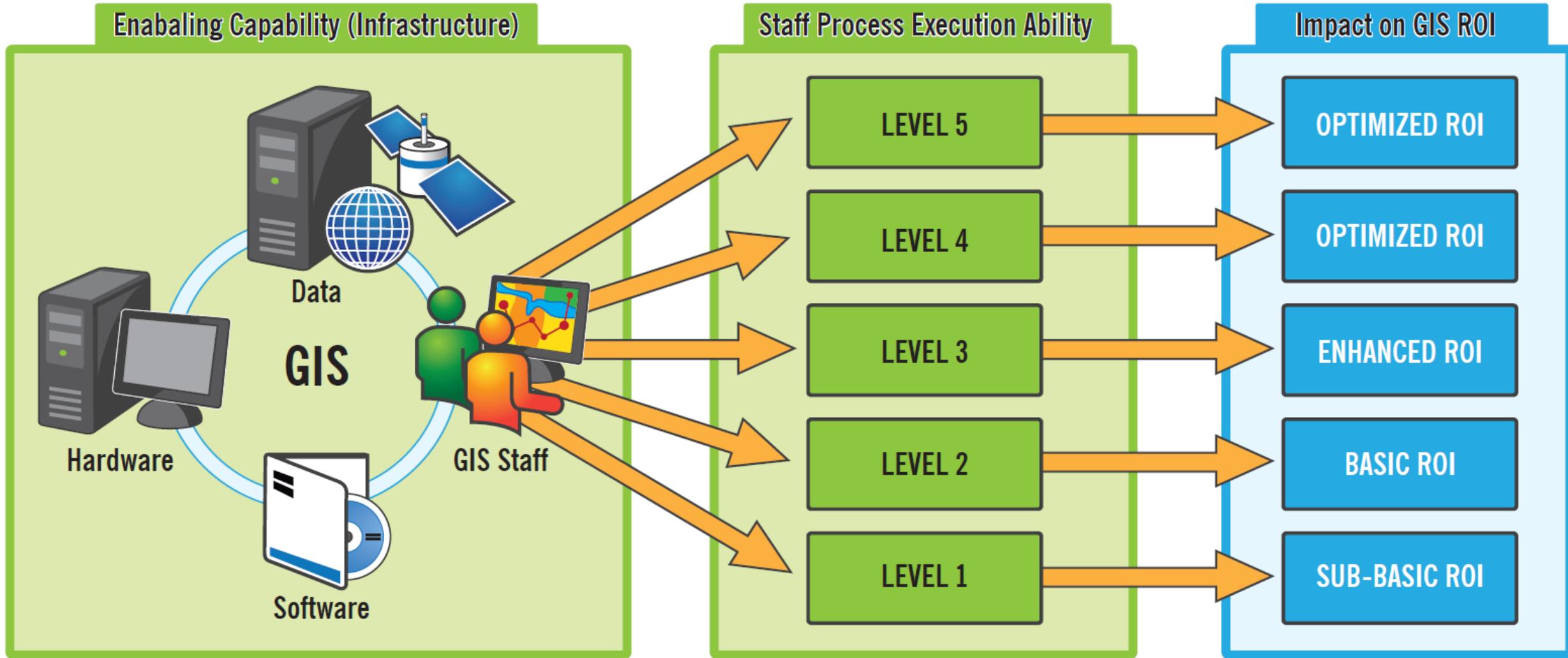


Value of GIS in Local Government

Presented to the North Carolina Geographic Information Coordinating
Council (GICC)

February 11, 2015

MapForsyth GIS CAPABILITY MATURITY MODEL



My Perspective – GIS ROCKS!

Supervisor of Land Records

- Tax Parcels

Director of Development & Planning

- Corridor Studies
- Zoning
- Potential Building Sites

Town Manager

- Sign Inventory
- Infrastructure (water/ waste water)
 - Lines, pumps, etc.
- Police Calls

Geographic Information Officer

- Centerline Maintenance
- Socioeconomic Distressed Areas
- GeoData Explorer
- Webmaps



GIS Champion

Forsyth County, NC

“As an early adopter of GIS technologies, Forsyth County has enjoyed the capabilities of GIS to accomplish numerous land related tasks for almost all of our departments.

