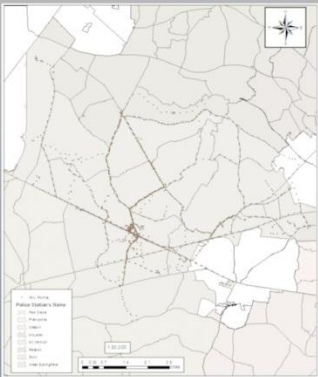


# ANALYTIC CATEGORY

## Constructing a Web Based Mapping Application For Police To Analyze The Efficiency of Patrolling



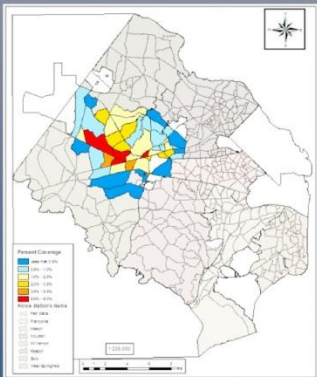
Model created in Model Builder to aid in the construction of a web based GIS map with plans of having it hosted on the Police Interoffice website "BlueNet". This model requires user's input (Unit ID and Date) to generate an AVL location layer, a percent coverage layer and a kernel density layer from the live police iLeads SQL database. The AVL and Percent coverage layer are geoprocessed on the backend then published to the GIS Server to be accessible for the web based GIS Application.



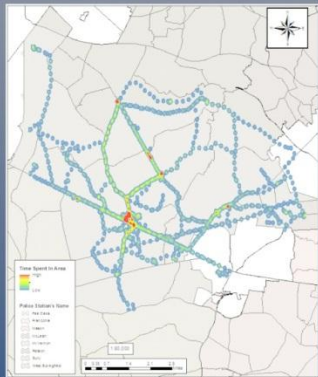
To determine the percent coverage and kernel density the model has to first obtain the AVL points. To retrieve these points a connection to the police iLeads server has to be established. Once this connection is established within Model Builder the database can then be queried by time by Unit ID and Date. This two parameters were chosen to keep the amount of points down to a manageable number while testing.

With help from Fairfax County GIS department the Police is looking for new ways to provide current and accurate information to it's officers. This projects tackles this issue as well as trying to provide officers the ability to perform analysis with a few clicks of a button. Most web based application out in the County displays simple points, lines and/or polygons that visually provide information to the user, but lacks the ability for the user to perform any analysis to the information being displayed. This projects pushes the limits to determine if a County hosted web based application can perform advanced preloaded geoprocesses to the data and return the information back to the user in a timely manner. If this process can be completed it will open the door to more web based applications to non GIS Analysts and give them the ability to view County data in ways that will hopefully make their job easier, quicker and/or more efficient.

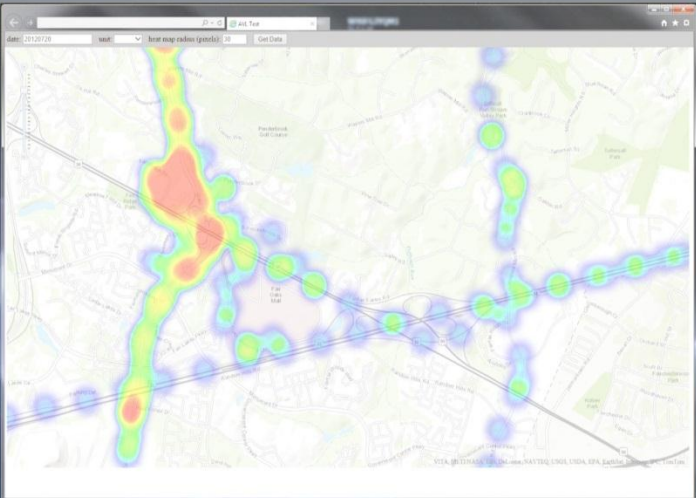
Future plans for this project is to design a friendly interface that will allow Station Commanders the ability to view analytical data about their station with a few clicks of a button within the security of BlueNet. In addition to providing the information shown here, The application will return CFS "Calls For Service" data in the form of a hotspot map and crime location based off event type. As the County's ability to collect data advances the ability to disseminate this information needs to be advances. It's the hope of this project to pave the way for additional web based analytical application to be provided to citizens and/or County employees.



With AVL points captured, the model uses the police patrol area layer within Fairfax County's SDE to construct a choropleth map. This map displays the percentage of AVL points found within each patrol area, normalizes by the area of each polygon. The function of this map along with the others is to aid in the Station Commander's ability to quickly determine if any changes to patrolling is warranted within their station to increase coverage.



With AVL points captured, the model employs the use of the spatial tool Kernel Density to display the density of AVL data as a hotspot map within the County. The density radius was set at 400 feet or less then 1/10<sup>th</sup> of a mile. The function of this map along with the others is to aid in the Station Commander's ability to quickly determine if any changes to patrolling is warranted within their station to increase the coverage area.



Sample of the published hotspot map on a web based map. With more work, modification and testing the web based map will be published and the URL will be hosted within Fairfax County's police intranet "BlueNet".

First Place

Constructing a Web-Based Mapping Application for Police to Analyze the Efficiency of Patrolling

Jeffrey Gallagher

Fairfax County Police Department

# AGENCY CATEGORY

## Best Use of GIS for Public Outreach

### Winner

## Fairfax Trail Buddy

Fairfax County Park Authority



**Fairfax Trail Buddy**

Fairfax County offers over 900 miles of trails, bikeways and sidewalks for non-motorized transportation that have been mapped using a Geographic Information Systems database. Fairfax Trail Buddy is a web-based mapping tool that allows you to discover the extensive network of Fairfax County Park trails. Fairfax Trail Buddy also provides access to the Bike Fairfax Interactive Bike Map, which highlights the most desirable on-road and off-road bike routes for recreational and commuter bicyclists. The web map is accessible from all types of devices and operating systems.

The creation of this comprehensive mapping tool was the result of collaboration of Fairfax County Park Authority, Fairfax County Department of Transportation and Department of Information Technology Geographic Information Systems and Mapping Branch with data provided by Fairfax County Department of Public Works and Environmental Services, City of Fairfax, Town of Herndon, Town of Vienna, Northern Virginia Regional Park Authority, The Bureau of Land Management, National Park Service, Virginia Department of Conservation and Recreation, Virginia State Parks, U.S. Fish and Wildlife Service, Reston Association and George Mason University. This application will evolve and improve over time with feedback from users.

On Trail Use with a Smartphone: Taking the Fairfax Trail Buddy with you on your hike is easy and requires downloading a free mobile application to convert the map functionality to view on a variety of mobile devices. For iPhones and iPad devices, go to the iTunes App Store and search for the ArcGIS application and install it to your device. For Android devices go to Google Play Store and search for the ArcGIS application and install it on your device.

View iTunes Preview: <https://itunes.apple.com/us/app/arcgis/id379687930?mt=8>  
Android Preview: <https://play.google.com/store/apps/details?id=com.esri.android.client>

After you have installed the application, open ArcGIS and use the search tool to find the "Fairfax Trail Buddy." Select the map to immediately view or add to your favorites for future reference. Activate the GPS functionality of your device to dynamically reference your location on the map.

<http://www.fairfaxcounty.gov/parks/trails/>

**TRAIL BUDDY CONNECTS TO SIDEWALKS**

**CLICK ON PARK FOR MORE INFORMATION**

**AERIAL VIEW**

**NATIONAL GEOGRAPHIC BASEMAP**

**TRAIL BUDDY LOCATES STREAM VALLEY TRAILS**

**OPEN STREETMAP**

**STREETS BASEMAP**

**AERIAL WITH LABELS**

**LIGHT GRAY CANVAS**

<http://www.fairfaxcounty.gov/parks/trails/>



# AGENCY CATEGORY

## Best Use of GIS on the Web

## The Department of Planning and Zoning Map Portal/DPZ Public Website

### Department of Planning and Zoning



### The Department of Planning and Zoning (DPZ) Public Website

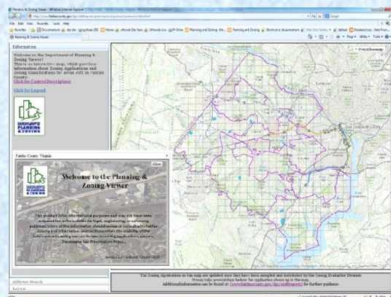
The [Department of Planning and Zoning \(DPZ\) Website](#) is focused on providing rapid access to important, relevant and timely Planning and Zoning information by using and incorporating GIS data throughout the site.



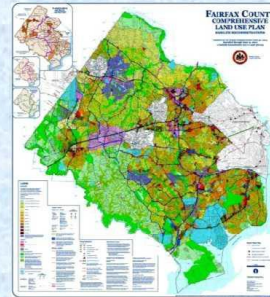
The [DPZ Map Portal Page](#) showcases DPZ created GIS maps as well as links to county-wide GIS maps on a dedicated page with user friendly access and navigation in a one-stop shop.



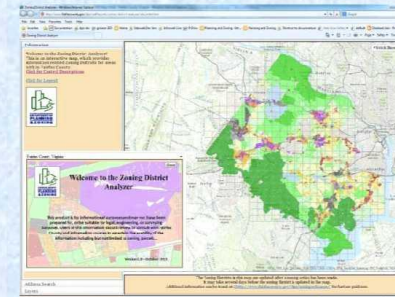
These maps are examples of incorporation of GIS into the DPZ website which assist the agency in achieving its goal of efficiently delivering easily accessible, user friendly access to DPZ information and services to the public, development community, staff, county officials and others.



[Planning and Zoning Viewer](#)



[Comprehensive Land Use Plan Map](#)



[Zoning District Analyzer](#)

<http://www.fairfaxcounty.gov/dpz/maps/>

# AGENCY CATEGORY

## Most Significant Data Contributor



### Fairfax County Landcover Classification

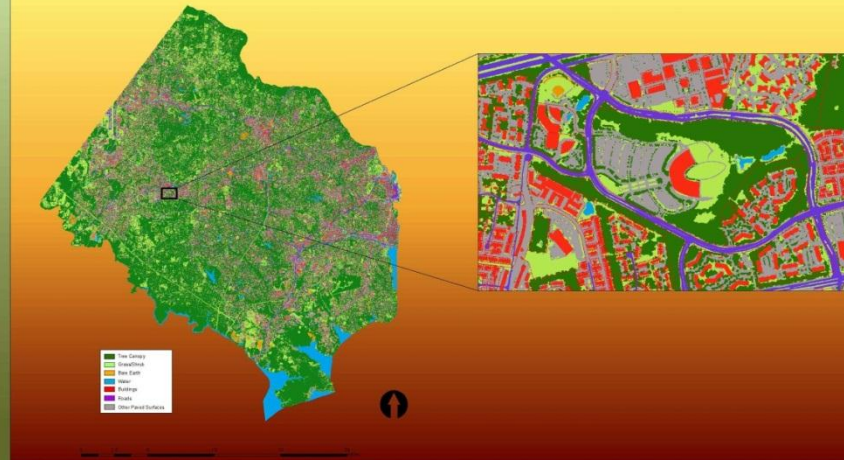
Department of Public Works and Environmental Services

#### COVER CLASSIFICATION

In 2012, the Urban Forest Management Division entered into data exchange with Casey Trees Foundation in order to obtain an updated remote sensing analysis of Fairfax County's tree canopy along with other landcover types. Casey Trees had contracted with the University of Vermont Spatial Analysis Laboratory (UVSAL) to produce a regional tree canopy analysis and was searching for high-quality satellite imagery for Northern Virginia. In exchange for the County's 2011 high resolution satellite imagery, Casey Trees was given rights to the resulting classification data; in return, Fairfax County received a highly accurate landcover classification.

The new classification delineates (1) tree canopy, (2) shrub/grass, (3) roadways, (4) buildings, (5) waterways, (6) impervious surfaces, and (7) bare soil. The remote sensing techniques employed by UVSAL in the classification are considered state of the art.

#### Land Cover Assessment



## 7-Class Landcover Classification

Urban Forest Management Division of the Department of Public Works and Environmental Services

#### ACCURACY

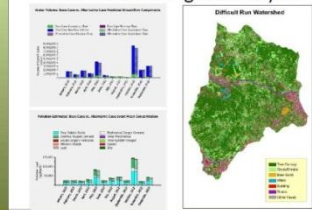
The new landcover classification indicates that approximately 53% of the County's landmass is covered by tree canopy. An accuracy assessment conducted by GIS/UFMD revealed that a user of the classification would find that 94.0% of the time, a visit to an area mapped as tree canopy would prove to be truly of that class.

Class	Actual \ Predicted	Tree Canopy	Shrub/Grass	Roadways	Buildings	Waterways	Impervious Surfaces	Bare Soil
Tree Canopy	100	94	5	2	1	0	0	0
Shrub/Grass	5	1	85	5	2	0	0	0
Roadways	2	0	0	95	0	0	0	0
Buildings	1	0	0	0	99	0	0	0
Waterways	0	0	0	0	0	98	0	0
Impervious Surfaces	0	0	0	0	0	0	95	0
Bare Soil	0	0	0	0	0	0	0	95

#### DATA APPLICATIONS

The countywide tree canopy data was broken down in to all 30 major watersheds and provides a theoretical canopy gain for each watershed which will prove useful in setting meaningful watershed-based canopy goals as recommended in the County's Tree Action Plan. UFMD and GIS and Stormwater staff is currently using the landcover data, digital elevation models and i-Tree Hydro software to model the impacts of tree canopy gain/loss on water quality and stream flow. This modeling may prove useful in developing future land use policies and in setting canopy goals in support of the MS4 Permit and Chesapeake Bay TMDL regulatory requirements.

#### How we are using the Analysis



The Classification data is expected to prove useful to multiple agencies involved with land use decision making, natural resource management, land development review, and property management.



