



Fairfax County Information Technology

Geospatial Services Division

GIS Directions FY21

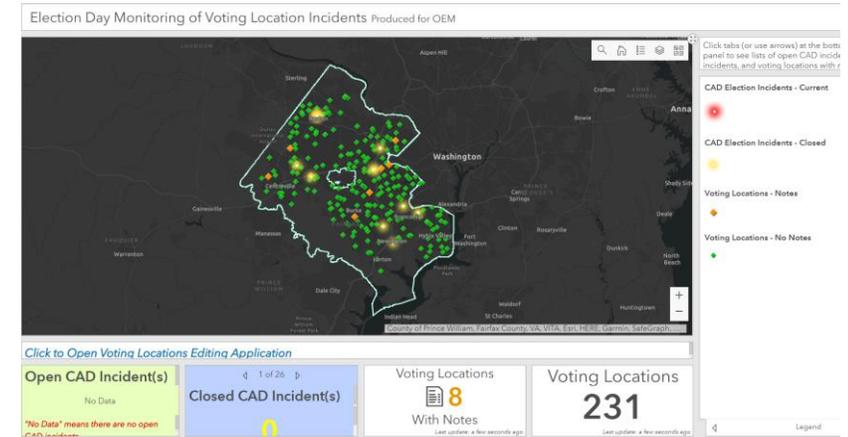
January 12, 2021

GIS Directions – Locational Intelligence

- GIS enters new phase in FY 21
- Recent Activity
 - COVID -19 and public safety support
 - Next Generation – 911
- Redistricting and GIS tools
- GIS Modernization – True enterprise class GIS
- GIS Centric Business Systems
- Data Acquisitions

Public Safety GIS Support Areas

- NG9-1-1
 - Live on June 3
 - Geospatial Call Routing
 - First in Virginia and top 5% in United States out of 6,000+ PSAPs
- Election Day
 - Voting Location Monitoring
- COVID-19 Response
 - COVID-19 Geospatial Resources HUB
 - Resources (maps, interactive applications, map layers, and other data) relevant to the County response



COVID-19 Geospatial Resources in Fairfax County, VA

Fairfax County COVID-19 Portal Case Information Maps and Applications Demographics Data and Map Layers GIS Division Main Website

COVID-19 Geospatial Resources in Fairfax County, VA

This site provides geospatial resources (maps, interactive applications, map layers, and other data) that are relevant to Fairfax County's COVID-19 response.

Fairfax County's dedicated coronavirus response page Send questions or suggestions about this site and geospatial resources

Regional and National Resources

Social Distancing Metrics

View information on mobile devices staying at home, or appearing to be working full or part time, at the census block and county-level. Data courtesy of SafeGraph and BlueDot.

Details View

COVID-19 Common Operational Procedure

Common Operational Picture - Coronavirus

Details View

Definitive Healthcare: Hospital Beds Dashboard

An Operations Dashboard for ArcGIS showing Definitive Healthcare data on hospital beds including the numbers of licensed beds, staffed beds, and ICU beds.

Details View

Fairfax County Layers

Public School Food Distribution Sites

Fairfax County Public School food distribution sites during COVID-19 school closures

Details View

Nonprofit Food Providers

Nonprofit food providers (i.e. Community Based Organizations) ready to assist during the COVID-19 pandemic.

Details View

Senior Store Hours

Grocery stores offering senior-only hours to support the elderly during the COVID-19 pandemic.

Details View

Public Safety GIS Support Areas

- COVID-19 Response
 - Health Department Support
 - FCPS / NCS Support
 - Food Resources Application / Dashboard
 - Assist the community in locating closed food resource options
 - NCR effort in progress



Food Resources

Food distribution sites and assistance providers in Fairfax County, including public school sites and nonprofit providers.