GIS has: **improved** our **data accuracy** tremendously, **enabled large scale data analysis** and finally to **enable** us to delve into ‘quality of life’ issues in our community.”

Robert Robinson

Chief Information Officer



Forsyth County Sheriff's Office

Email Date: December 16, 2013

Good morning,

The maps that you prepared for the Forsyth County Sheriff's Office Narcotics Unit were **invaluable** during our research into **additional felony drug charges** associated with the activities of an interstate drug trafficking organization, which was operating within the Winston-Salem/Forsyth County area. To date **13 additional Class E felony charges have been identified** and are now pending against individuals associated with this drug trafficking organization.

Thank you for your cooperation and assistance in this investigation.

Investigator -----
Forsyth County Sheriff's Office
301 North Church St.
Winston-Salem, NC, 27101

Email Date: December 20, 2013

The maps you just printed for us; this is the case. Have a Merry Christmas.

<http://myfox8.com/2013/12/19/winston-salem-residents-charged-with-drug-trafficking/>

Investigator -----
Forsyth County Sheriff's Office
301 North Church St.
Winston-Salem, NC, 27101



Winston-Salem 'Detroit Boys' crime organization members busted for heroin

POSTED 5:15 PM, DECEMBER 19, 2013, BY CHAD TUCKER. UPDATED AT 10:50PM, DECEMBER 19, 2013

f FACEBOOK 465 t TWITTER 6 g+ GOOGLE p PINTEREST r REDDIT e EMAIL

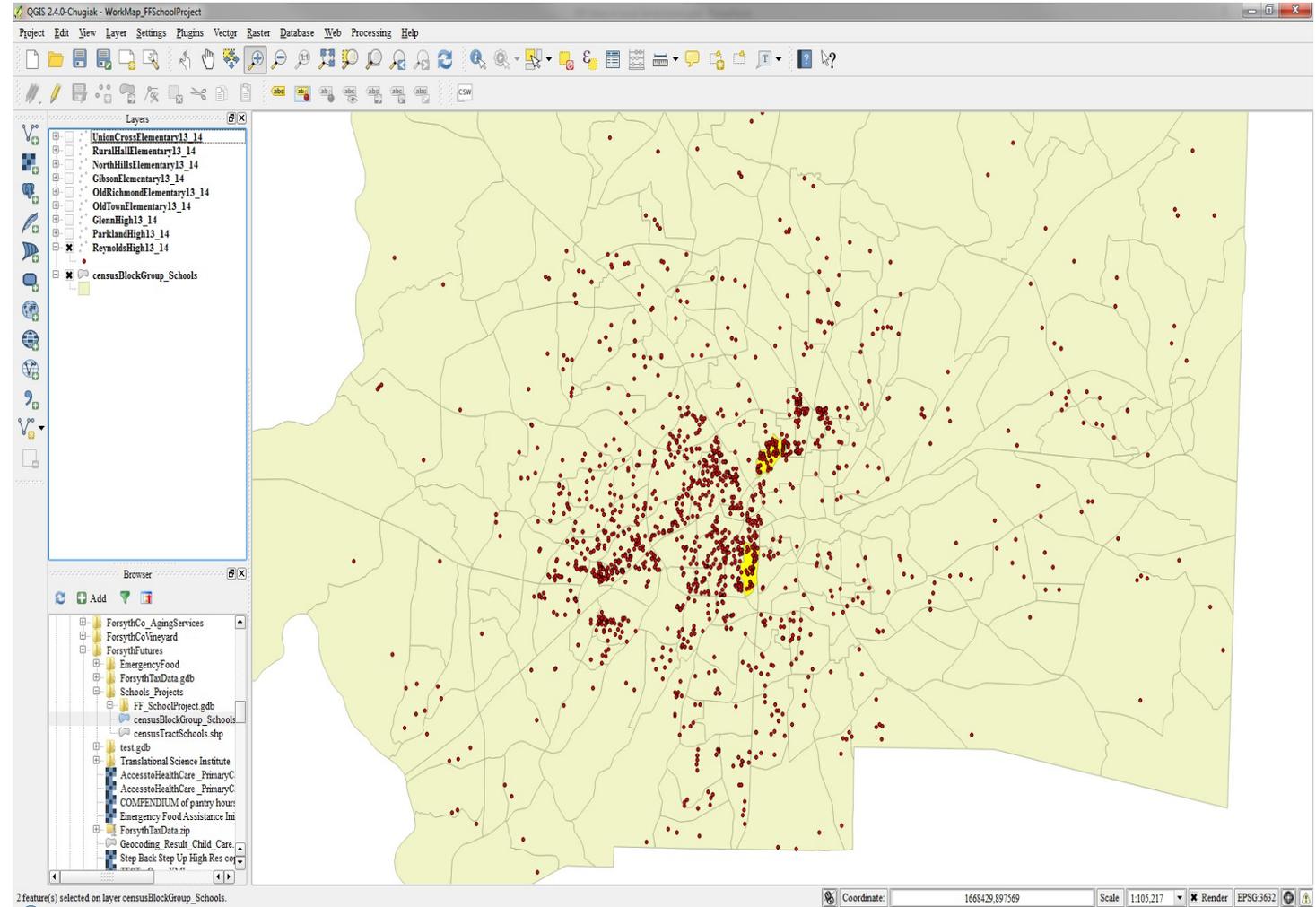


WINSTON-SALEM, N.C. — Investigators say they've arrested five people in connection to a drug trafficking investigation that spanned to Detroit.

Winston-Salem residents Dante Cole, Rudolph Cole Jr., Terrance Cole, Joe Harper and

“GIS helps us to **answer questions that do not have an easy answer when looking at a traditional spreadsheet.** For instance, in a community with school choice, what percentage of students live outside of their school's zone? What census tracts and zones are they coming from?”