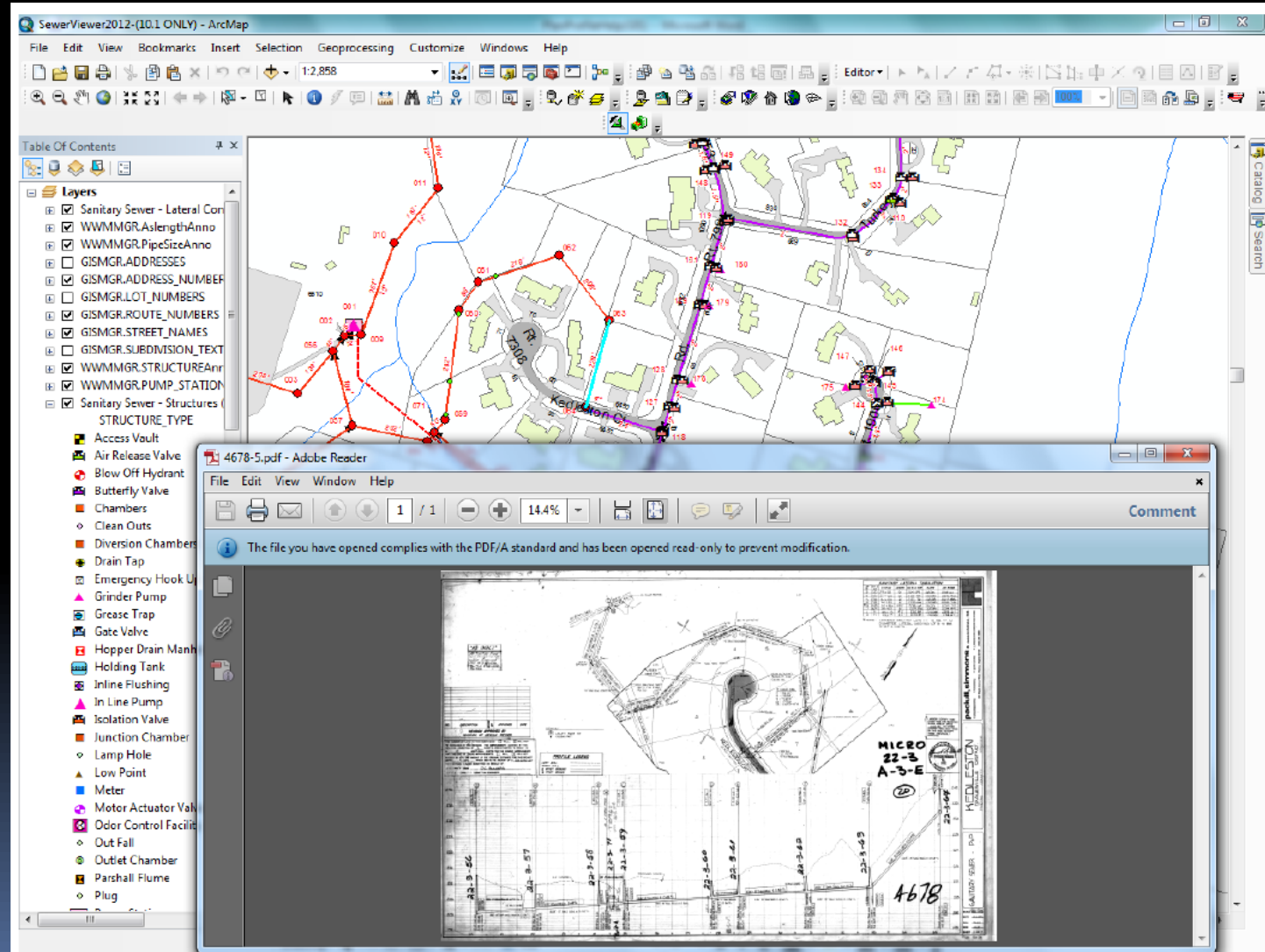
## AGENCY CATEGORY

### Best GIS Integration or Application Development

### Winner

**Plan & Profile**

**Waste Water  
Management Division  
of the Department of  
Public Works and  
Environmental  
Services**



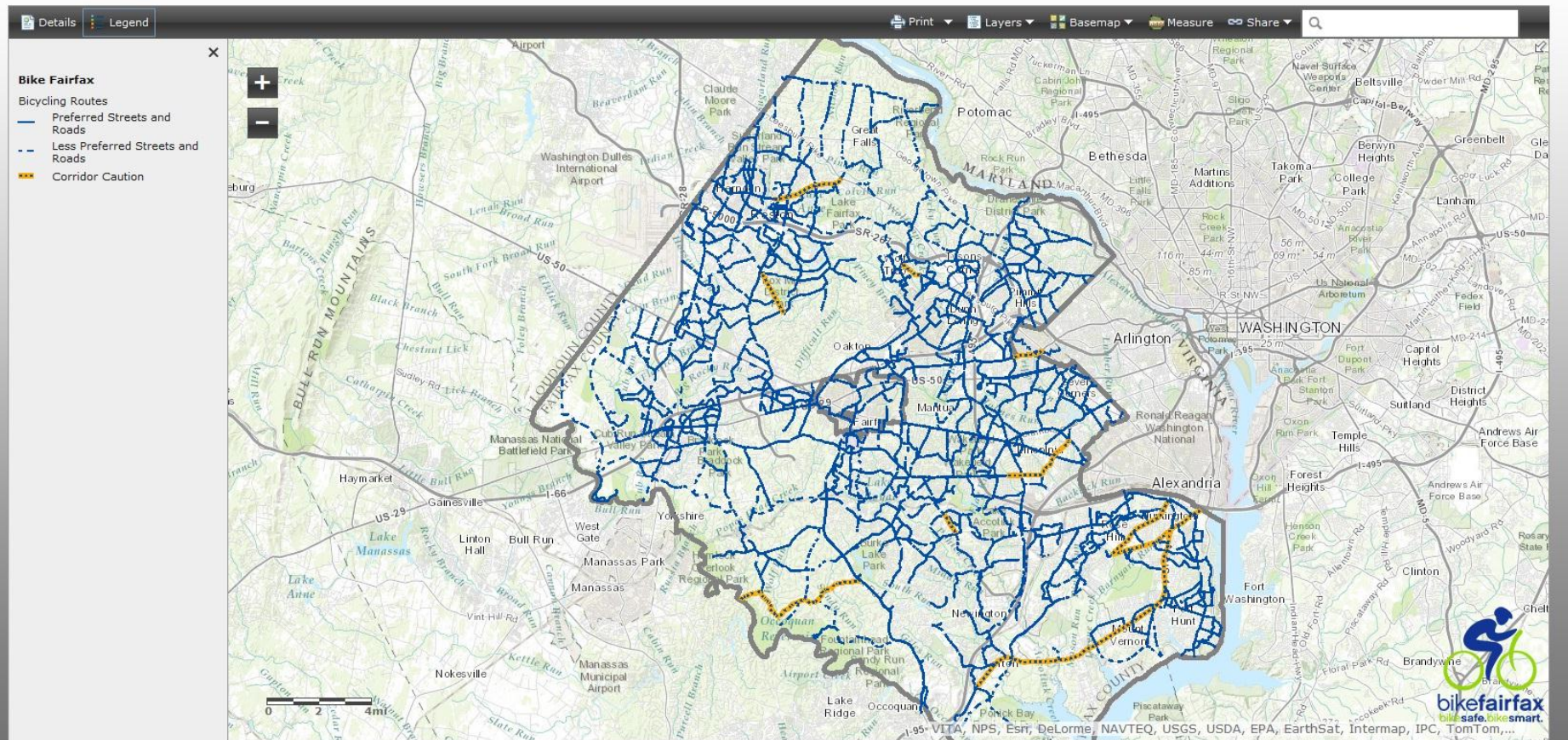
# AGENCY CATEGORY

## Most Significant Progress

**Bike Fairfax**

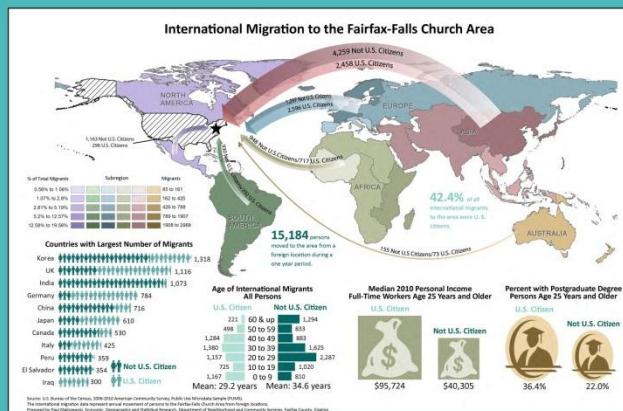
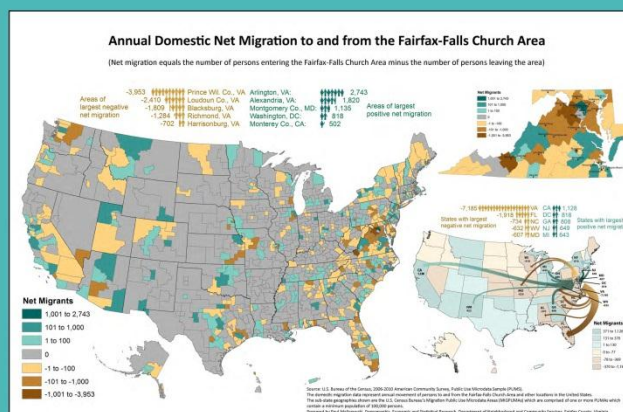
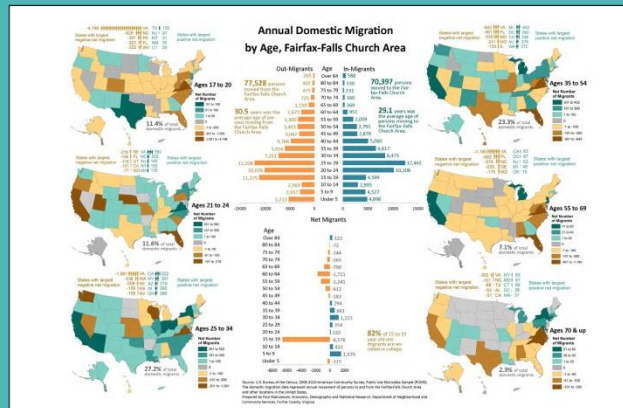
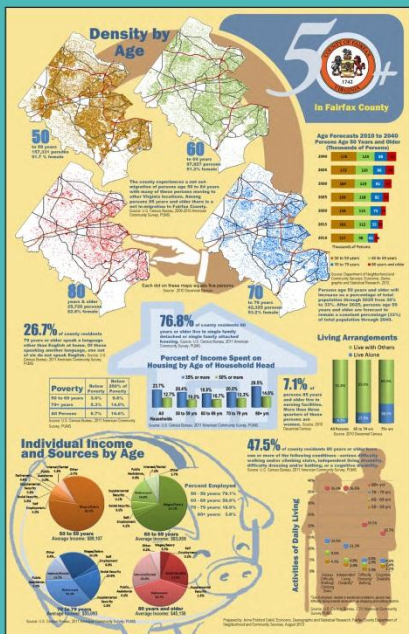
**Department of Transportation**

### Bike Fairfax



<http://www.fairfaxcounty.gov/fcdot/bike/bikemap/>





## Fairfax County Data Visualization and Infographic Gallery

[http://www.fairfaxcounty.gov/demogrph/data\\_visualization.htm](http://www.fairfaxcounty.gov/demogrph/data_visualization.htm)

Economic, Demographic and Statistical Research  
Countywide Service Integration and Program Management  
Department of Neighborhood and Community Services



### Fairfax County Data Visualization and Infographic Gallery

The Economic, Demographic and Statistical Research (EDSR) group has gone live with its new Fairfax County Data Visualization and Infographic Gallery website. Infographics and data visualizations provide an enjoyable way to learn about complex topics without requiring a lot of reading. These techniques employ graphics and data-rich visuals to help explain patterns and trends. Research suggests that information delivered visually is much more likely than text to be read and understood. Infographics and data visualizations help to convey ideas clearly and effectively in order to educate, inform and showcase key information in an intuitive format to the general public and others who may not be used to working with large quantities of tabular data.

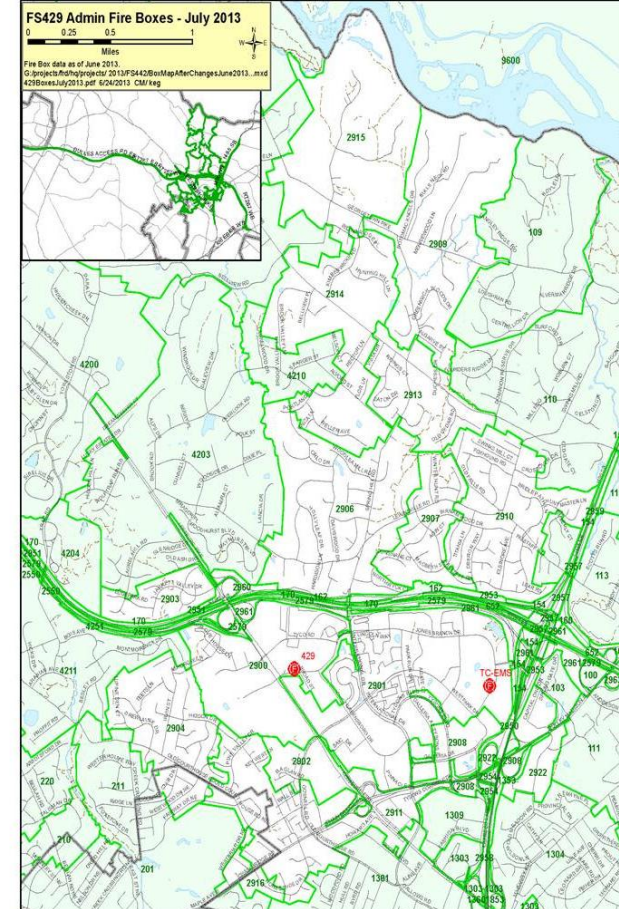
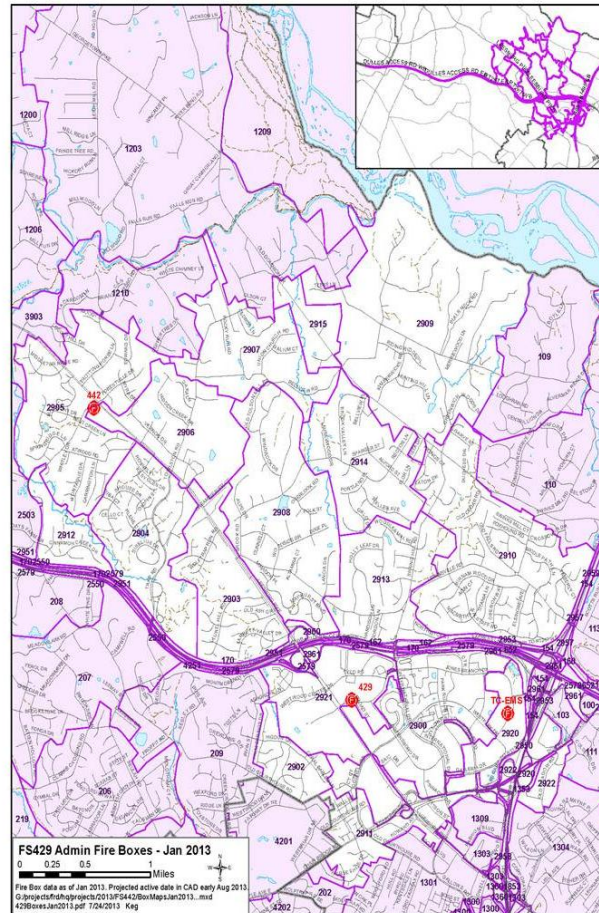
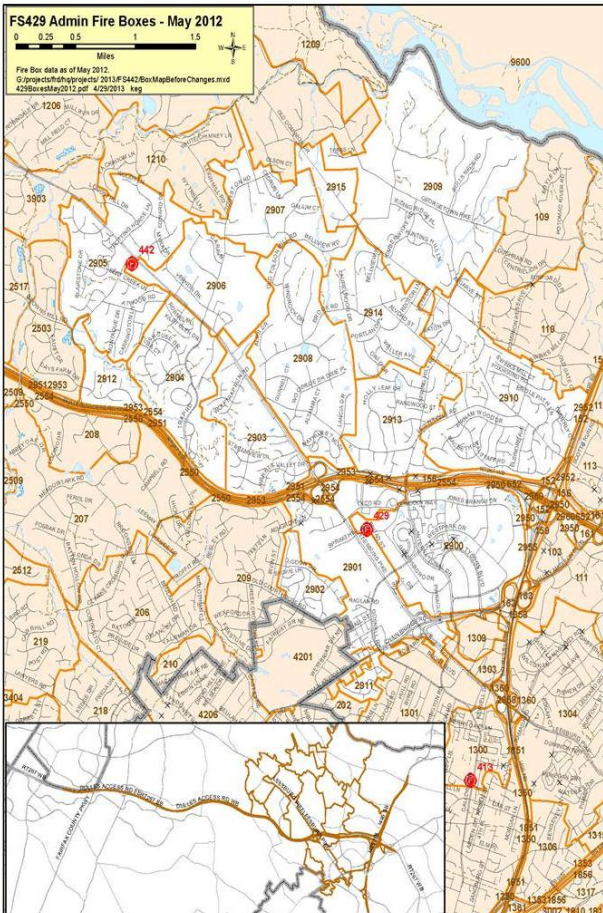
The goals of the Fairfax County Data Visualization and Infographic Gallery are:

- To provide a showcase for data visualizations on a range of interesting and important topics,
- To make data more accessible and understandable to users of the information,
- To provide data in a format that helps to make sense of complex issues, and
- To turn an avalanche of county data into useful and actionable information.

It is hoped that other county agencies will be inspired to create their own data visualizations and share these creations in the web-based gallery. The first five of the infographics in the gallery explore the characteristics of people moving to and from the Fairfax-Falls Church Area; the characteristics of international in-migrants; the characteristics of Fairfax County residents who are age 50 years and older; and the characteristics of county residents living in poverty.



# Evolution of Fire Engine and Medic First Due Maps



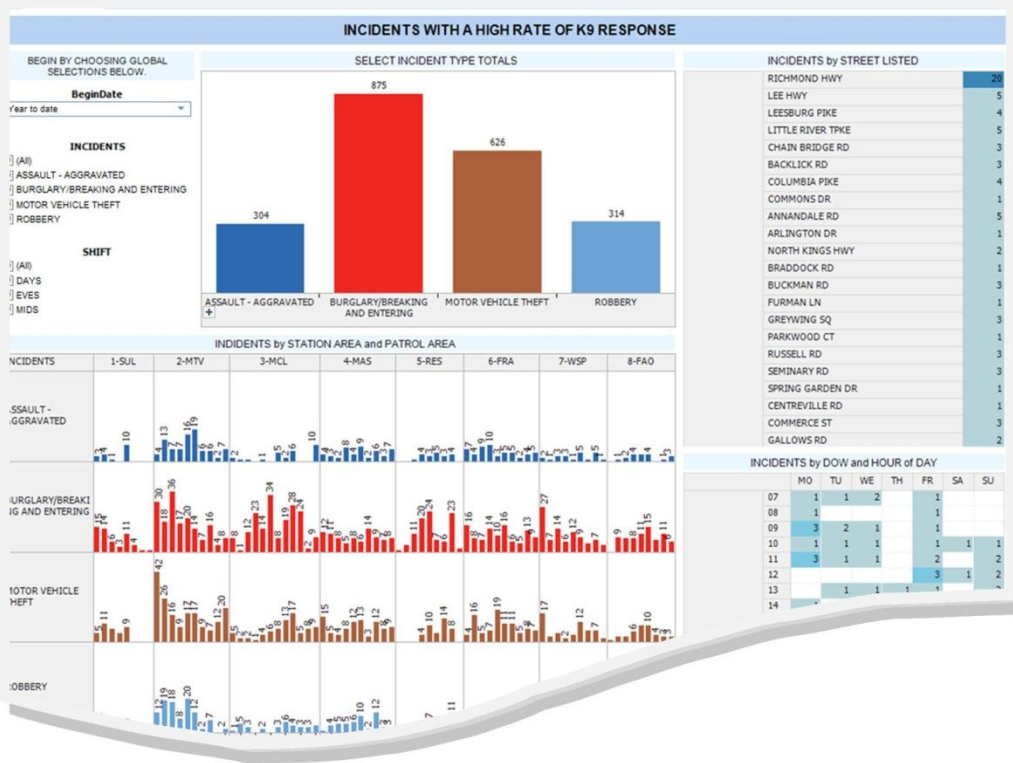
The fire first dues or first responding areas for fire vehicles have changed greatly in the last few years. Reasons include: new roads such as slip ramps between the Dulles Toll Road and Dulles Access Road, new ramps to and from the Beltway Express lanes, Ongoing construction for the new Silver Metro Line, changes in speed limits, and the opening of a new fire station. The first due changes for a single fire station, Fire Station 429, Tysons Corner are shown here. The color sequence was deliberately changed to reduce confusion between map dates.