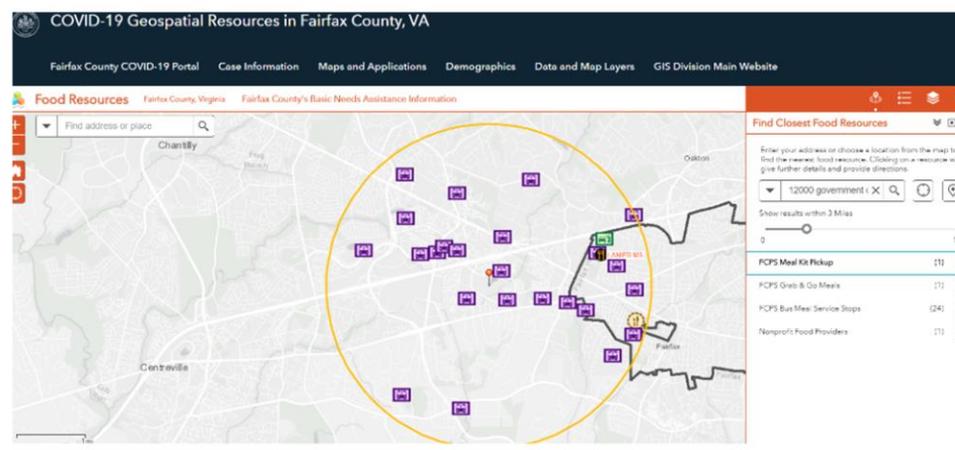
[Details](#) [View](#)



Recursos Alimenticios

Sitios de distribución de alimentos y proveedores de asistencia en el condado de Fairfax, incluidos sitios del sistema de escuelas públicas..

[Details](#) [View](#)



COVID-19 Geospatial Resources in Fairfax County, VA

Find address or place

Find Closest Food Resources

Enter your address or choose a location from the map to find the nearest food resource. Clicking on a resource will give further details and provide directions.

12000 government | X |

Show results within 3 Miles

- FCPS Meal Kit Pickup (1)
- FCPS Grab & Go Meals (7)
- FCPS Bus Meal Service Stops (24)
- Nonprofit Food Providers (7)

Exposure Log Entry Form

This is training only environment

Form used by COVID-19 investigation staff to capture known case exposures in the community to assist in the identification of clusters/outbreaks. Each identified exposure should be entered in separate record (i.e., one case can have multiple exposure records). Do not enter placeholder records. Variables with a red asterisk * are required before the record can be submitted. If a record needs to be updated, provide the updated information to your supervisor and they will contact the Data & Surveillance Group to modify the record.

VEDSS ID* Case Last Name*

Case Onset Date* Outbreak ID#

Exposure Location

Known addresses should be entered in the map search tool to populate location information. You can also use the same tool to search for an address, apartment or check a point on the map.



Location Information

Location Common Name*

Exposure Address Information

Addresses should be initially entered into search tool in the map above. Address information will be auto-filled into the below fields. If needed, small address adjustments can be made below (e.g., 12000 to 12001, however, apartment, street, city, state, or location Street Address* can be changed using the map search tool. Units with red asterisks are required to be populated in this form.