Mari Krane | Interim Director



Attribute table - censusBlockGroup_Schools - Features total: 243, filtered: 243, selected: 2

	COUNTYFP10	TRACTCE10	BLKGRPCE10	GEOID10	NAMELSAD10	MTFCC10	FUNCSAT10	ALAND10
168	067	001000	2	370670010002	Block Group 2	G5030	S	958492.000000
191	067	000301	1	370670003011	Block Group 1	G5030	S	895939.000000
143	067	003903	2	370670039032	Block Group 2	G5030	S	466898.000000
147	067	000400	1	370670004001	Block Group 1	G5030	S	1046699.000000
58	067	001200	2	370670012002	Block Group 2	G5030	S	1646784.000000
119	067	003805	1	370670038051	Block Group 1	G5030	S	2106282.000000
64	067	003903	1	370670039031	Block Group 1	G5030	S	1971728.000000
103	067	003805	2	370670038052	Block Group 2	G5030	S	2784671.000000
37	067	002502	1	370670025021	Block Group 1	G5030	S	1896573.000000
120	067	003903	3	370670039033	Block Group 3	G5030	S	1176904.000000
38	067	003905	2	370670039052	Block Group 2	G5030	S	1913864.000000
25	067	003904	2	370670039042	Block Group 2	G5030	S	1784187.000000
71	067	002601	2	370670026012	Block Group 2	G5030	S	2393540.000000
75	067	002501	2	370670025012	Block Group 2	G5030	S	539397.000000
74	067	002501	3	370670025013	Block Group 3	G5030	S	1522058.000000
159	067	002200	3	370670022003	Block Group 3	G5030	S	1116332.000000
160	067	002100	2	370670021002	Block Group 2	G5030	S	943998.000000
36	067	002502	2	370670025022	Block Group 2	G5030	S	2858687.000000
61	067	001000	3	370670010003	Block Group 3	G5030	S	1050991.000000
158	067	002200	2	370670022002	Block Group 2	G5030	S	1430721.000000
12	067	001602	1	370670016021	Block Group 1	G5030	S	2349648.000000
86	067	003803	1	370670038031	Block Group 1	G5030	S	2080106.000000
77	067	002100	1	370670021001	Block Group 1	G5030	S	1090567.000000

Show All Features

Forsyth County Budget & Management Office

“The information/maps provided regarding Sheriff calls and locations of responders has been a tremendous help to the Budget & Management Office as we look at service levels in relation to position requests, population changes, etc.