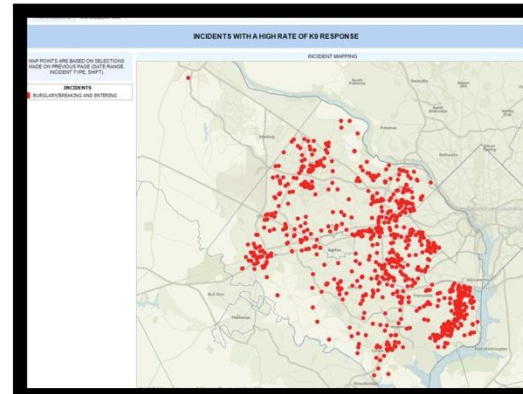
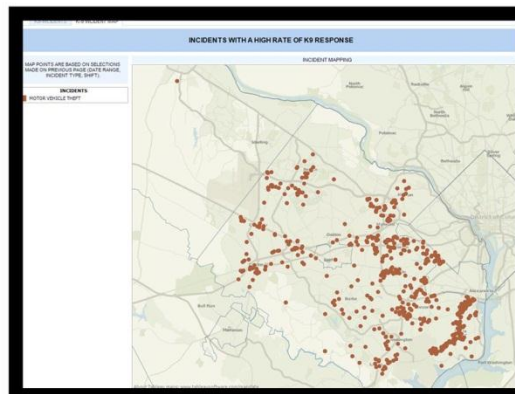
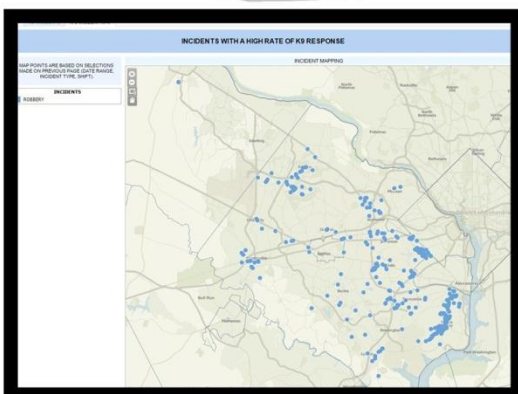
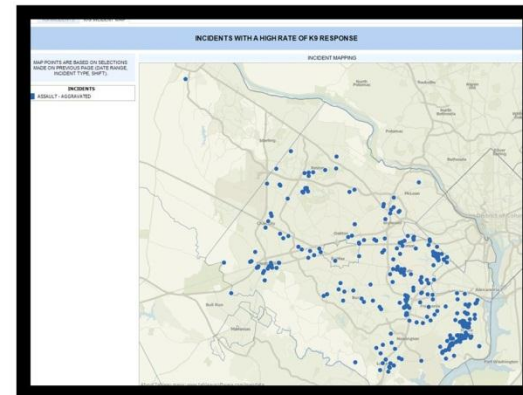


# Police Incidents Displaying a High Rate of Canine (K9) Unit Response

Live Updating Incident Web integration through *Tableau Business Intelligence* Application in conjunction with FCPD Records Management System.

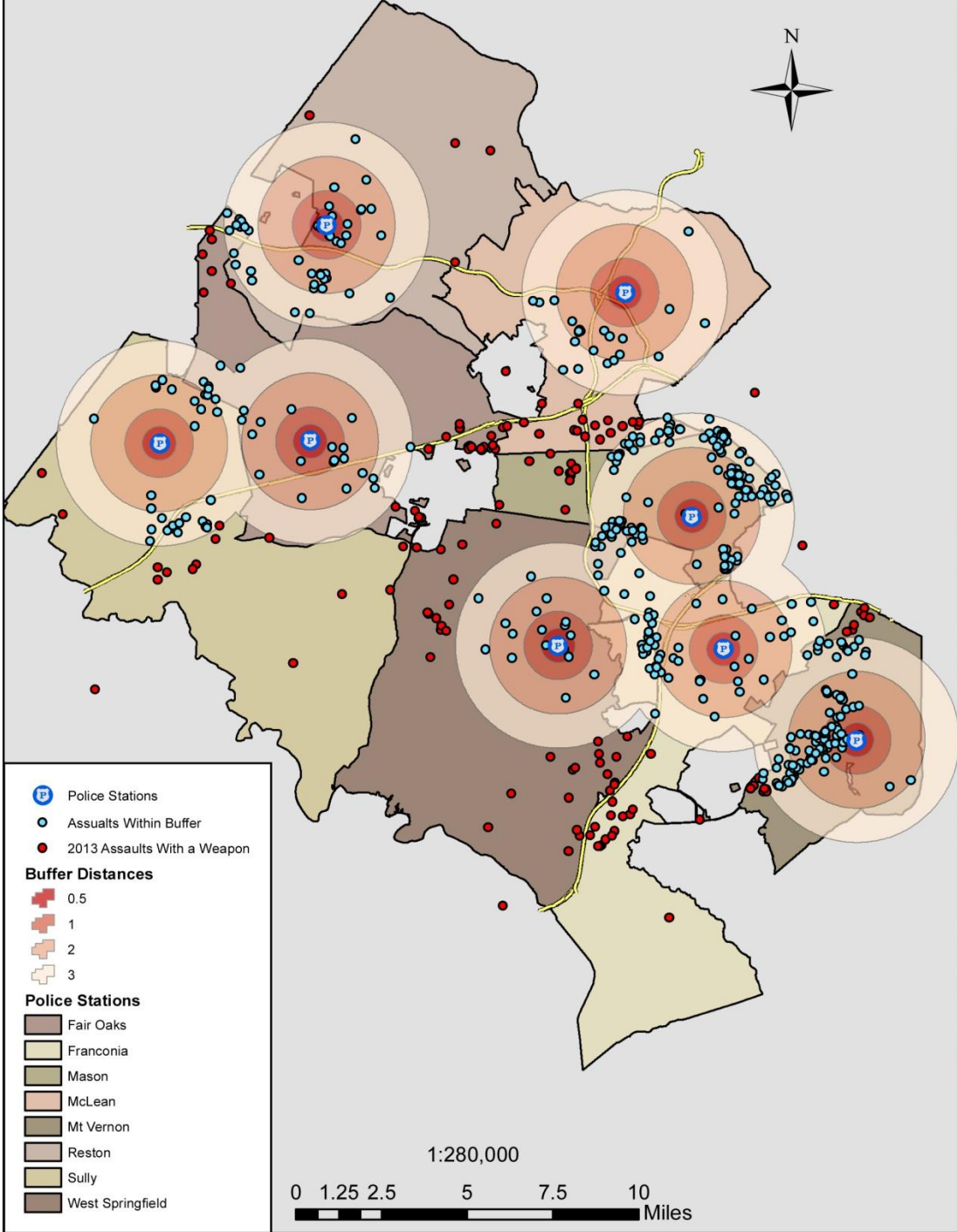


**Description:** The website homepage (FCPD Internal) exhibits police responses for incidents (assaults, burglary, motor vehicle theft and robbery) and by police K9 shifts (days, eves and mids). The website homepage allows the canine unit to view all incidents for a designated date, incident type and/or shift. This filter narrows events down by streets listed on the report, includes a heat map (day of week and hour of day) - these events then filter down to the next tab which places the incidents by color, on a geographic map of Fairfax County. Multiple event types can be displayed on the map. The site is live data and is useful for police resource planning and operational awareness.





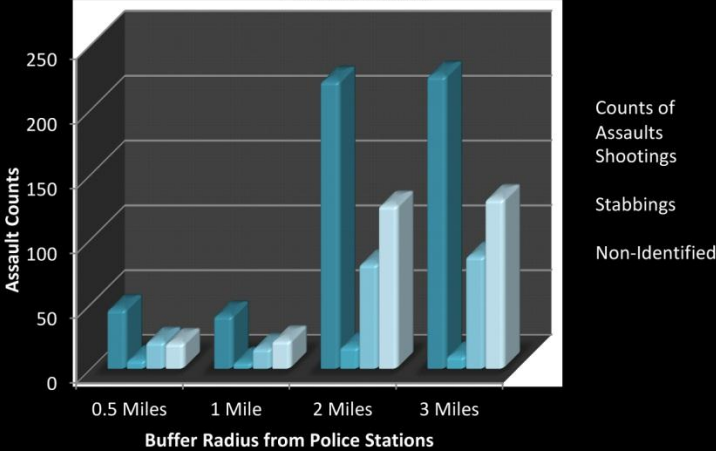




**Counts of 2013 Assaults With a Weapon Event Types Within Proximity to Police Stations.**

2013 CFS (Calls For Service) data was collected from the live iLeads database with a OLE connection. The BI\_aeven\_event database was processed and queried to select out all 717 assaults with a weapon event types within 2013. Multiple buffer rings of 0.5, 1.0, 2.0 and 3 Miles were generated from the 8 police station points. With the use of the "Select By Location" tool within ArcMap to highlight all the assaults that fell within the buffer rings. The "Table Join" feature was used to sum up the total within each separate buffer ring distance. This analysis identifies an large increase in the amount of assaults from a distance of 2 miles or further from a police station compared to 0.5 and 1 mile. It could be hypothesized that a police station will have an positive affect in reducing the amount of assaults if a police station has a presence within one mile of the events.

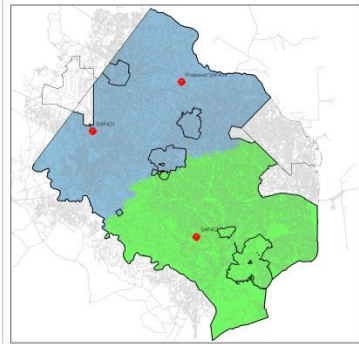
**Counts of Assault Types Within a Buffer Distance From Police Stations**



Buffer Distance	0.5 Miles	1 Mile	2 Miles	3 Miles
Counts of Assaults	45	40	221	225
Shootings	6	4	16	9
Stabbings	20	15	80	86
Non-Identified	19	21	125	130

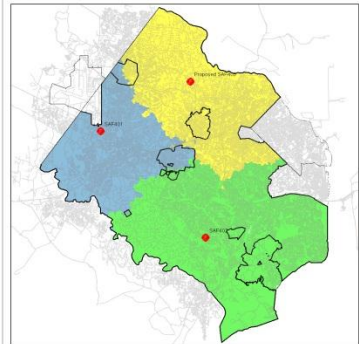
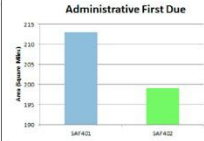


# Fairfax County Fire & Rescue Department Safety Officer Staffing

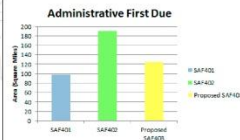


## Administrative First Due

The map on the left shows the current administrative first due area for SAF401 and SAF402. The graph below shows the amount of area of coverage for these Safety Officers.



The map on the left shows the changed administrative first due areas for SAF401, SAF402, and the proposed SAF403 Officer. The graph below shows the amount of area of coverage for each Safety Officer's new administrative first due.



## Background:

Currently the Fairfax County Fire & Rescue Department has 2 Safety Officers on-duty at all times. These uniformed officers respond to over 120 high-risk incidents every month; including large fires, major accidents, and hazardous materials situations. Combined, these Safety Officers can only cover 84% of the county within a 20 minute travel time.

In 2012, a study was conducted to examine coverage differences if a Safety Officer was moved to a new fire station planned to open in late 2013.

## Purpose:

This study builds upon the 2012 study to determine if a new deployment would provide optimum coverage for the county, whether Safety Officer 401 (SAF401) and Safety Officer 402 (SAF402) should remain at their current home stations, and specifically, how would adding a 3rd Safety Officer affect coverage.

## Conclusion:

This analysis demonstrates that an additional Safety Officer will increase the 20 minute travel time area of coverage by 12% at the proposed station location. This study also shows how the administrative first due area for SAF401 and SAF402 would change if the proposed SAF403 Officer were to be put into service.

## Projected Travel Times

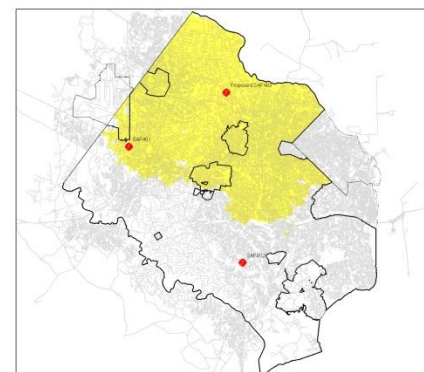
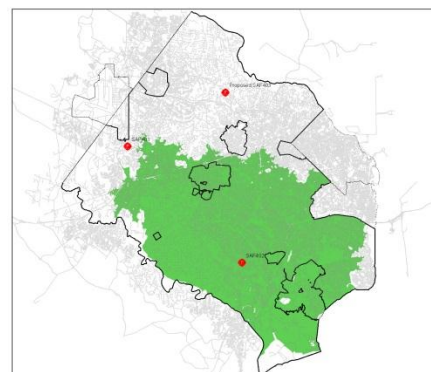
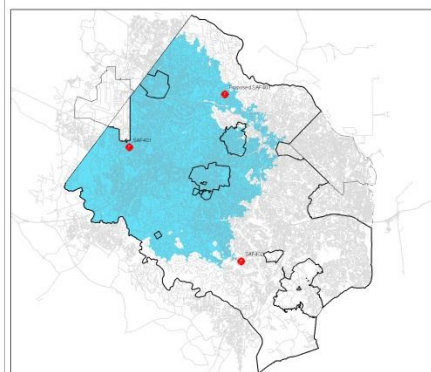
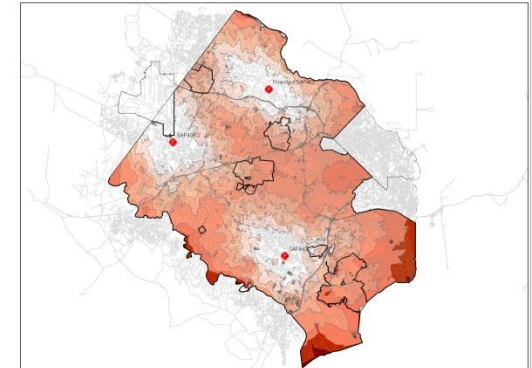
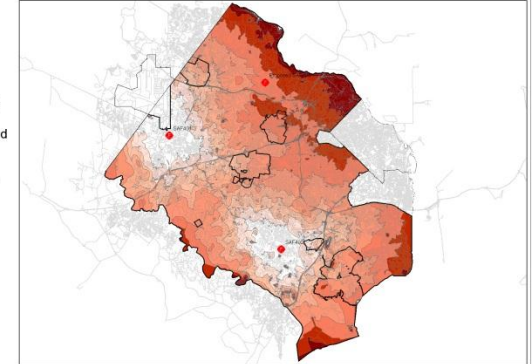
To conduct this study, surface area and graduated time response maps were created using the Esri's ArcGIS 10.1 and the Network Analyst extension. These maps provide an overview of the projected travel times for a Safety Officer if they were available in quarters (responding from their home fire station).

The lists below show the percent of county covered within three projected travel times for the different deployment plans of 2 and 3 Safety Officers.

2 Safety Officers	
6 Minute Travel	9%
10 Minute Travel	28%
20 Minute Travel	84%

3 Safety Officers	
6 Minute Travel	14%
10 Minute Travel	44%
20 Minute Travel	96%

Percentage Gained	
6 Minute Travel	5%
10 Minute Travel	16%
20 Minute Travel	12%



## Projected 20 Minute Response Coverage

This series of maps show the projected 20 minute travel time area of coverage for a Safety Officer available in quarters (responding from their home station).