City* State*

Zip*

Exposure Type* Location Type*

Exposure Start Date/Time* Exposure End Date/Time*

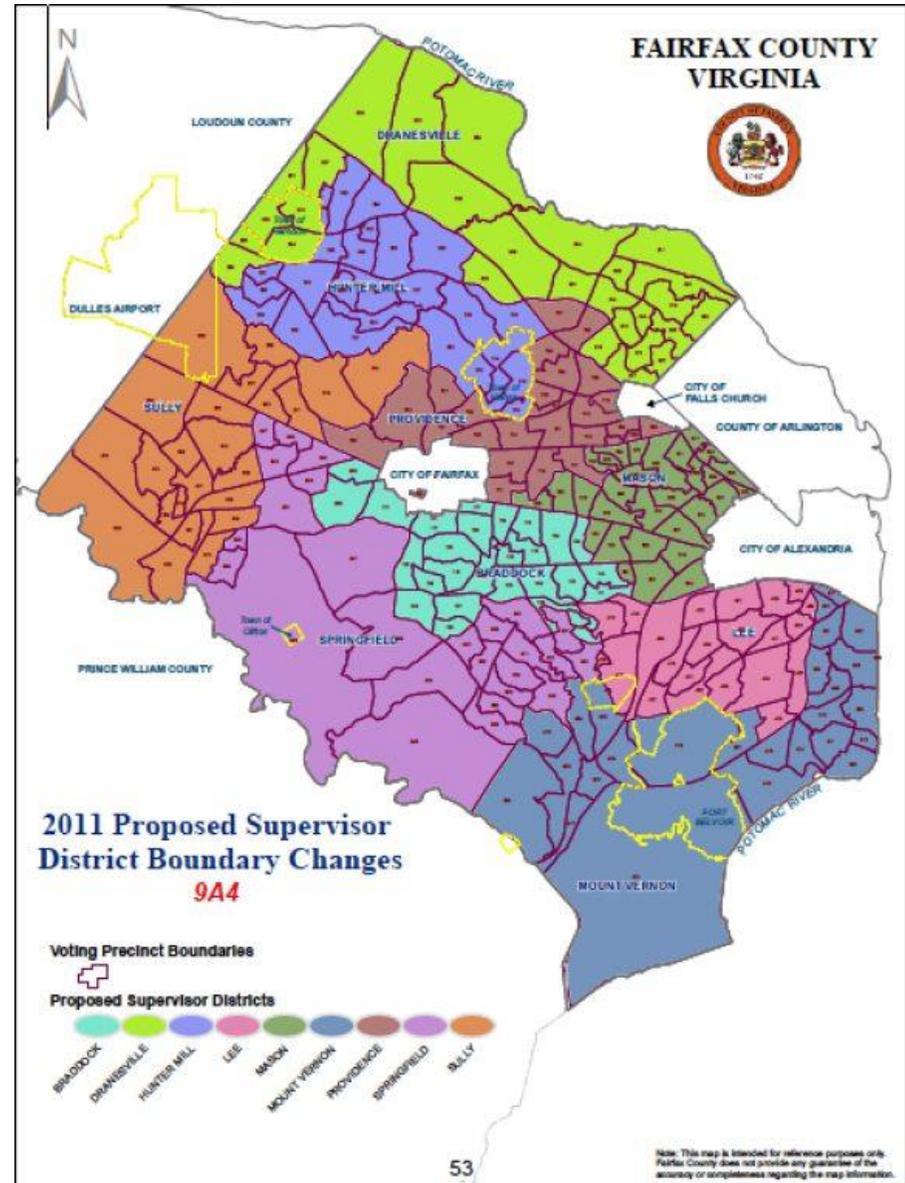
Comments

This is training only environment

[Submit & Carryover](#) [Submit & New](#) [Clear Form](#)

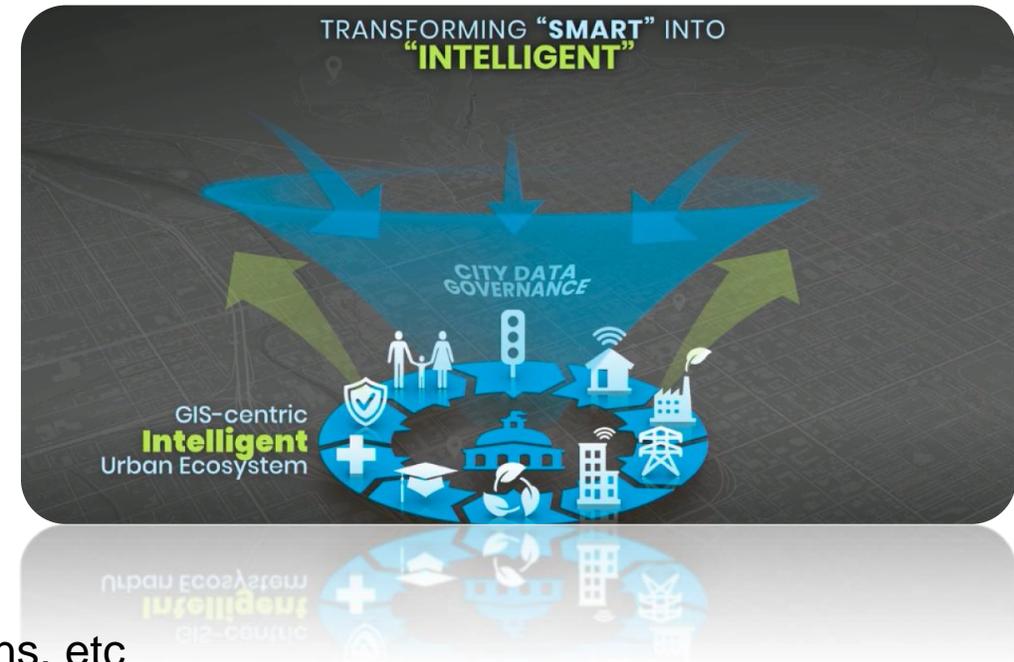
Reapportionment Support with GIS

- Successful experience using remote GIS in 2011
- Evaluating software packages for 2021
- Example requirements
 - Facilitate a COVID -19 environment
 - Allow Reapportionment Committee members to develop plans electronically and remotely
 - Share proposed plans with Committee and public
 - Provide demographics and population analysis at district and precinct level
 - Utilize county preferred geographies (precincts)