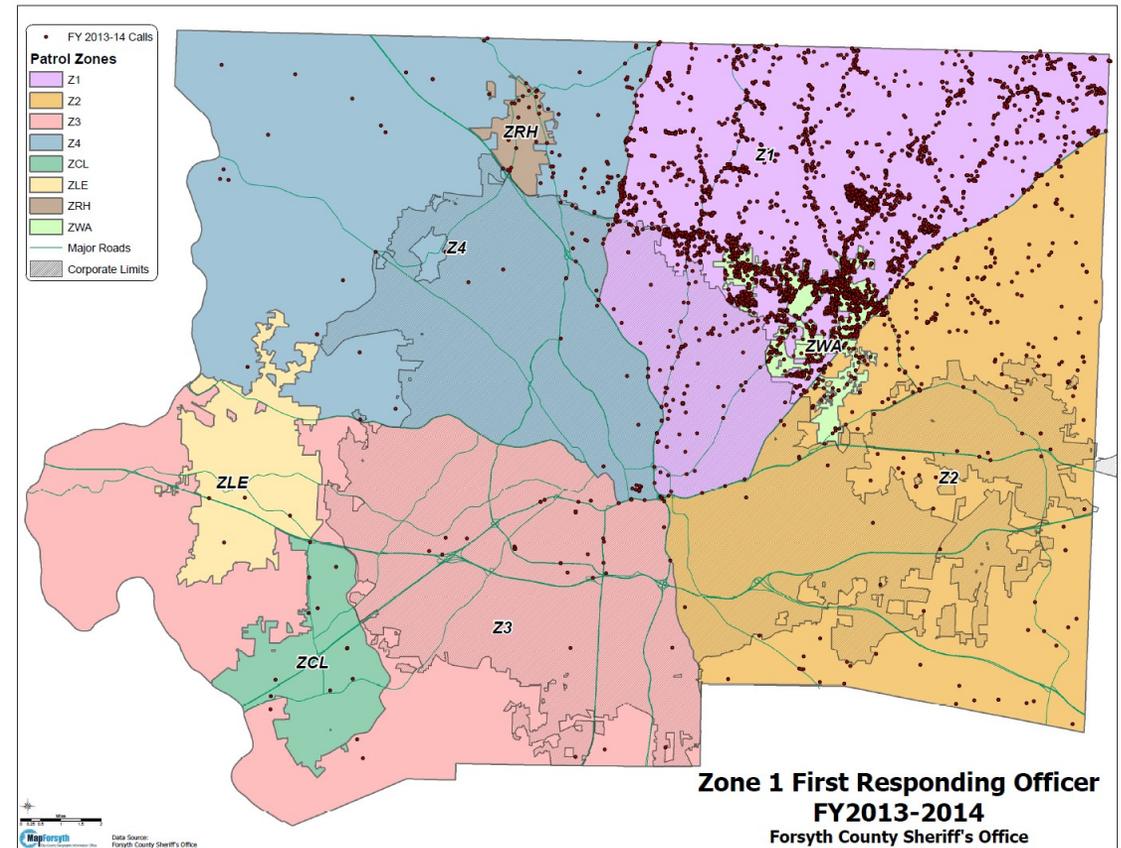
The visual information **provides** us with much **more valid data than anecdotal or hearsay** and gives us a way to actually see where 1st responses are coming from and what if any impact, deployment may have in regards to response times. **We've never been able to drill down this level before visually and it makes it much more easy.**

In addition, being able to carve out areas to show as prospective Service District areas and including the assessed values of the real property in the area is critical to some of the findings in the report.

GIS is providing really great information in visual form to provide to key players when we are doing studies and with workgroups.”

Ronda D. Tatum | Assistant County Manager

(Former Budget Director)



Forsyth County Fire

FIRE DEPARTMENT



Daniel L. Ozimek
Emergency Services Director

MEMORANDUM

To: Joseph Sloop, Map Forsyth
From: T.L. Whicker, Emergency Services
Date: January 30, 2015
Subject: Mapping Projects and Data Support