- SAF401
- SAF402
- Proposed SAF403

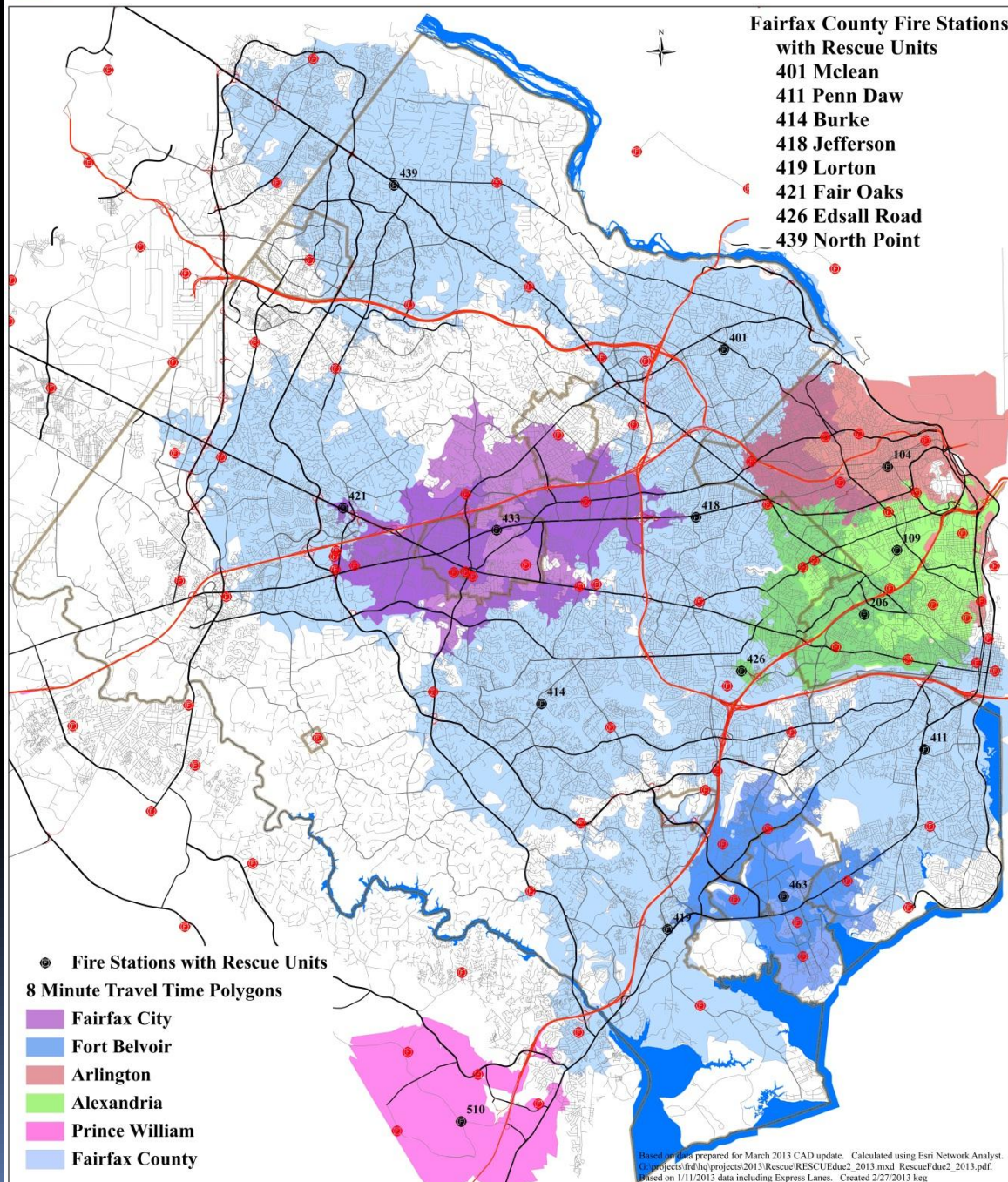




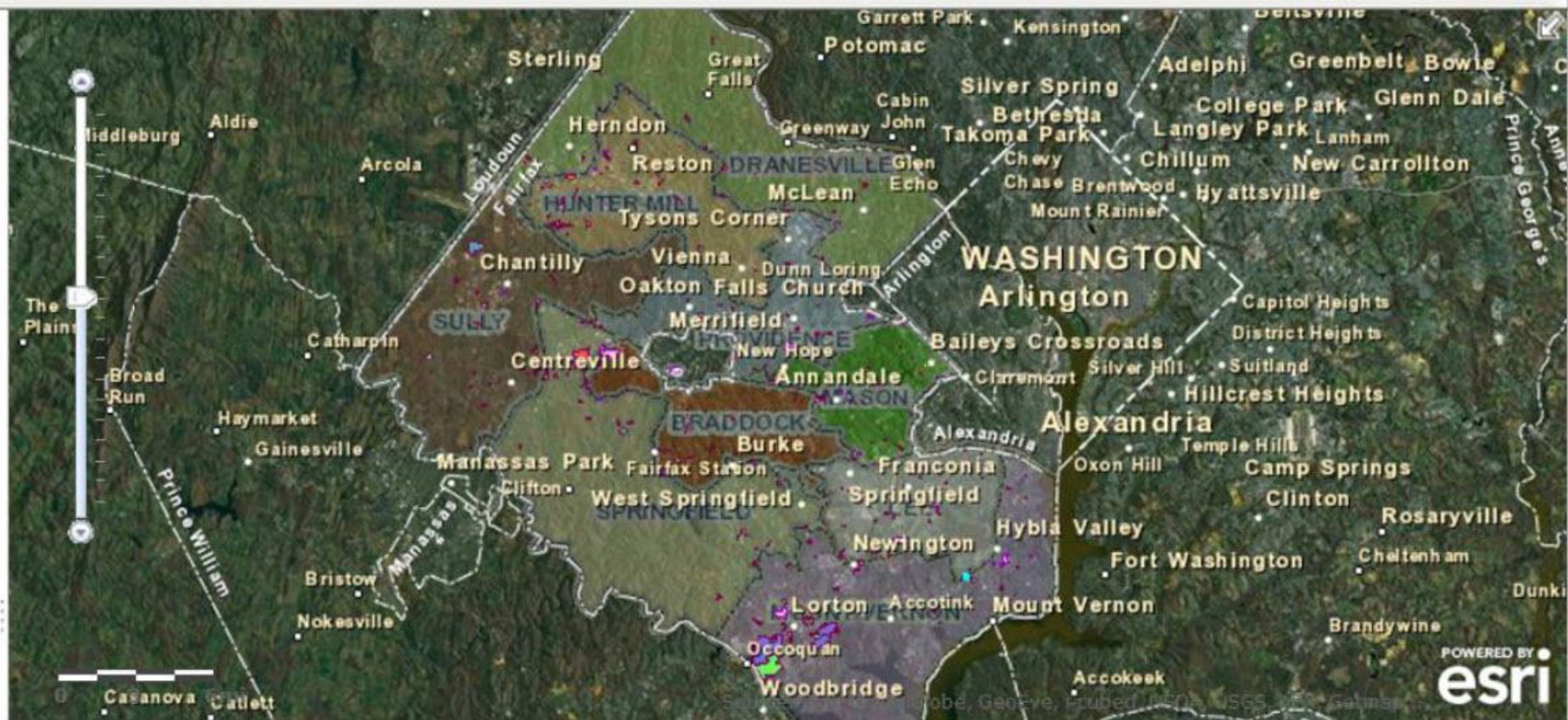


**Rescue: 8 Minute Travel Time**      **March 2013**  
**Includes RE433, RE463, R104, R109, R206, R504, R510**

All units are assumed to be in quarters.  
Prince William units include 90 seconds for call transfer.  
Not all streets shown outside of Fairfax County.







### BOS Properties for Table Viewing - BOS Properties for Table Viewing (662 features)

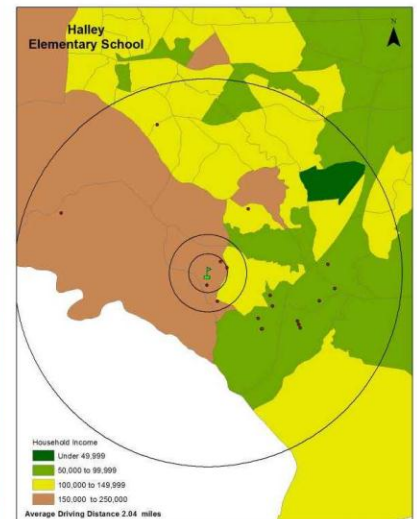
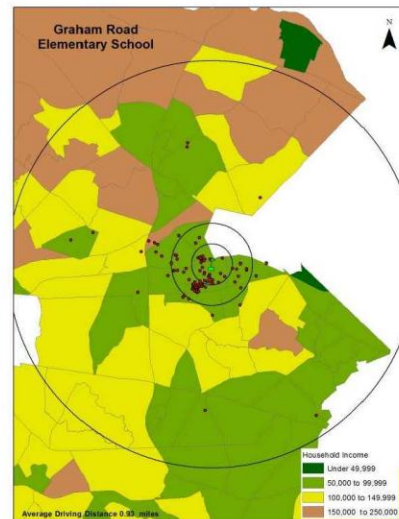
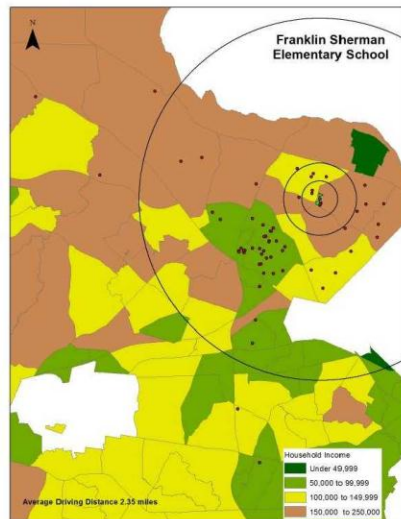
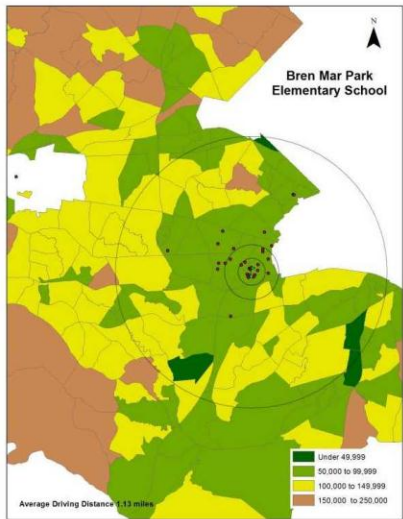
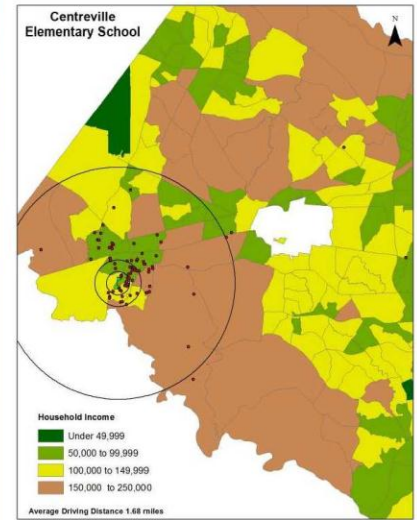
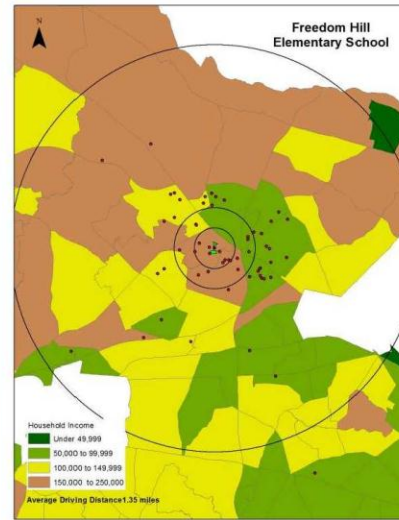
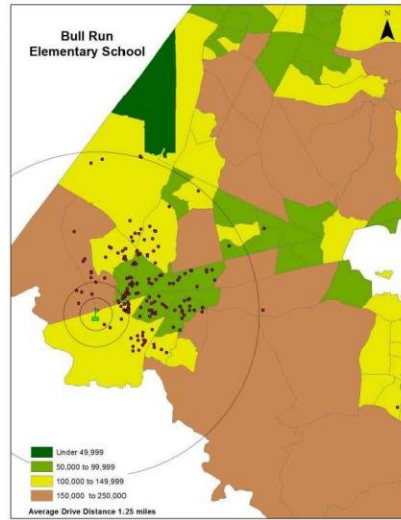
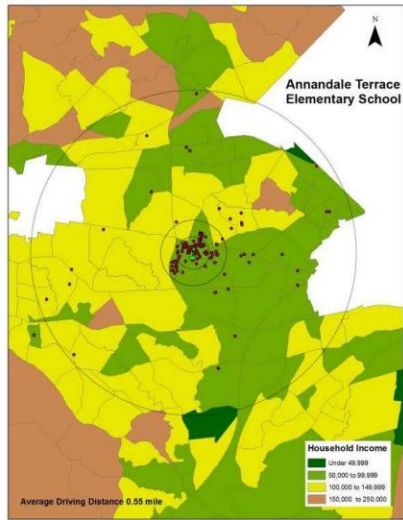
Table Options ▾

Parcel ID	Land Appraisal	Building Appraisal	Total Appraisal	Street Name	Property Description	Land Use Description	
1013 01 0016A	6,104,850.00	36,910,810.00	43,015,660.00	8350 RICHMOND HY	South County Government Center	Low Risk (< = 4	ZONING)
1014 01 0008	990.00	0.00	990.00	No Address	ROW Russell	Vacant Land	C-8(Highway

- Zoom to Selection
- Clear Selection
- Show/Hide Columns
- Filter



# Rec-PAC Location Analysis





Fairfax Center Area Study

About The Study

Comment + Connect

Documents

Meetings

Presentations

FAQs

FAIRFAX FORWARD HOME

The Fairfax Center Area Study

The Fairfax Center Area Study is a multi-phase planning study to examine current recommendations and existing conditions within the Fairfax County Comprehensive Plan. The Fairfax Center Area comprises approximately 5,550 acres west of the City of Fairfax and east of Centerville, generally between Lee-Jackson Memorial Highway (Route 50) and Lee Highway (Route 29).

Information

Address Search

Layers

☐ Metro Bus Route Series 28  
☐ Metro Bus Route Series 29  
☐ Metro Bus Route Series 38  
☐ Streets  
☐ Bike Trails  
☐ Supervisor Districts  
☐ Overlay Districts  
☐ Planning Districts  
☐ Planning Sectors  
☐ Planning Areas  
☐ Fairfax Center Study Phases  
☒ Fairfax Center Concept

Shape

☒ Fairfax Center Land Units  
☒ Parcels  
☒ Common Areas  
☐ Chesapeake Bay Preservation Areas  
☐ Commercial Revitalization

Districts & Areas

☐ Orange Soil  
☐ Asbestos Soil  
☐ Shrink Swell Soil

Switch Basemap

esri

The map and data in this map are for informational purposes.  
 Please contact the Department of Planning & Zoning for information related to this project.  
 Additional information can be found at: (<http://www.fairfaxcounty.gov/dpz/fairfaxforward/>) for further guidance.

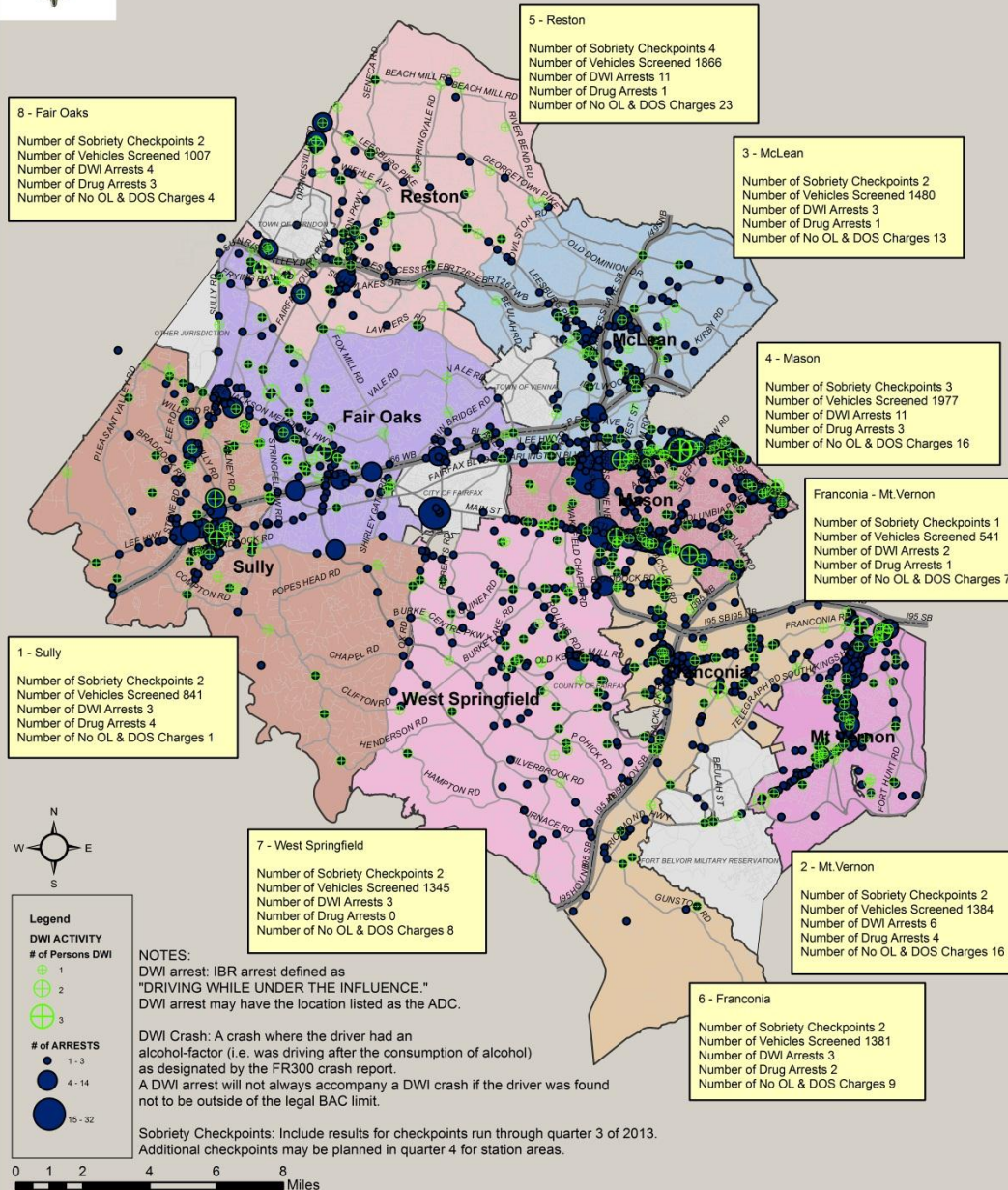




## 2013 DWI ENFORCEMENT PLANNING GUIDE - COUNTYWIDE MAP

Contains activity from the first through third quarters of 2013.

For use with fourth quarter DWI enforcement planning. Please see the station area maps for detailed views of individual geographic station areas.