GIS Modernization

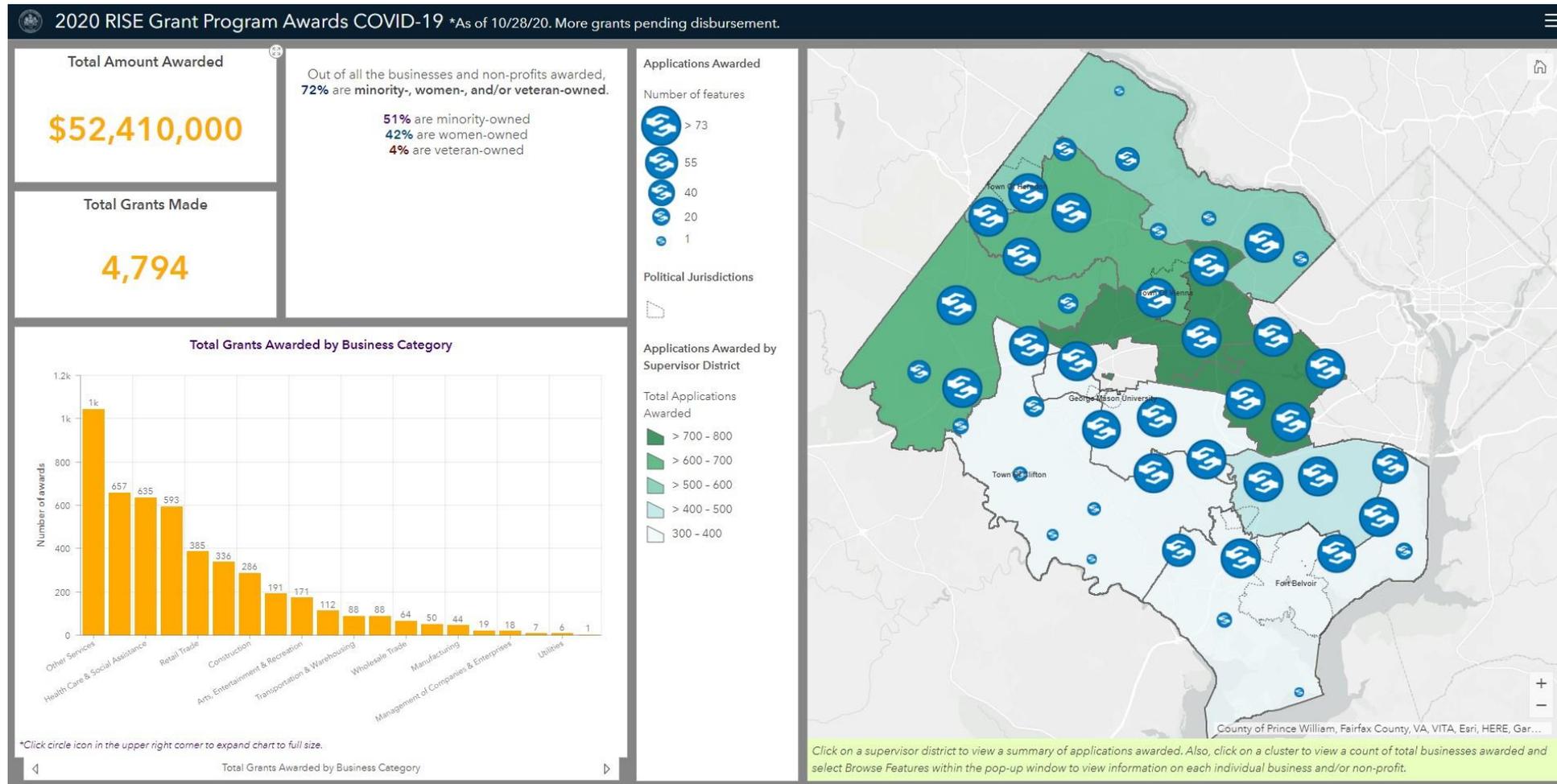
- Why Modernize?
 - Locational intelligence focus of County
 - Where are services needed? Who is where? Equity
 - Licensing bottlenecks
 - Could not take full advantage of what GIS could do
 - Could not deploy licensing to stabilize system
 - GIS Systems on par with IT ecosystem
 - No weak link for GIS capabilities
 - Disaster Recovery (DR)
 - High Availability (HA)
 - New mobile capabilities
 - Inspections, snowplow crews, pest control, park operations, etc
 - Full end to end solutions native to GIS
 - Consolidate county licensing for higher value
 - New technology available