I would like to express our sincere appreciation for the talent and work of your staff in assisting our division with mapping and data needs. Emergency Services and specifically the Fire Division and Fire Departments of Forsyth County depend heavily on accurate mapping and data management that are tied to maps. I feel we have taken advantage of your staff and we are working with all fire districts to coordinate our future request. Prior to Map Forsyth we relied on our staff and the Tax Office to manage hand drawn maps and physical deed descriptions, which were extremely time consuming and logistically prohibitive to changes and updates. For that reason most projects were avoided as we just did not have the manpower or time to take on the task. In addition our various Fire Departments, 911 Centers and County Government Divisions all had their own mapping methods and programs, which were not compatible and these same systems could not link with data or be of use in the field. We have completed many projects that have been on our "do list" for many years. I feel we now have the ability to plan ahead and work with all organizations on sharing data and taking advantage of technology that puts us all on the "same page" due to Map Forsyth being a focal point for this need. Our Division is committed to not making a move with mapping or the data that is tied to same without first working with Map Forsyth. I have compiled a list of subjects that involve the need for mapping and associated data on the attached document to include comments on the nature and impact of accurate data. This list not only impacts the fire departments but also other agencies such as utilities, insurance companies, law enforcement and others so it would be in the interest of all to be sure that when we discuss our needs and determine a path, that we also look at this need from the perspective of other agencies for an inclusive solution which in the end will improve service and utilize our resources proficiently. I am looking forward to communicating with our District Fire Chiefs and a presentation from Map Forsyth that will inform and impress upon everyone the importance of coordinating our needs and future planning.

3000 Aviation Drive · Winston-Salem, NC 27105 · 336/703-2550 · Fax 336/727-2078
Website: www.forsyth.cc/fire

Timothy Whicker
*Forsyth County Deputy
Fire Marshal*

FIRE DEPARTMENT



Daniel L. Ozimek
Emergency Services Director

Mapping and Data needs for Fire Departments of Forsyth County

- Fire Insurance District Mapping: requires regular updates and impacts the annual insurance premiums of property owners and response of proper fire department resources.
- Fire Tax District Mapping: impacts tax billings and funding of fire tax districts.
- Fire District Distribution Mapping: impacts future planning, identifies fire station locations, fire department fleet needs, Insurance grades and thus property owner insurance premiums and fire department budgets.
- Hydrant Distribution- Water Point Mapping and Coverage: Impacts fire department planning for apparatus purchases, fire district insurance grades and insurance premiums, fire department pre-fire surveys, field data collection and management, effective emergency response and safety of responders.
- Physical Mapping and Imagery: impacts emergency scene action plans, provides current data for pre-fire surveys, reduces redundancy and outdated data and the logistics of data management by multiple entities. This mapping technology has a major impact on responder and public safety.
- Field Data Effectiveness: the ability to access and manage data in the field and link same to mapping improves accuracy, reduces human error in data transfer, provides the information that is needed by personnel in the field to have live information in the field with them. The use of smart phone and iPad technology is providing our responders with inexpensive means of using data in the field but that data must be a coordinated effort with other agencies and thus requires a focal point to coordinate this resource.
- Demographic Mapping and Data: impacts fire department planning, resource deployment, fire and life safety program planning, fire inspection manpower and scheduling, accurate grant application data and tracking of events and trends. The effectiveness of our programs and operations are a part of the fire district grading process which impacts property owners insurance premiums and fire department budgets.
- Accurate Mapping: provides responders with the tools to arrive and bring data to the scene that enhances our ability to quickly and safely handle the event.