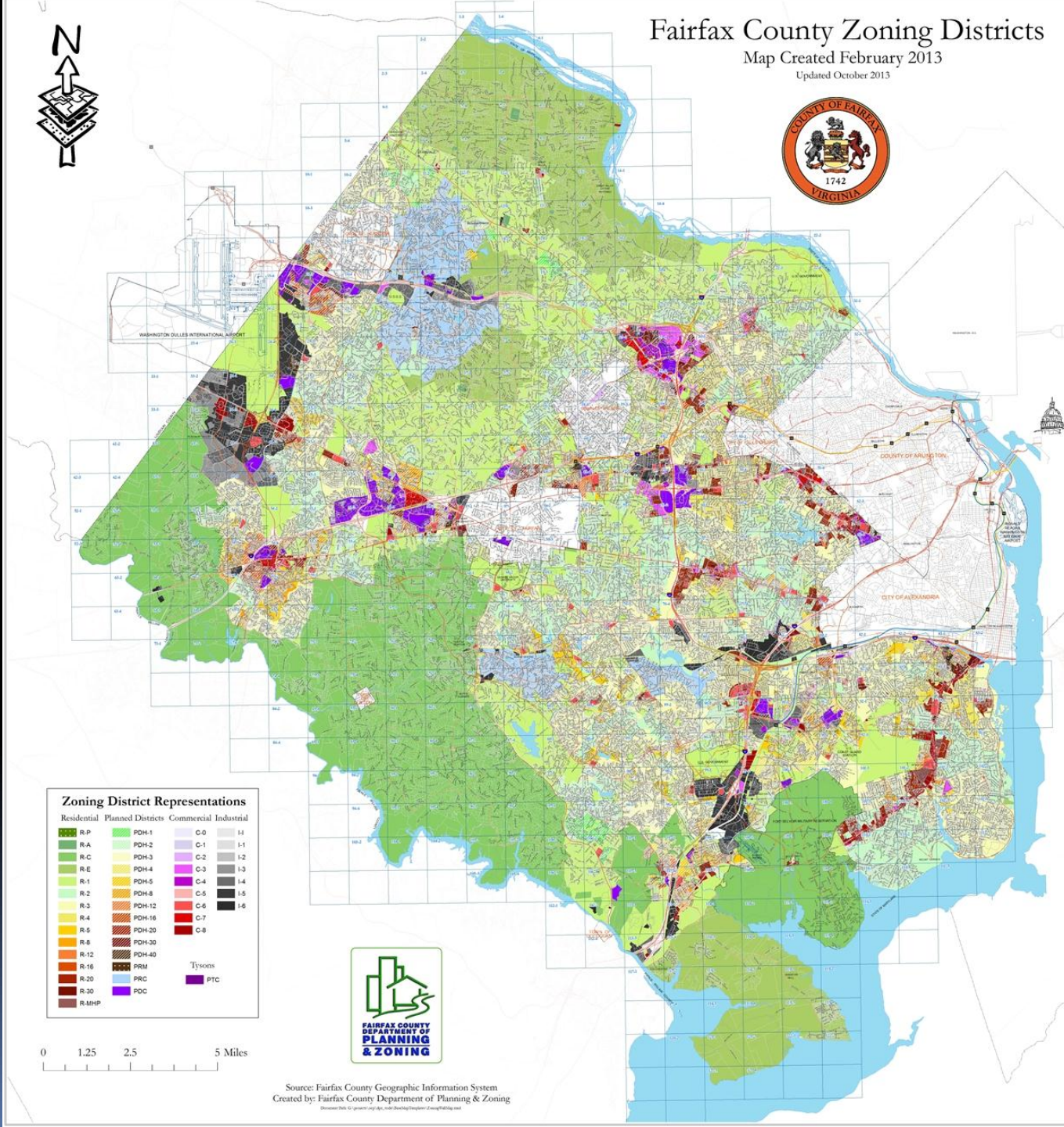




# Fairfax County Zoning Districts

Map Created February 2013

Updated October 2013



## Zoning District Representations

Residential Planned Districts Commercial Industrial

R-P	PDH-1	C-0	I-1
R-A	PDH-2	C-1	I-2
R-C	PDH-3	C-2	I-3
R-E	PDH-4	C-3	I-4
R-1	PDH-5	C-4	I-5
R-2	PDH-8	C-5	I-6
R-3	PDH-12	C-6	
R-4	PDH-16	C-7	
R-5	PDH-20	C-8	
R-6	PDH-30		
R-12	PDH-40		
R-16	PRM		
R-20	PRC		
R-30	POC		
R-MHP			
		Tysons	
		PTC	

0 1.25 2.5 5 Miles



Source: Fairfax County Geographic Information System  
Created by: Fairfax County Department of Planning & Zoning  
Document Path: G:\gis\map\figs\map\Building\Zoning\ZoningMap.mxd





# AT&T Originating Cell Site Activations by Subscriber (■■■■) ■■■-■■■ between December 27, 2012 and January 15, 2013

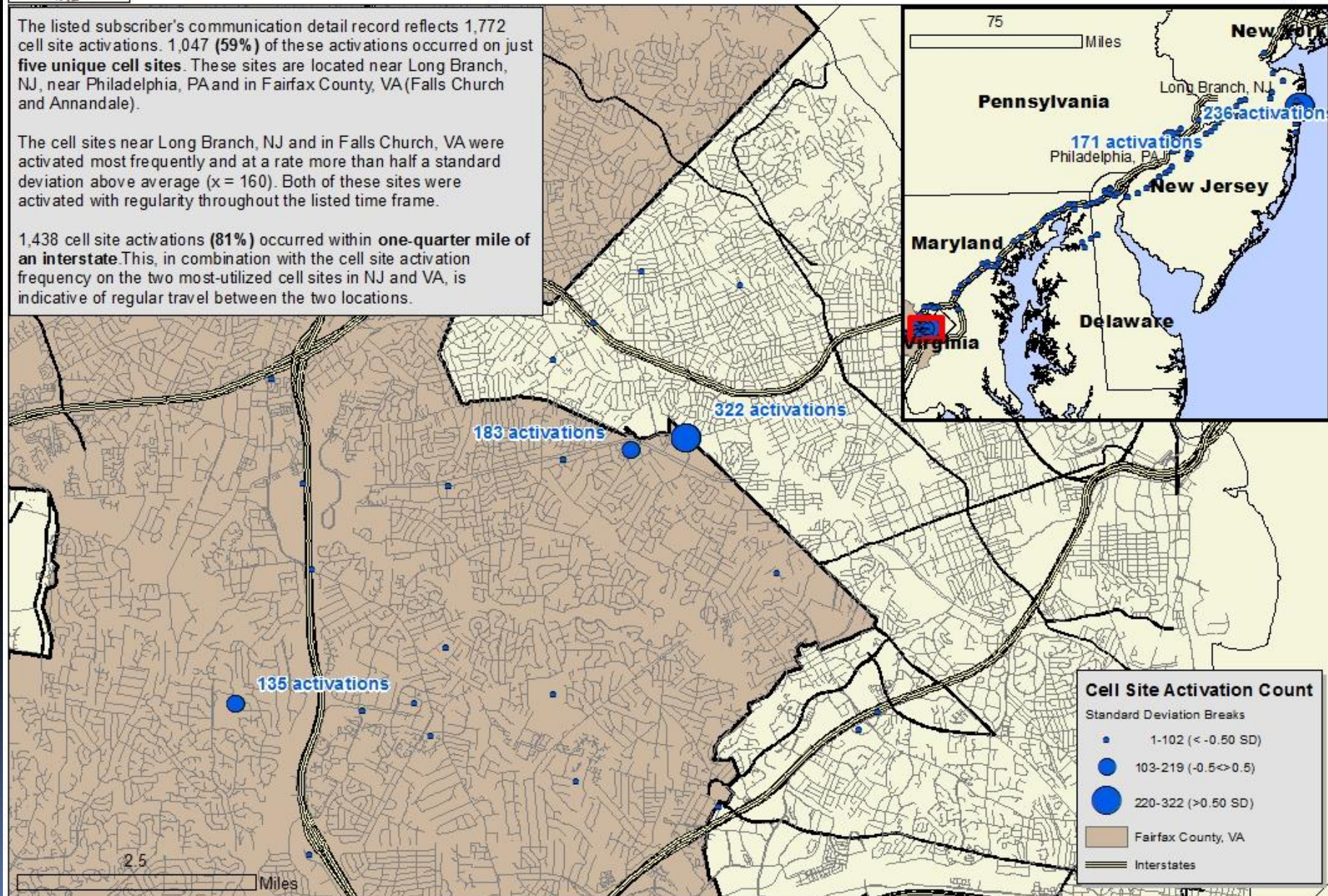
FCDP/CAU/MAS/JBL  
01/17/13



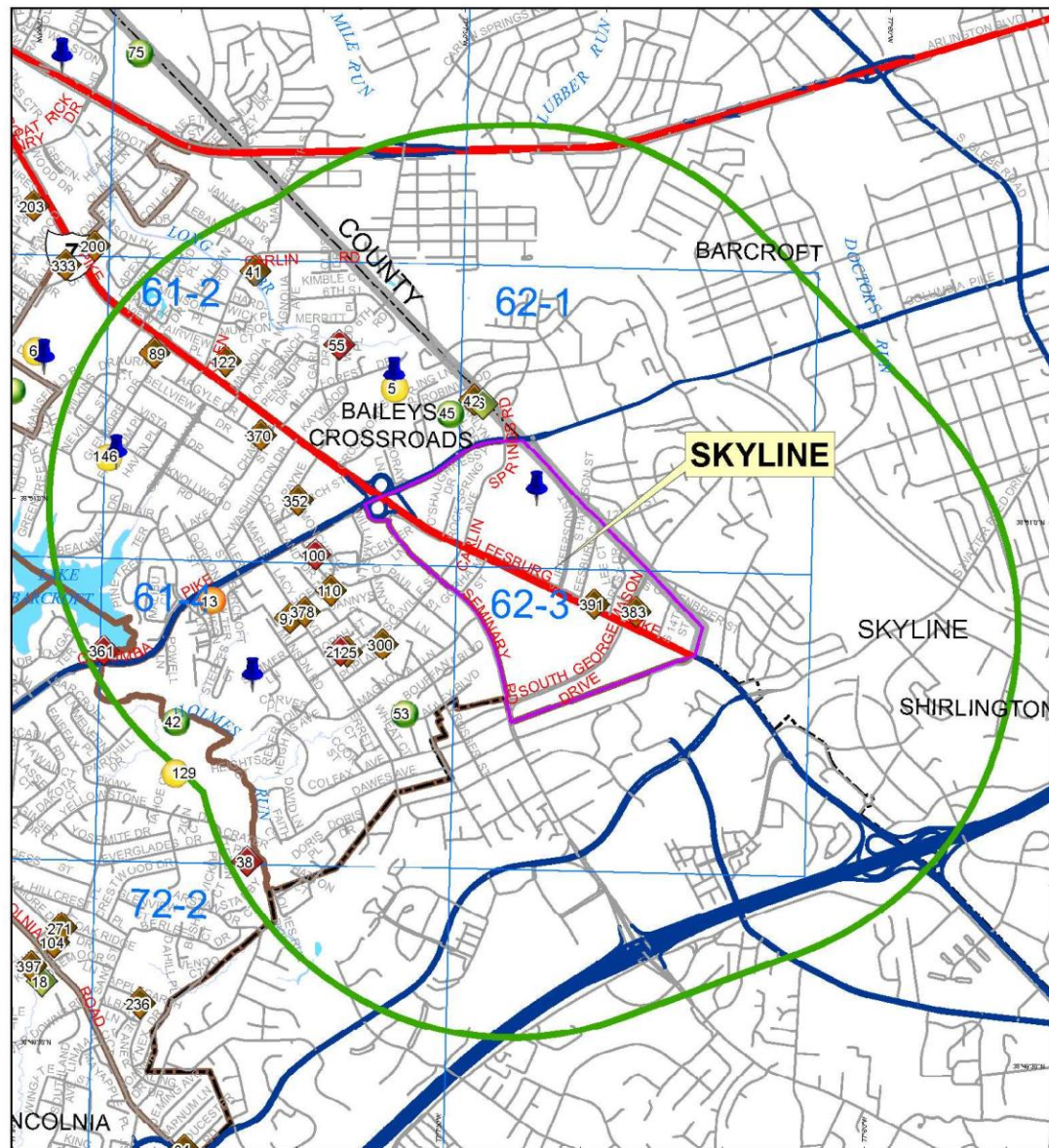
The listed subscriber's communication detail record reflects 1,772 cell site activations. 1,047 (59%) of these activations occurred on just **five unique cell sites**. These sites are located near Long Branch, NJ, near Philadelphia, PA and in Fairfax County, VA (Falls Church and Annandale).

The cell sites near Long Branch, NJ and in Falls Church, VA were activated most frequently and at a rate more than half a standard deviation above average ( $x = 160$ ). Both of these sites were activated with regularity throughout the listed time frame.

1,438 cell site activations (81%) occurred within **one-quarter mile of an interstate**. This, in combination with the cell site activation frequency on the two most-utilized cell sites in NJ and VA, is indicative of regular travel between the two locations.







#### Legend

##### Alternate Polling Locations

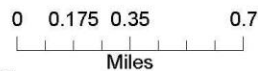
##### Category

- Civic
- Government Center
- Library
- Voting Location
- 1 Mile buffer of Skyline Precinct

- Private Education
- Public Facility
- Other Facility
- Recreation Center
- Public School

- Hunters Branch Precinct Area

#### Alternate Polling Place Map Skyline Area



COUNTY OF FAIRFAX  
COMMONWEALTH OF VIRGINIA



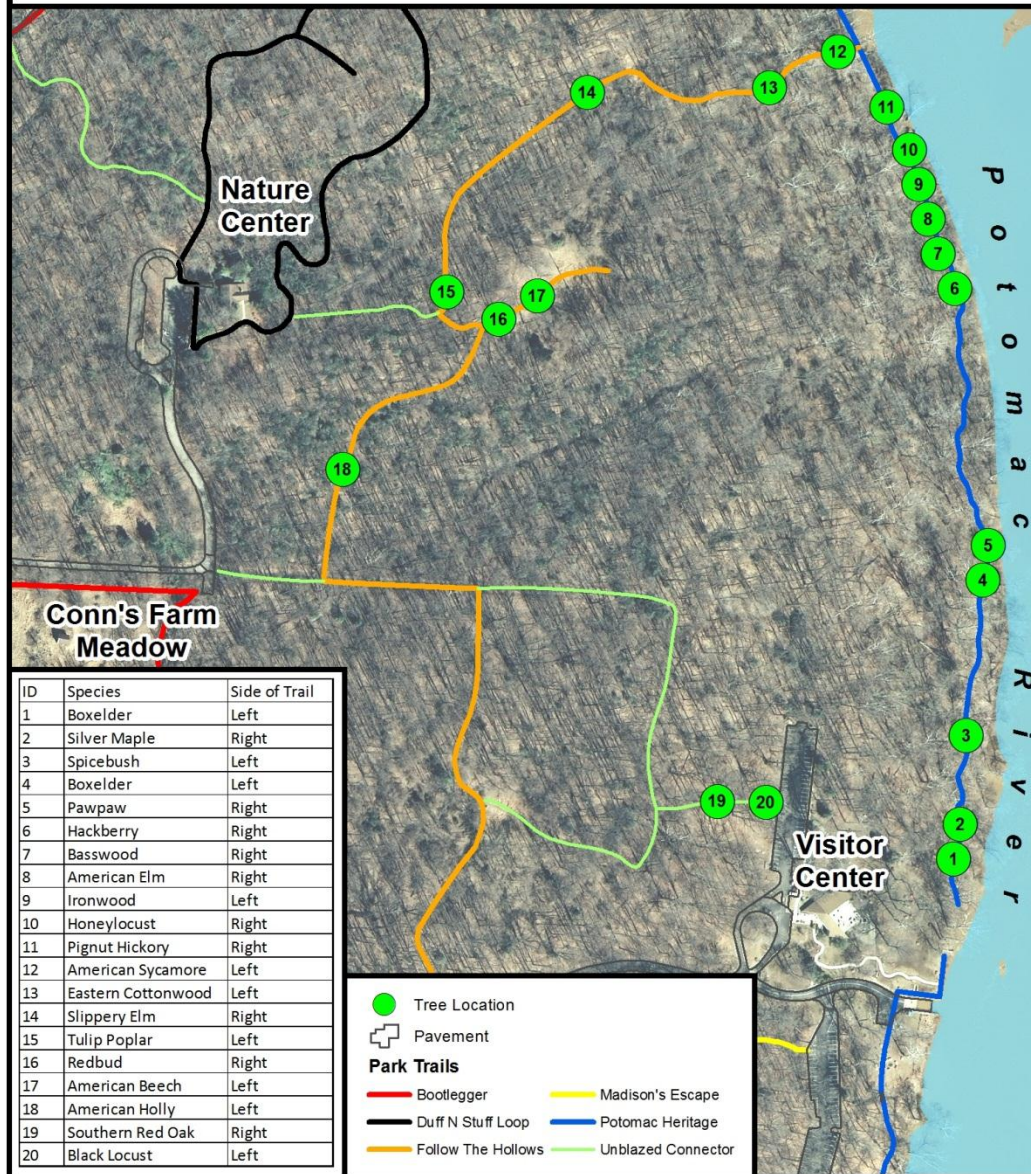
2013

PUBLISHED BY FAIRFAX COUNTY, VA GOVERNMENT  
PREPARED BY FAIRFAX COUNTY DEPARTMENT OF INFORMATION TECHNOLOGY'S  
GIS AND MAPPING SERVICES BRANCH  
CORRECTIONS OR ADDITIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE ABOVE AGENCY  
PHONE: (703) 324-2712  
Project # 2392, March 2012





Please return this map to the Riverbend Park Visitor Center.



ID	Species	Side of Trail
1	Boxelder	Left
2	Silver Maple	Right
3	Spicebush	Left
4	Boxelder	Left
5	Pawpaw	Right
6	Hackberry	Right
7	Basswood	Right
8	American Elm	Right
9	Ironwood	Left
10	Honeylocust	Right
11	Pignut Hickory	Right
12	American Sycamore	Left
13	Eastern Cottonwood	Left
14	Slippery Elm	Right
15	Tulip Poplar	Left
16	Redbud	Right
17	American Beech	Left
18	American Holly	Left
19	Southern Red Oak	Right
20	Black Locust	Left



**FAIRFAX COUNTY  
PARK AUTHORITY**

12055 Government  
Center Parkway, Suite 406  
Fairfax, VA 22035-1118

## RIVERBEND PARK TREE WALK

0 100 200 400  
Feet

1:3,000

October 15, 2012





# How far do my honeybees roam?

## And why does this matter?

Although honeybees are workaholics, they will only roam as far as needed to locate good sources of nectar and pollen. It is pretty well established that they will easily travel 2 miles in their search for good food and that they will suffer diminishing cost effectiveness beyond a 4 mile one-way trip.(1)

Pesticide application anywhere within the forage buffer can have a devastating effect on the health of the hive.