GIS Modernization

- Why Modernize?
 - Better Constituent/Resident engagement – Communicate and collaborate with residents and communities of interest
 - Decision Support – Gain situational awareness, enable information driven decision making
 - Design, planning, and review – Evaluate alternative solutions to create optimal plans or designs
 - Sharing and Collaboration – Empower everyone to easily discover, use, make and share geographic information

GIS- Centric Program Management - RISE

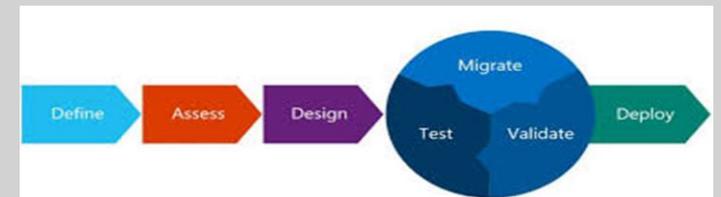


GIS Modernization – Architecture Refresh

- Native Monitoring for ESRI products
- Service tuning capability
- Vertical and horizontal scaling
- Pairing
- Largely complete - Summer 22

GIS Modernization – SQL Migration

- Move GIS Database to SQL
 - In Process now
 - Creating and testing scripts to migrate various schema
 - Next Steps
 - Execute scripts to migrate data
 - Data Quality Assurance
 - Application code migration to SQL Server
 - Recreate map services
 - Application testing
 - Performance testing
 - Plan to have completed by summer 2021



GIS Centric Business Systems

- PLUS – Multi agency
- CMMS – DPWES
- CPMIS - DPWES
- IPLS - DMB
- MAR - Multi agency
- EDGR - OEM



GIS Centric Business Systems - PLUS

PLUS ZAD GIS History - Production

ZAD Records

Home-Based Business:
HBB-2020-00056
Issued on 11/20/2020, 3:10 PM
[Link to Details](#)

Interpretations of Zoning Ordinance:
INTOAB-2020-00051
Issued on 11/20/2020, 2:32 PM
[Link to Details](#)

Home-Based Business:
HBB-2020-00055
Issued on 11/19/2020, 1:05 PM
[Link to Details](#)

Home-Based Business:
HBB-2020-00048
Issued on 11/19/2020, 10:49 AM
[Link to Details](#)

Interpretations of Zoning Ordinance:
INTOAB-2020-00049
Issued on 11/19/2020, 9:24 AM
[Link to Details](#)

Interpretations of Zoning Ordinance:
INTOAB-2020-00048
Issued on 11/19/2020, 9:03 AM
[Link to Details](#)

Interpretations of Zoning Ordinance:
INTOAB-2020-00047
Issued on 11/19/2020, 8:35 AM
[Link to Details](#)

Interpretations of Zoning Ordinance:
INTOAB-2020-00046
Issued on 11/19/2020, 8:25 AM
[Link to Details](#)

Interpretations of Zoning Ordinance:
INTOAB-2020-00045
Issued on 11/18/2020, 8:34 AM
[Link to Details](#)

Home-Based Business:
HBB-2020-00054
Issued on 11/17/2020, 3:03 PM
[Link to Details](#)

Interpretations of Zoning Ordinance:
INTOAB-2020-00044
Issued on 11/17/2020, 2:58 PM
[Link to Details](#)

List of ZAD Records, starting with the most recent. Click an item on the list to zoom to it on the map.