3000 Aviation Drive · Winston-Salem, NC 27105 · 336/703-2550 · Fax 336/727-2078
Website: www.forsyth.cc/fire



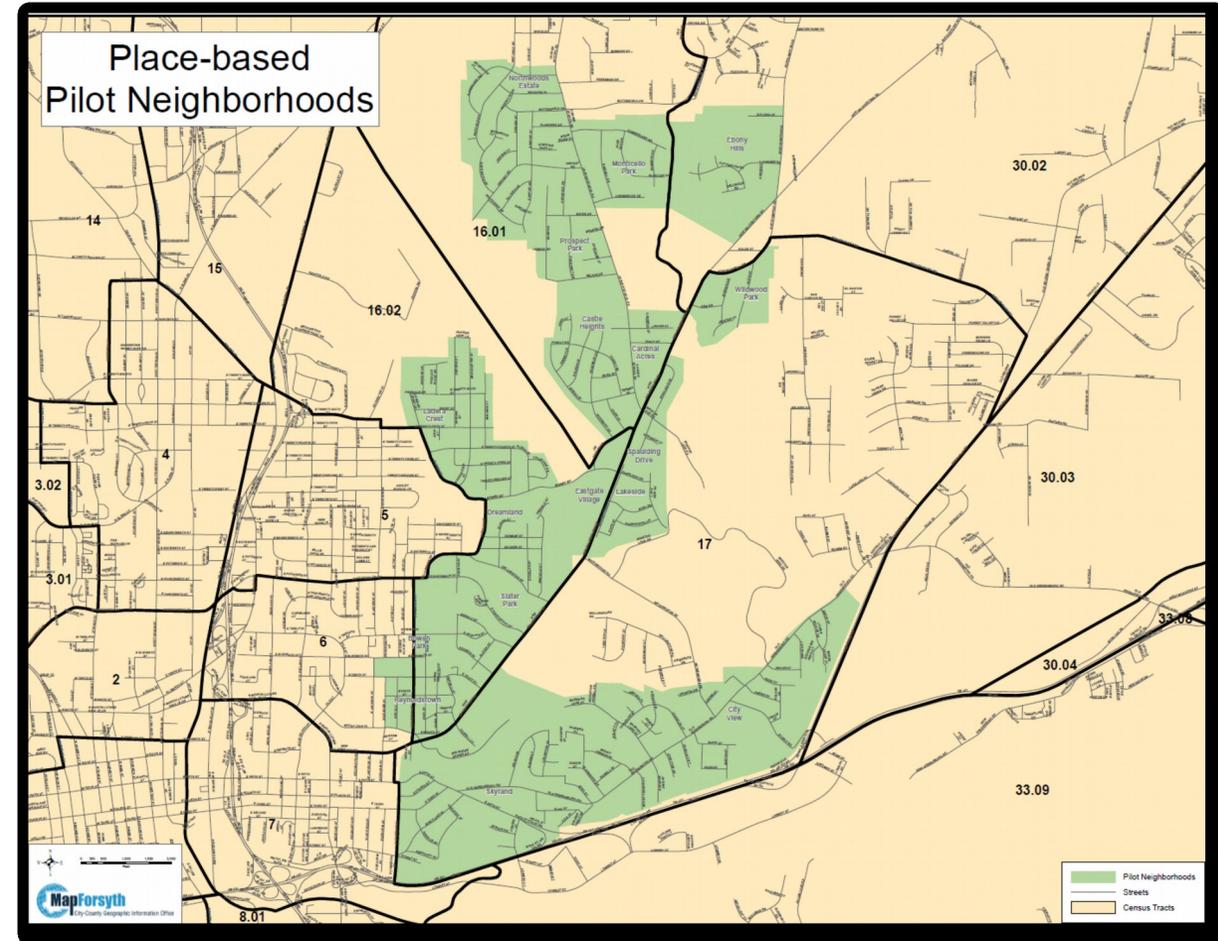
United Way of Forsyth County

“United Way of Forsyth County’s strategic direction included a deeper focus on specific neighborhoods and areas with more challenges in order to raise the quality of life for the whole community. One of the **critical aspects of our research was the GIS analysis** provided by MapForsyth, which offered valuable insight into our community through the density mapping of community indicators. **This allowed us to pinpoint the optimum area to pilot our place-based strategy.** In addition, a presentation of the data maps in October 2013 continues to be referred to by those in attendance for the innovative way it captured and presented community information.”