In addition, the proximity of other managed hives means competition for the best food.

The area covered by honeybees in search of forage seems huge, but large amounts of the area may be unusable. Water, landscaped grass (as in athletic fields), pavement, and buildings take up much of the area. The forests on the Fairfax County side of the Occoquan Reservoir provide pollen but little nectar. Of the remaining area, plants specifically bred for human enjoyment may not provide the nutrition needed by bees.

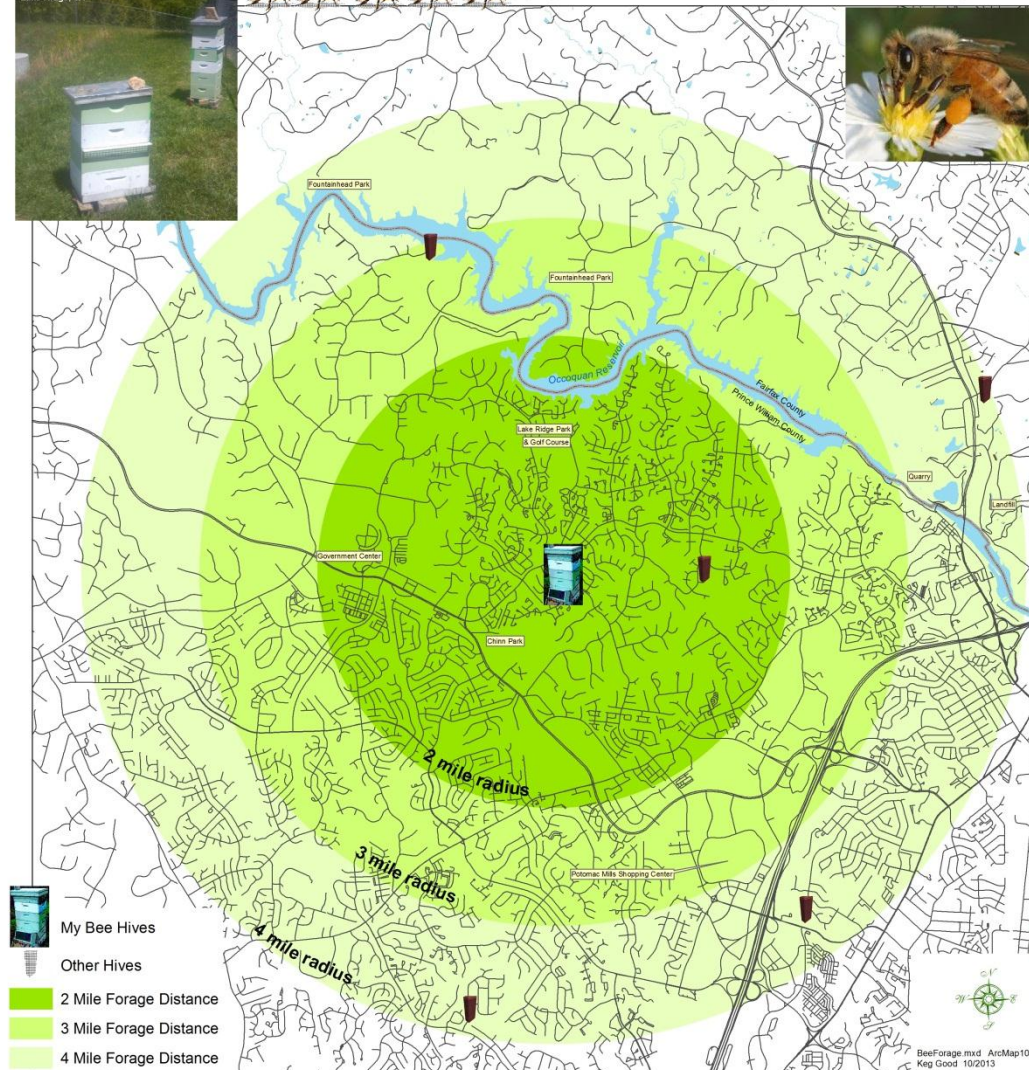
Radius	Acres
2 miles	8,658
3 miles	18,092
4 miles	32,166



Actual hives in Lake Ridge, VA



(1) Traynor, Joe. 2002. *How Far Do Bees Fly? One Mile, Two, Seven? and Why?* Bee Culture.



My Bee Hives



Other Hives



2 Mile Forage Distance



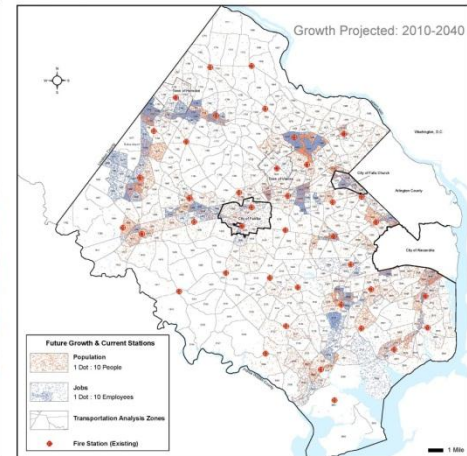
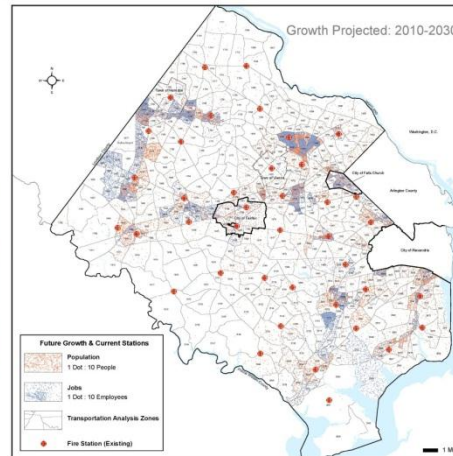
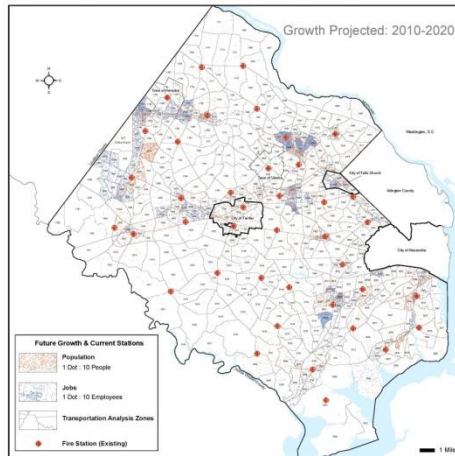
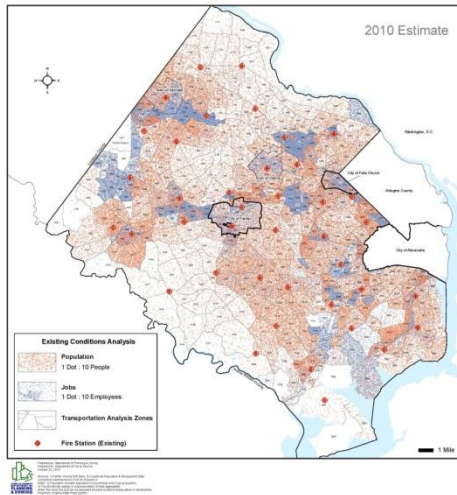
3 Mile Forage Distance