Last update: 2 hours ago

ZAD Records

9,182

Features in GIS Data

ZAD Records by Month

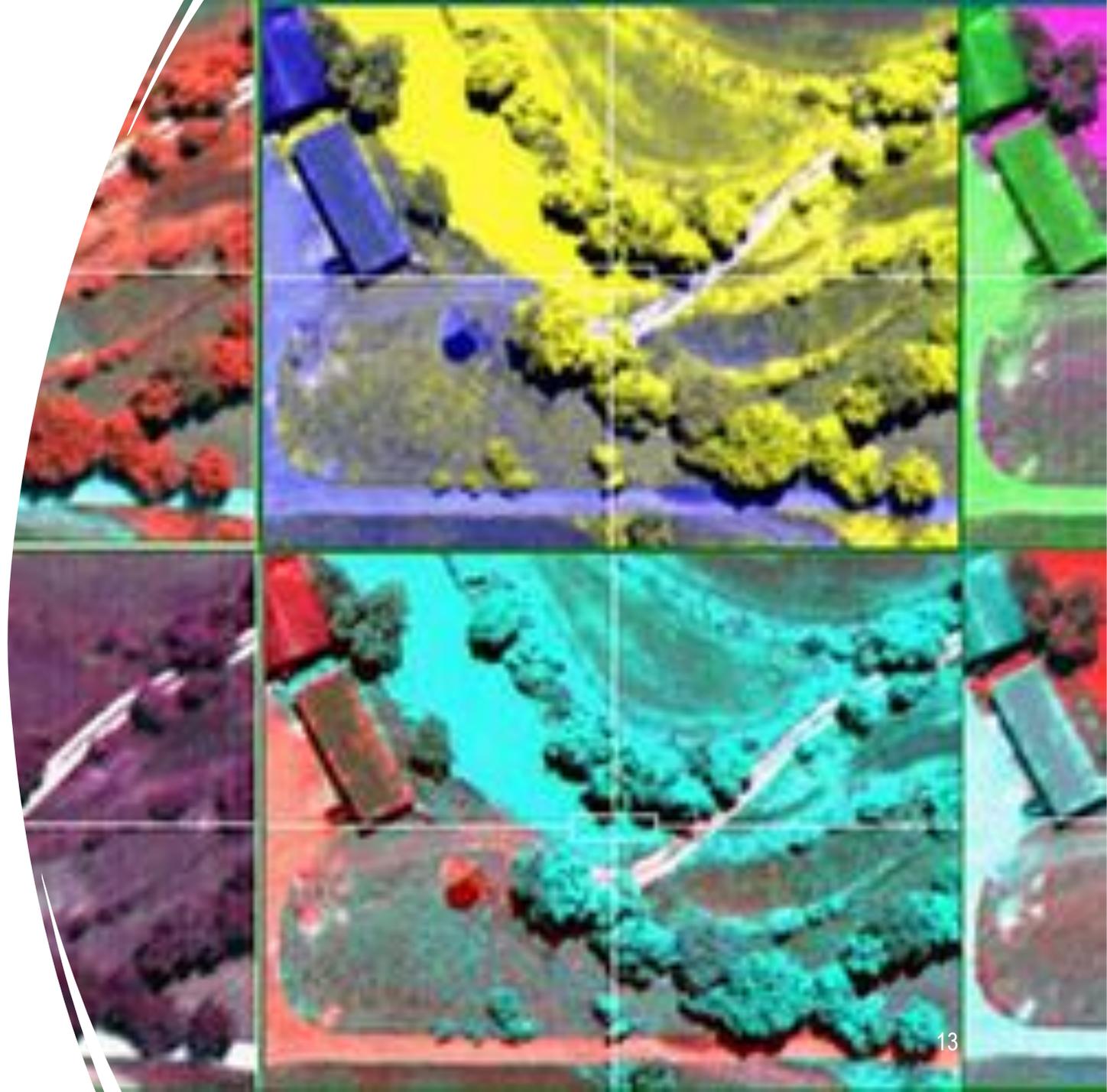
Month	Count
August	16
September	43
October	56
November	56

Last update: 2 hours ago

- GIS is source of a variety of data
- All records are automatically geo-enabled
- Map/analysis ready
- All business areas have dashboard enabled

Data Acquisitions and Maintenance

- Remotely Sensed Data
 - Satellite Tasking 2021
 - Worldview III, obtain multispectral imagery for land cover determinations
- Aerial Photography Program
 - Flight in March-April 2021
- LiDAR acquisition – early 2020
- Planimetric data update – 4-year process
- Buildings, roads, driveways, lakes, ponds, rivers, sidewalks, tennis courts, basketball courts, etc.
- 75% complete, finish in 2021





Resources for All Staff and the Public

Fully Interactive Resources

- [Fairfax County LiDAR Resources Site](#)
- [Geospatial Property Data Guide Storymap](#)
- [GIS Parcel Creation Process Storymap](#)
- [Interactive Mapping Applications Gallery](#)

Geospatial Services Division

- Questions?