4 Mile Forage Distance



## Visualizing Population & Employment Growth for Fire Station Planning Symposium





# Lee District Park and RECenter

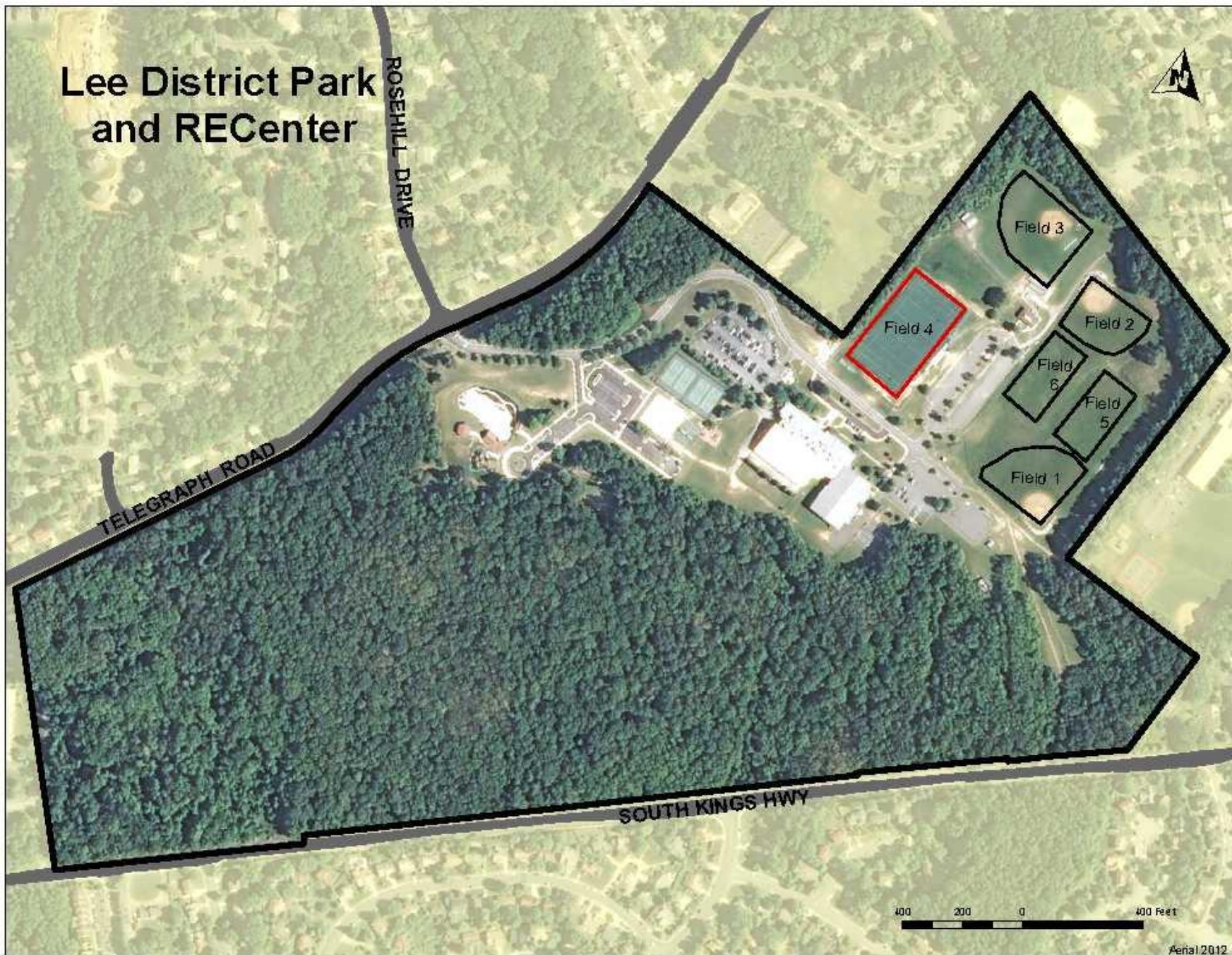
ROSEHILL DRIVE

TELEGRAPH ROAD

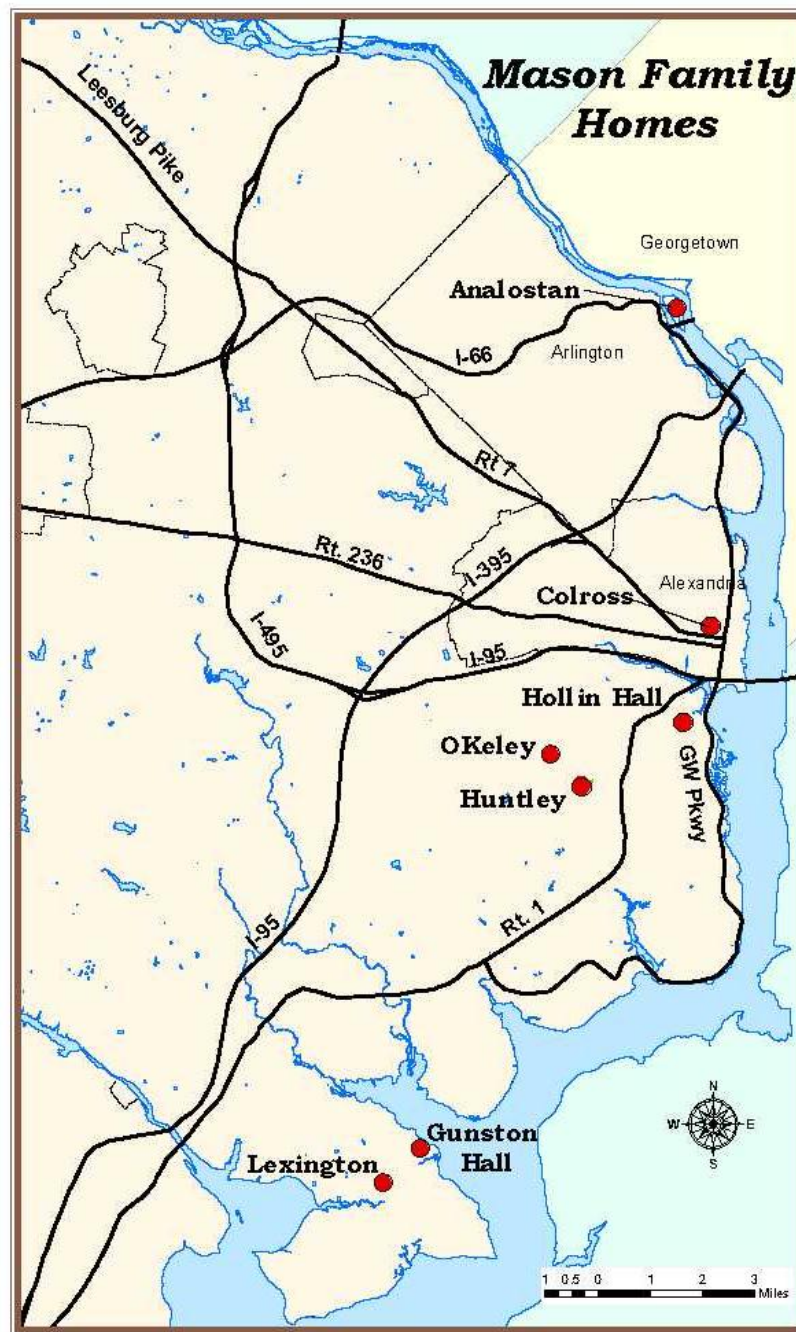
SOUTH KINGS HWY

400 200 0 400 Feet

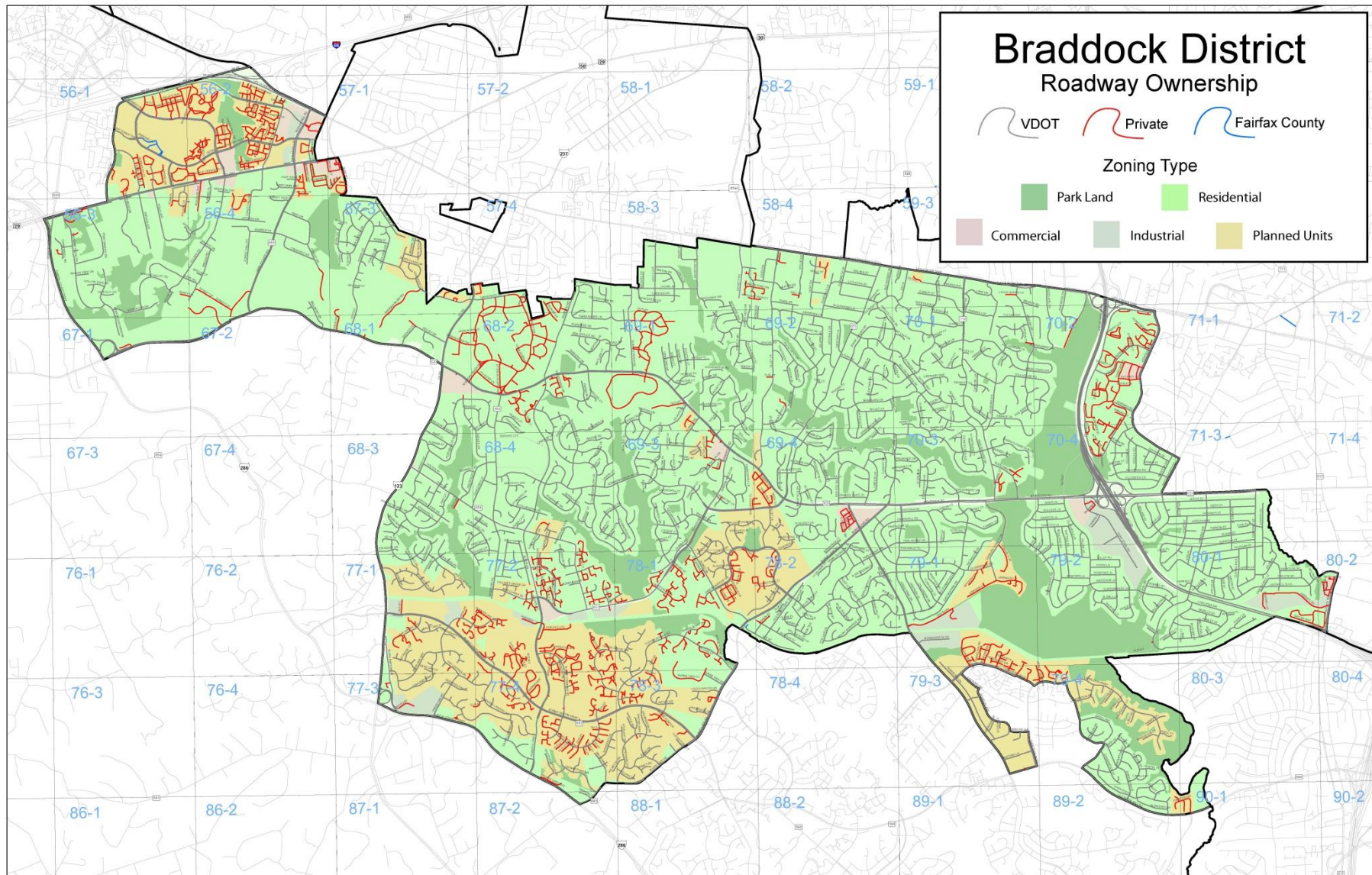
Aerial 2012











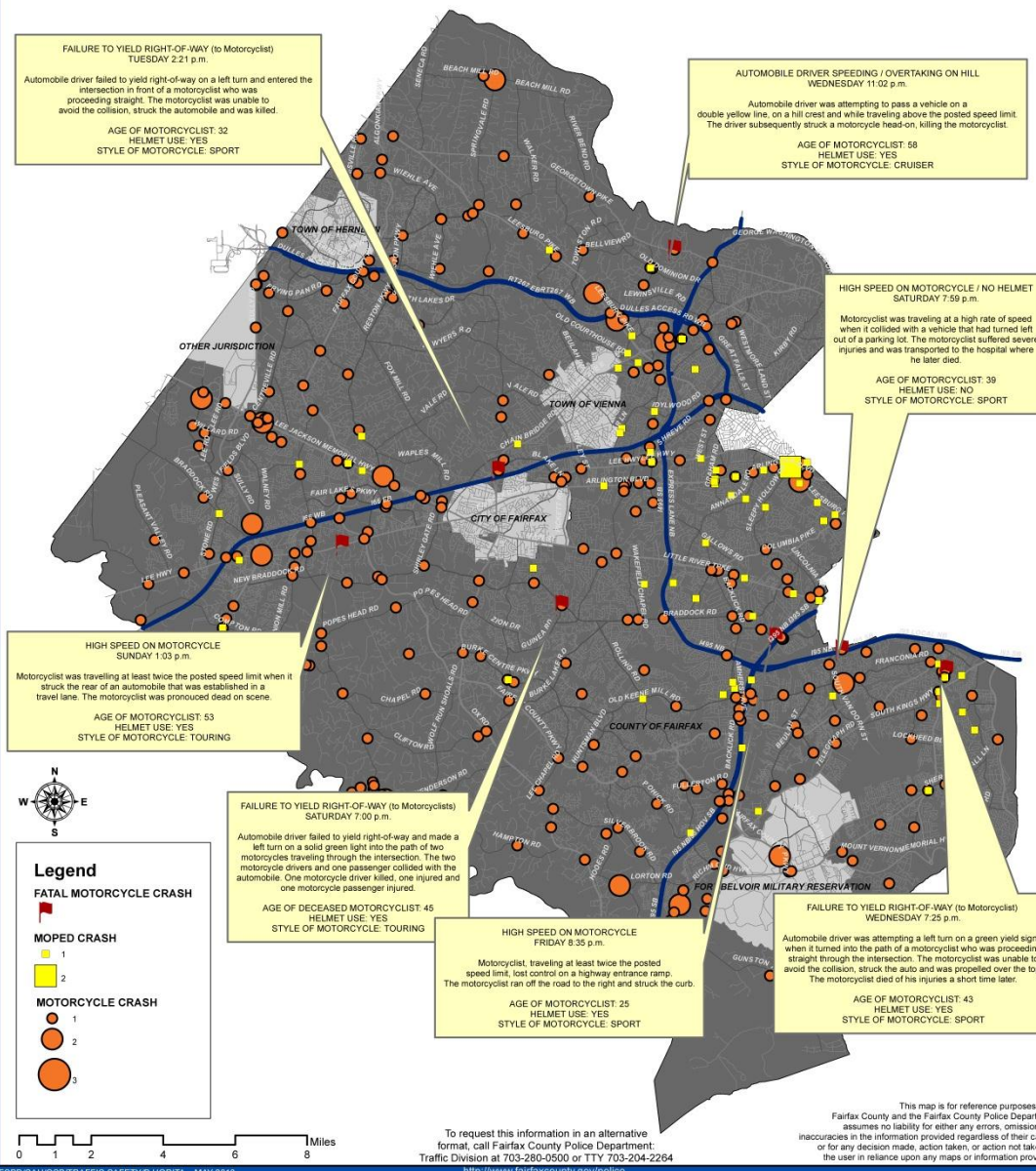




Includes 398 Motorcycle and Moped Crashes Occurring in Fairfax County in 2011 and 2012



- ★ *Touring = Built for long-distance travel, these are typically heavy bikes with many amenities.*
- ★ *Cruisers = "Low-style" design, relaxed ride, but new riders may find handling difficult.*
- ★ *Sport/Standard = Most are intended for high-performance track duty, speed and/or street riding.*
- ★ *Moped = (3) wheels or less, seat no less than 24" in height, and with less than 50cc engine displacement.*

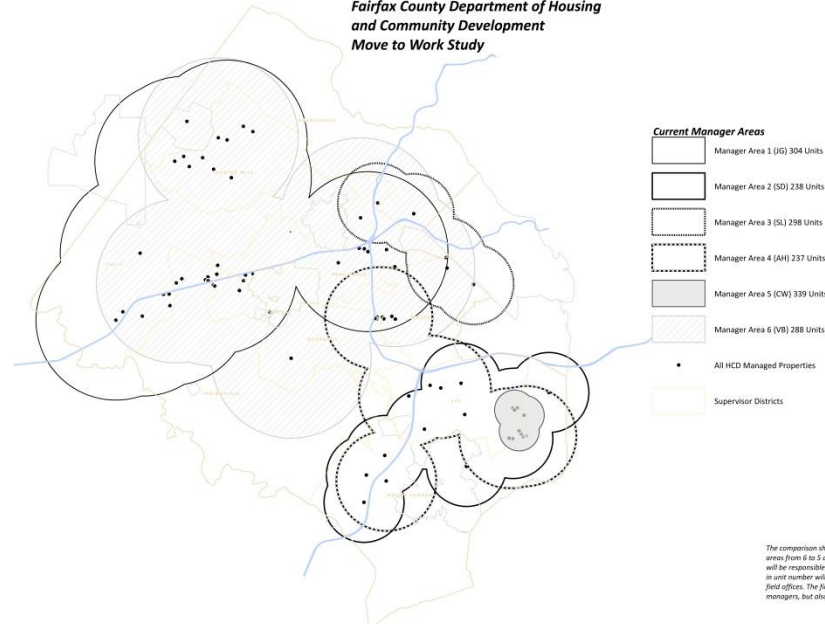


This map is for reference purposes only. Fairfax County and the Fairfax County Police Department assumes no liability for either any errors, omissions, or inaccuracies in the information provided regardless of their cause, or for any decision made, action taken, or action not taken by the user in reliance upon any maps or information provided.



## Comparison of Current and Proposed Property Manager Areas

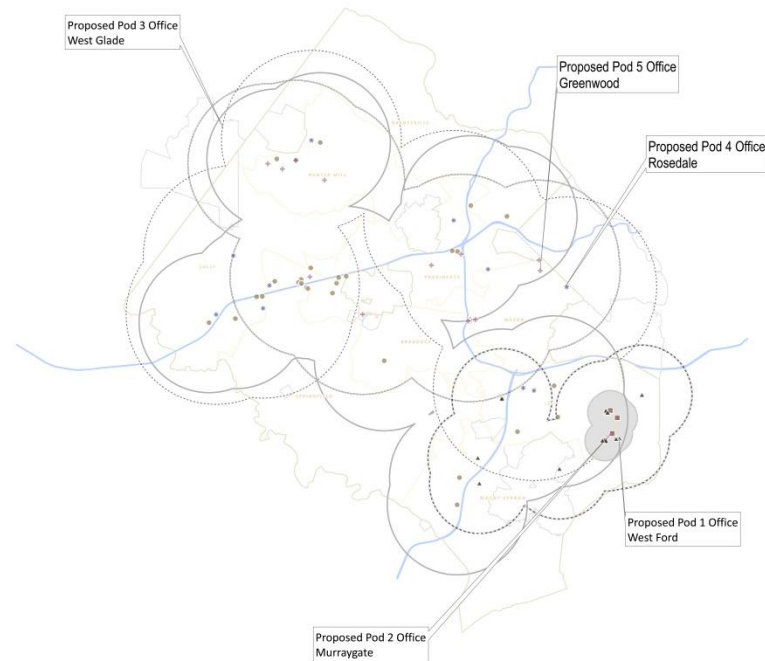
Fairfax County Department of Housing  
and Community Development  
Move to Work Study



The comparison shows that the reduction of property manager areas from 6 to 5 does increase the number of units each manager will be responsible for. The thinking, however, is that this increase in unit number will be mitigated by the establishment of permanent field offices. The field offices would be fully staffed not only with managers, but also with administrative and other housing staff.

Prepared by: Dave Smith 10/10/13  
Fairfax County Department of  
Housing and Community Development

### Proposed Manager Pods





# COUNTY OF FAIRFAX COMMONWEALTH OF VIRGINIA

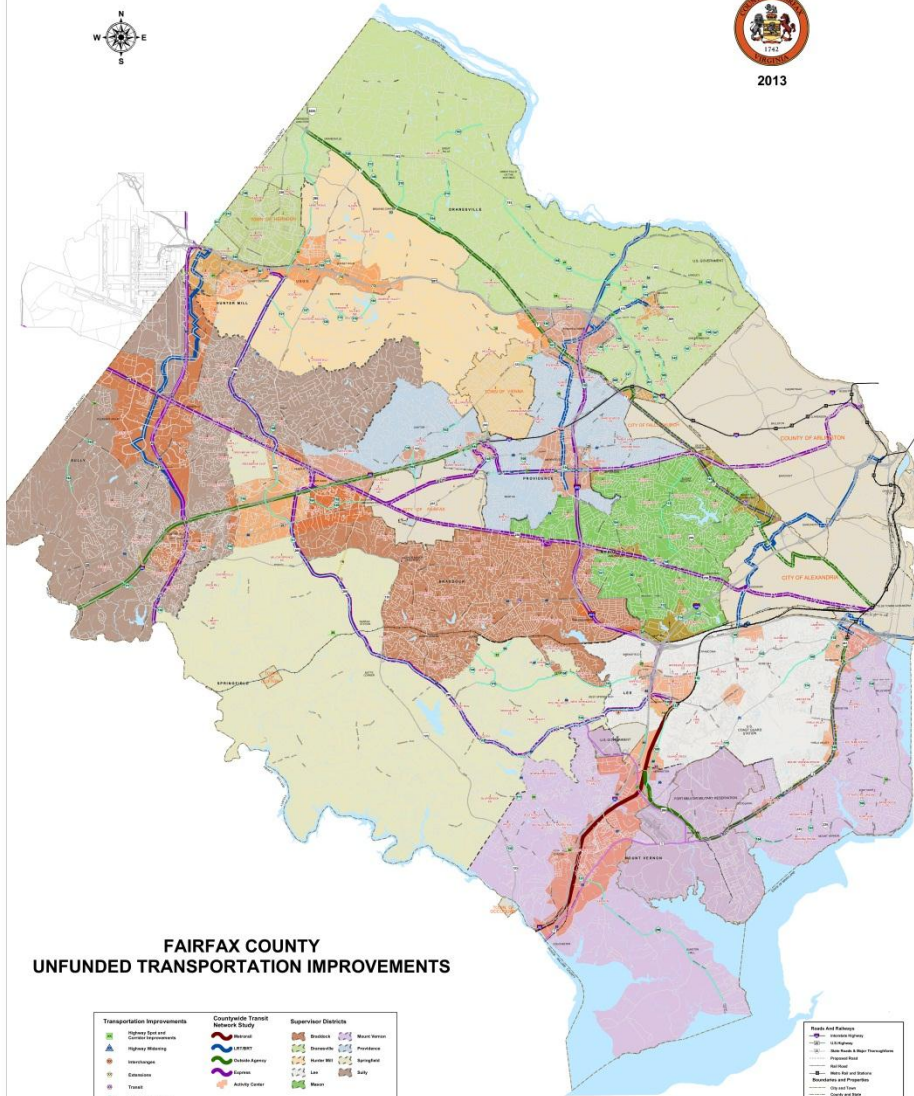


2013

# COUNTY OF FAIRFAX COMMONWEALTH OF VIRGINIA



2013

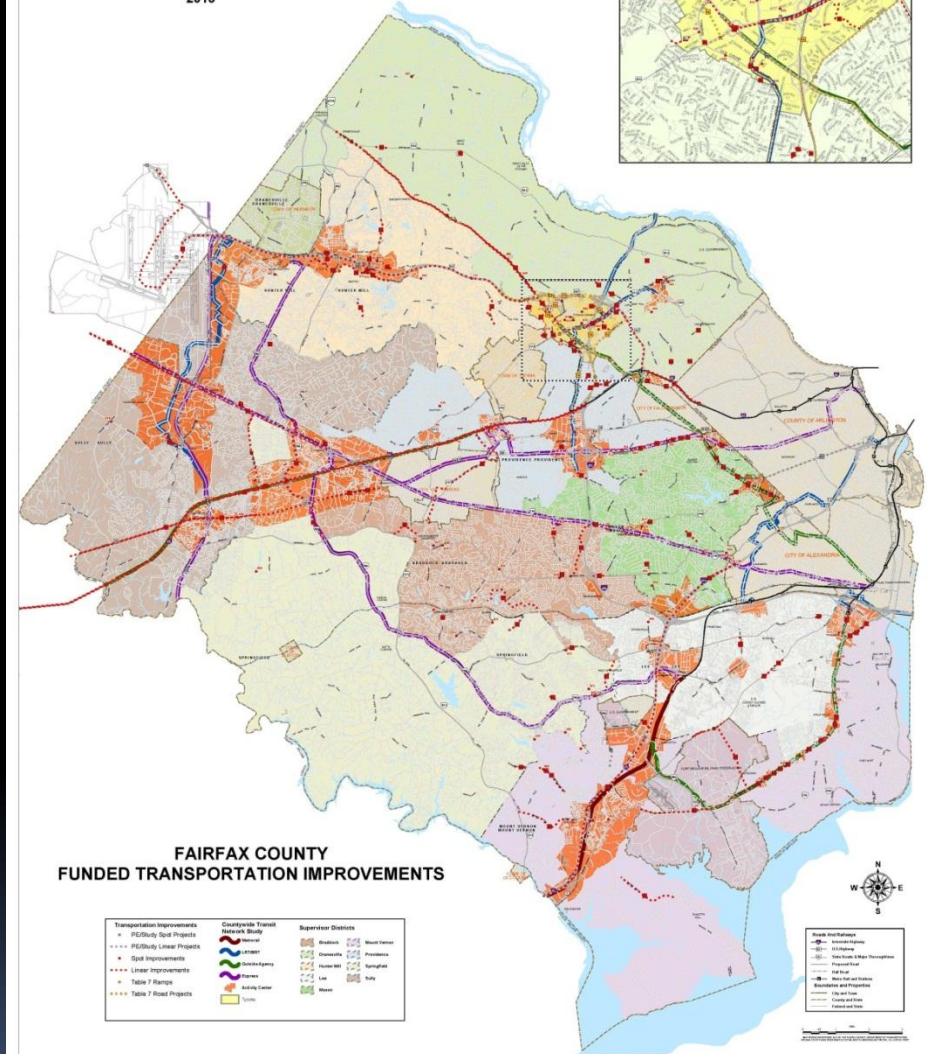


**FAIRFAX COUNTY  
UNFUNDED TRANSPORTATION IMPROVEMENTS**

Transportation Improvements	Countywide Transit Network Study	Supervisor Districts
Highway Exit and Interchange	Transit	Supervisor Districts
Highway Widening	Transit	Supervisor Districts
Interchange	Transit	Supervisor Districts
Education	Transit	Supervisor Districts
Transit	Transit	Supervisor Districts
Roadway Rehabilitation	Transit	Supervisor Districts

NOTE: Some project locations are in close proximity and may not be clearly distinguishable. Please reference individual project sheets for precise locations.

Project and Features
Interchange
Highway Exit and Interchange
Highway Widening
Interchange
Education
Transit
Roadway Rehabilitation



**FAIRFAX COUNTY  
FUNDED TRANSPORTATION IMPROVEMENTS**

Transportation Improvements	Countywide Transit Network Study	Supervisor Districts
Highway Exit and Interchange	Transit	Supervisor Districts
Highway Widening	Transit	Supervisor Districts
Interchange	Transit	Supervisor Districts
Education	Transit	Supervisor Districts
Transit	Transit	Supervisor Districts
Roadway Rehabilitation	Transit	Supervisor Districts



Project and Features
Interchange
Highway Exit and Interchange
Highway Widening
Interchange
Education
Transit
Roadway Rehabilitation



# 12 MONTHS OF DISTRACTED DRIVING

Reportable Crashes Occurring from July 2012 through June 2013



Fairfax County, VA

## FACT: DRIVER BEHAVIOR:

THIS MAP REPRESENTS OVER 2,800 DRIVERS WHO WERE INVOLVED IN A REPORTABLE CRASH WHILE DRIVING DISTRACTED.

HEAD-ON COLLISION  
DRIVER CONDITION: DISTRAUGHT / CRYING  
DISTRAUGHT OVER EMPLOYMENT ISSUES, THE DRIVER UNINTENTIONALLY CROSSED OVER THE MEDIAN LINE BEFORE COLLIDING  
HEAD ON WITH ANOTHER VEHICLE  
THE DRIVER AND YOUNG PASSENGER OF THE VEHICLE STRUCK BY THE DISTRACTED DRIVER WERE TRANSPORTED WITH INJURIES - THE FATHER LATER COLLAPSED AND DIED OF INJURIES SUSTAINED DURING THE COLLISION.

## Legend

### DRIVER FATIGUE



### CELL PHONE



### DAYDREAMING



### PASSENGERS



### OTHER



### EATING/DRINKING



### ADJUSTING VEH. CONTROLS



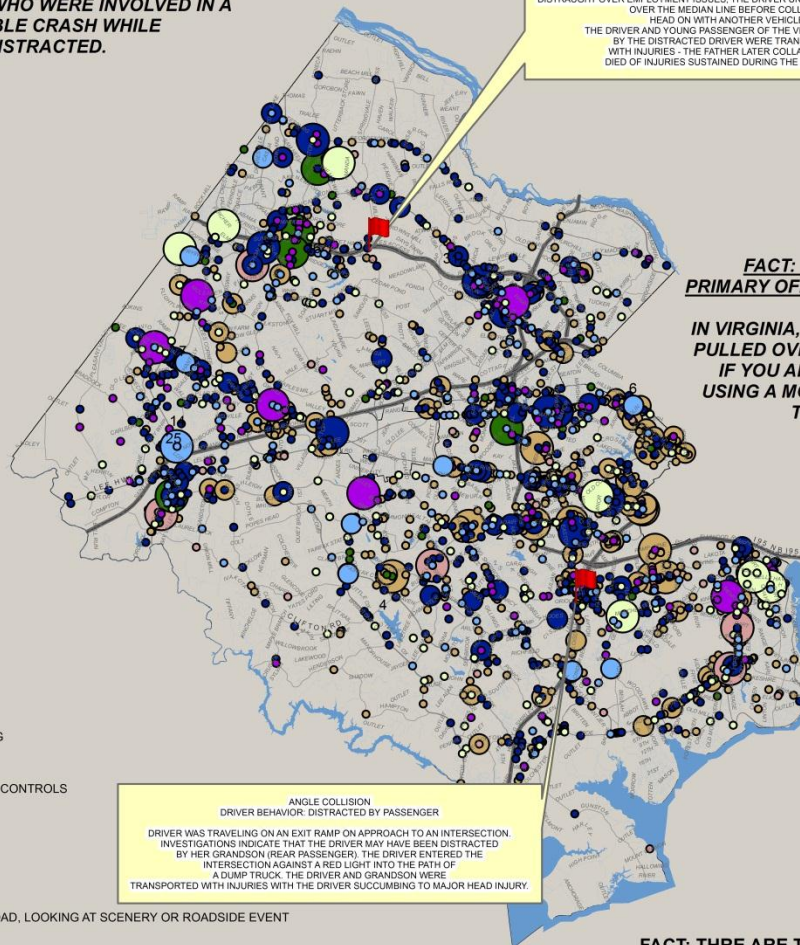
### EYES NOT ON ROAD, LOOKING AT SCENERY OR ROADSIDE EVENT



### FATAL CRASH



0 1.25 2.5 5 7.5 10 Miles



ANGLE COLLISION  
DRIVER BEHAVIOR: DISTRACTED BY PASSENGER  
DRIVER WAS TRAVELING ON AN EXIT RAMP ON APPROACH TO AN INTERSECTION. INVESTIGATIONS INDICATE THAT THE DRIVER MAY HAVE BEEN DISTRACTED BY HER GRANDSON (REAR PASSENGER). THE DRIVER ENTERED THE INTERSECTION AGAINST A RED LIGHT INTO THE PATH OF A DUMP TRUCK. THE DRIVER AND GRANDSON WERE TRANSPORTED WITH INJURIES WITH THE DRIVER SUCCEESSING TO MAJOR HEAD INJURY.

## FACT: TEXTING IS NOW A PRIMARY OFFENSE IN VIRGINIA

IN VIRGINIA, YOU MAY NOW BE PULLED OVER BY AN OFFICER IF YOU ARE SUSPECTED OF USING A MOBILE DEVICE FOR TEXTING OR EMAIL.

## FACT: THERE ARE THREE MAIN TYPES OF DISTRACTED DRIVING

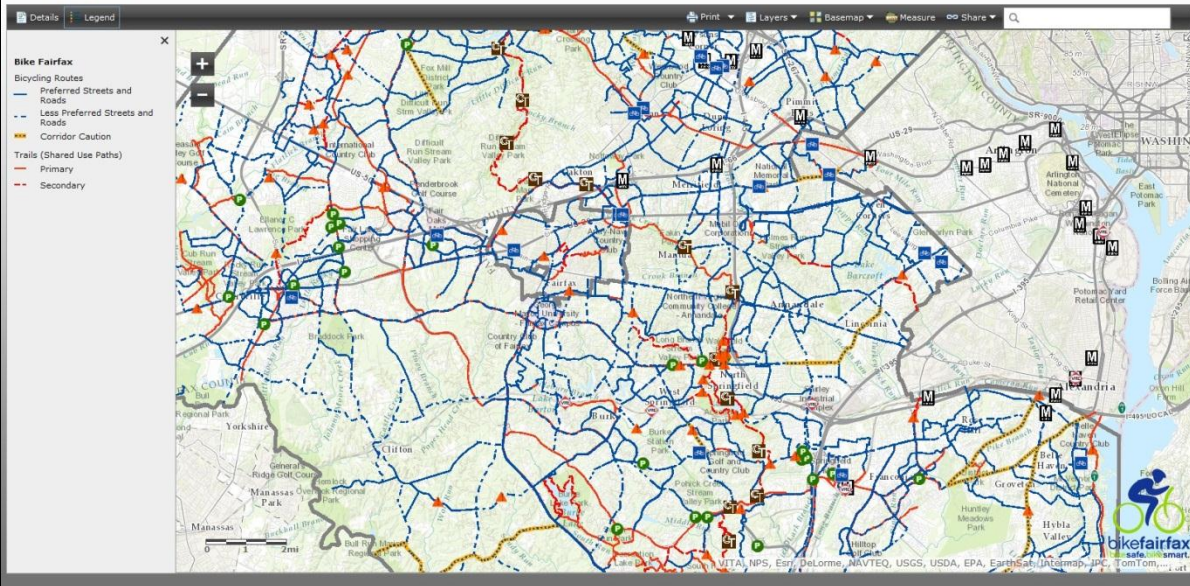
- 1) VISUAL: EYES ARE NOT ON ROAD
- 2) MANUAL: HANDS ARE OFF OF THE STEERING WHEEL
- 3) COGNITIVE: MIND IS OFF OF THE PRIMARY TASK OF DRIVING

To request this information in an alternate format, call the Fairfax County Police Department: Traffic Division at 703-280-0500 or TTY 703-204-2264

This map is for reference purposes only. Fairfax County and the Fairfax County Police Department assumes no liability for either any errors, omissions, or inaccuracies in the information provided regardless of their cause, or for any decision made, action taken, or action not taken by the user in reliance upon any maps or information provided.

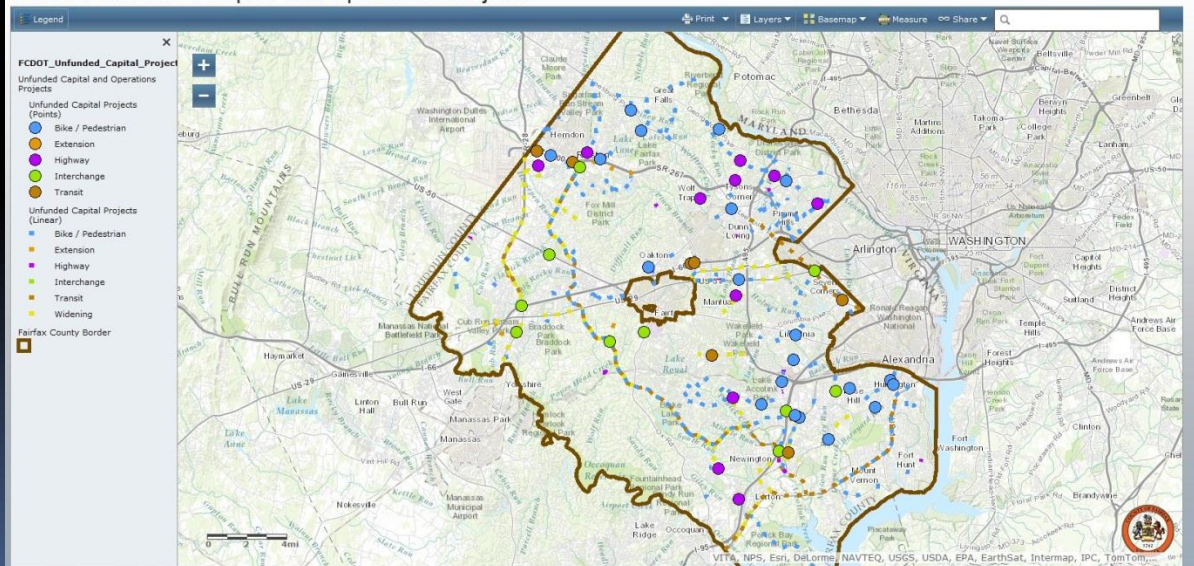


## Bike Fairfax



<http://www.fairfaxcounty.gov/fcdot/bike/bikemap/>

## FCDOT Unfunded Capital and Operations Projects



<http://www.fairfaxcounty.gov/fcdot/cdot/map.htm>

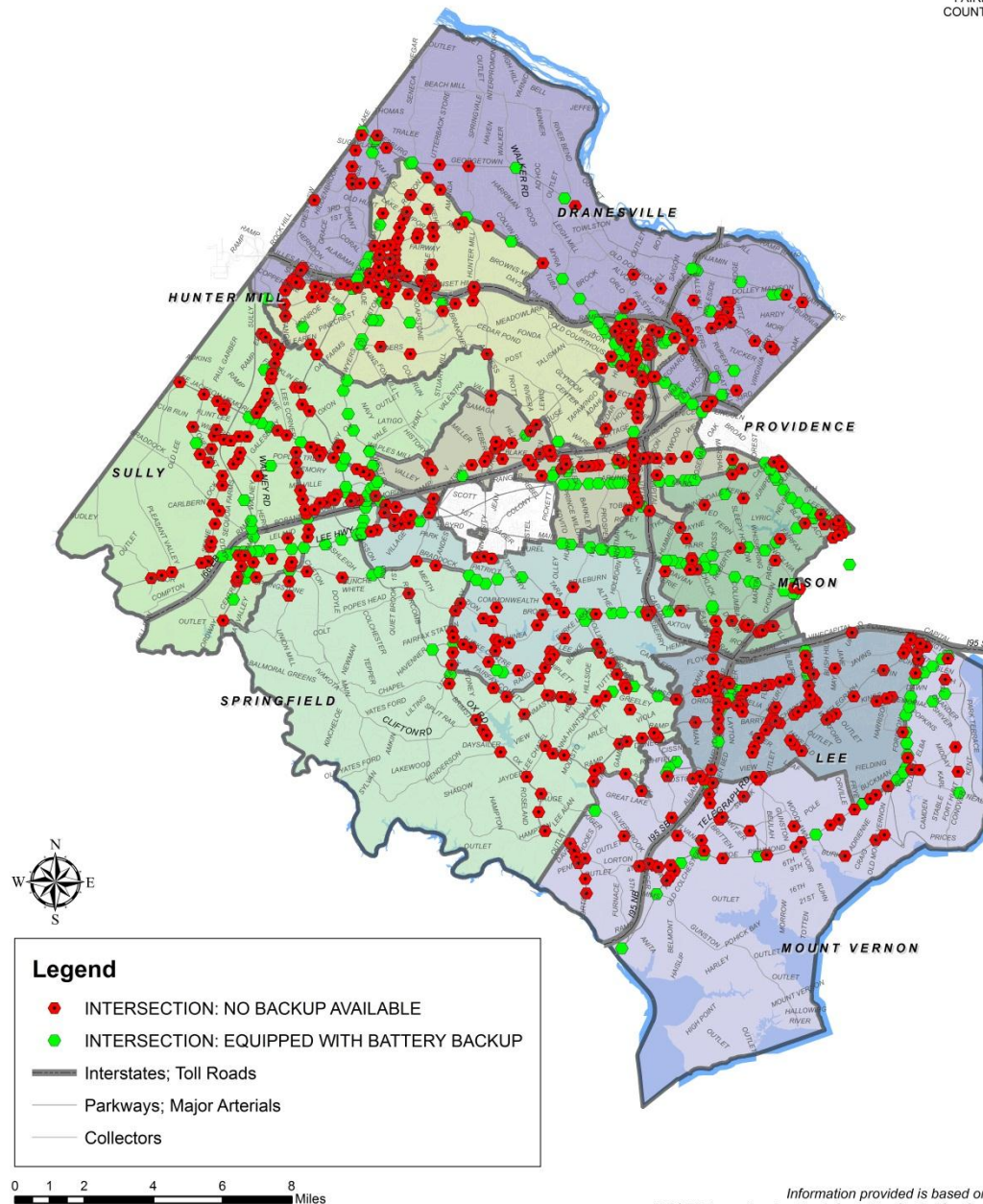


# SIGNALIZED TRAFFIC INTERSECTIONS

CURRENT BATTERY BACKUP SYSTEM CABILITIES FOR  
ALL SIGNALIZED TRAFFIC INTERSECTIONS WITHIN FAIRFAX COUNTY, VA.

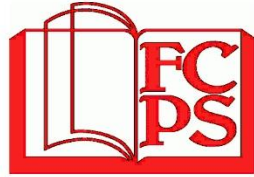


FAIRFAX  
COUNTY, VA



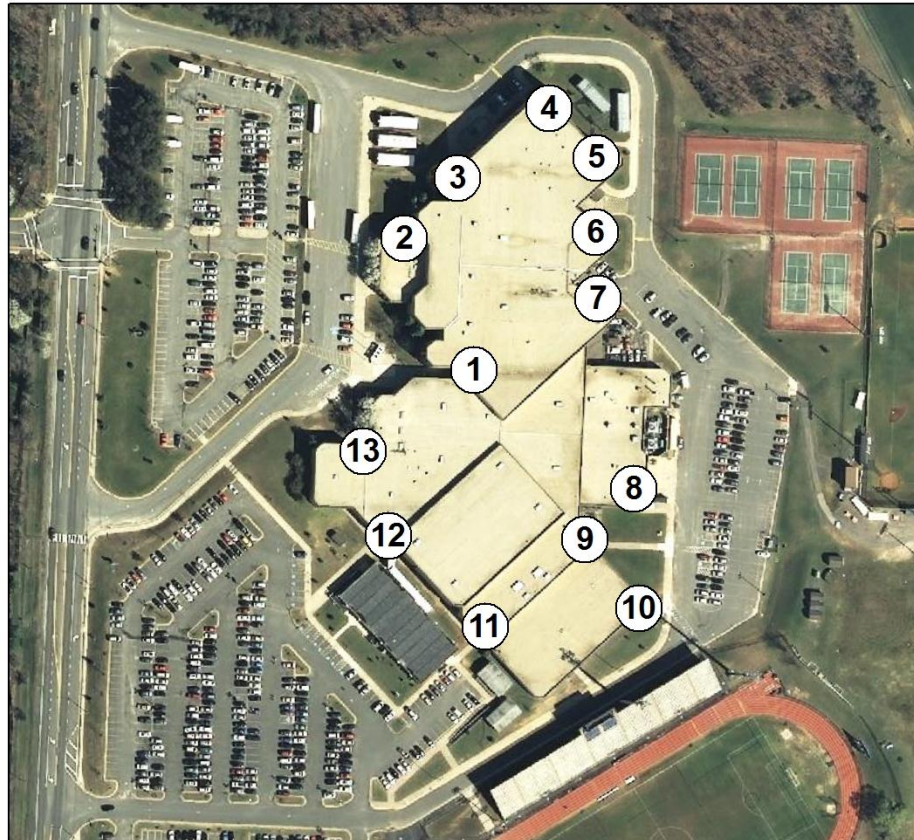


# Fairfax County Fire and Rescue Department GIS Data Project: Fairfax County Public Schools Exit Door Numbers



**184,625 Students**  
**23,831 Staff**  
**196 Schools and Centers**  
**1,633 Exit doors**  
**4 Agencies (FCPS, DPSC, FCPD, FRD)**  
**2 Goals – Safety and Security**

Data Sample: Exit doors at Centreville High School





# DPZ Web Applications




## Welcome to the Planning & Zoning Viewer

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult with Fairfax County and information sources to ascertain the usability of the information including but not limited to zoning applications, parcels, Chesapeake Bay Preservation Areas...

Version 2.3 – updated October 2013

**Planning & Zoning Viewer:**  
Provides Information about Zoning Applications and information related to our business process



## Welcome to the Zoning District Analyzer

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult with Fairfax County and information sources to ascertain the usability of the information including but not limited to zoning, parcels...

Version 1.0 – October 2013

**Zoning District Analyzer:**  
Allows Citizens, Developers, Real Estate Professionals to analyze where certain zoning districts are in the county .