Cynthia S. Gordineer

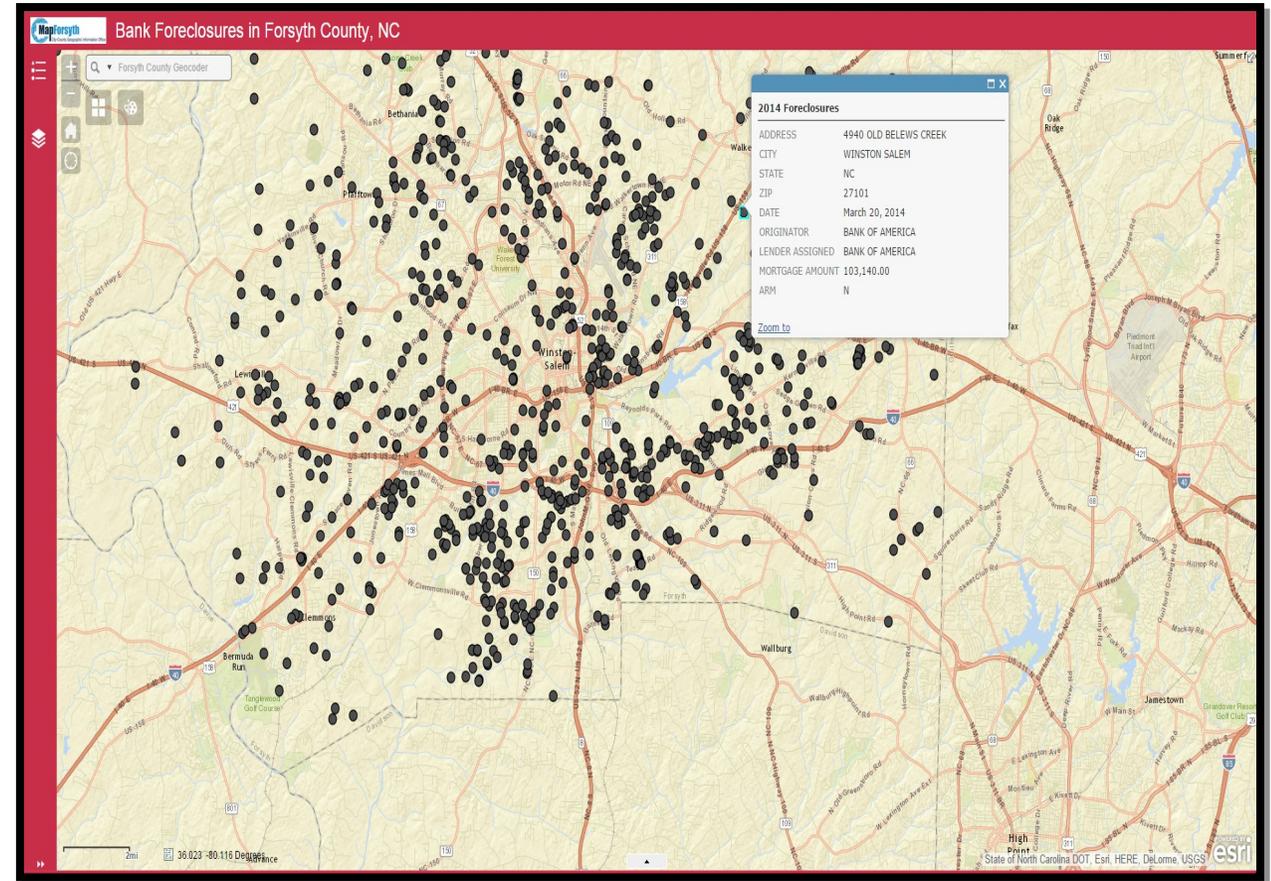
President & CEO

United Way of Forsyth County



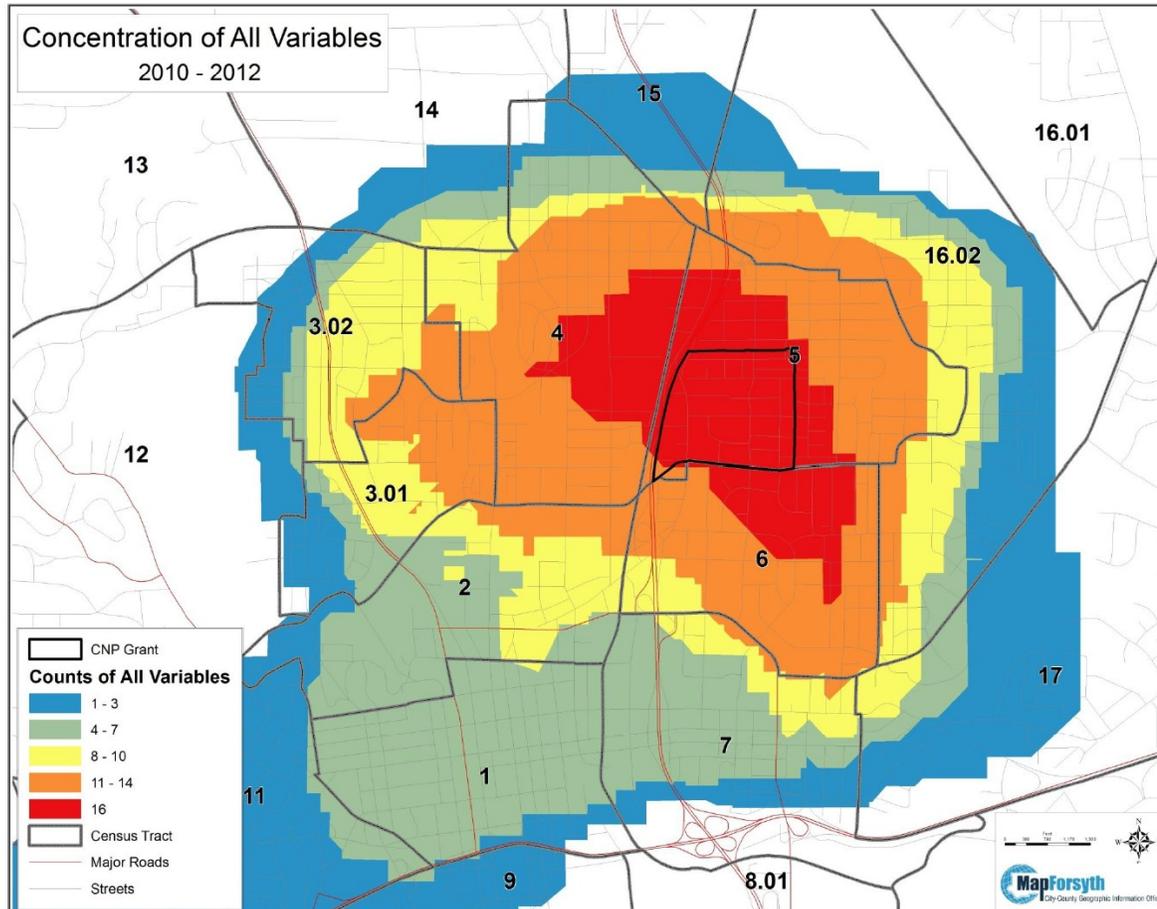
Forsyth Co. Housing & Community Development

“In 2008, Forsyth County Department of Housing and Community Development began tracking home foreclosures using an Excel spreadsheet. In order to better understand where the “hot spots” were for foreclosures in the County, the MapForsyth staff was able to provide a map showing the geographic location of each foreclosed home. In 2009, these maps proved valuable in the preparation of a Neighborhood Stabilization Grant request seeking HUD funding that would finance activities allowing the County to provide financing for families buying and renovating the vacant, foreclosed properties. **The County, by using the hotspots was able to designate as NSP eligible areas some 23 census tracts.** The **end result** of the Winston-Salem/Forsyth NSP project was an award of **\$3.625 million**, which allowed low and moderate income families, the financing needed, to purchase 94 formerly foreclosed homes. Additionally, a 12 unit abandoned condominium complex was purchased and the vacated 12 units were renovated and 56 more units were constructed. Two of these NSP projects received the NCHFA projects of the year for single and multi-family affordable housing. **The mapping of “hot spots” was instrumental in making this project a highly successful project for Winston-Salem and Forsyth County.**”



Daniel Kornelis
Director

Housing Authority of Winston-Salem (HAWs)



“The Housing Authority of Winston-Salem applied for and received a HUD Choice Neighborhoods Planning Grant(CNP) to plan the transformation of the Cleveland Avenue Neighborhood in Northeast Winston Salem. This application was one of only nine applications to be awarded the grant. It was based on the level of distress in the neighborhood and the partners that the Housing Authority had assembled with the relevant expertise in their field to plan the transformation. MapForsyth gave a presentation to the Housing Authority, HUD, CNP partners and stakeholders using GIS to show how the different variables of distress were concentrated in the neighborhood. The presentation was a tremendous help for everyone to visually understand the factors affecting the neighborhood.”

Troy DeHaven

Real Estate Development Manager
The Housing Authority of Winston-Salem

Wake Forest University Translational Science Institute

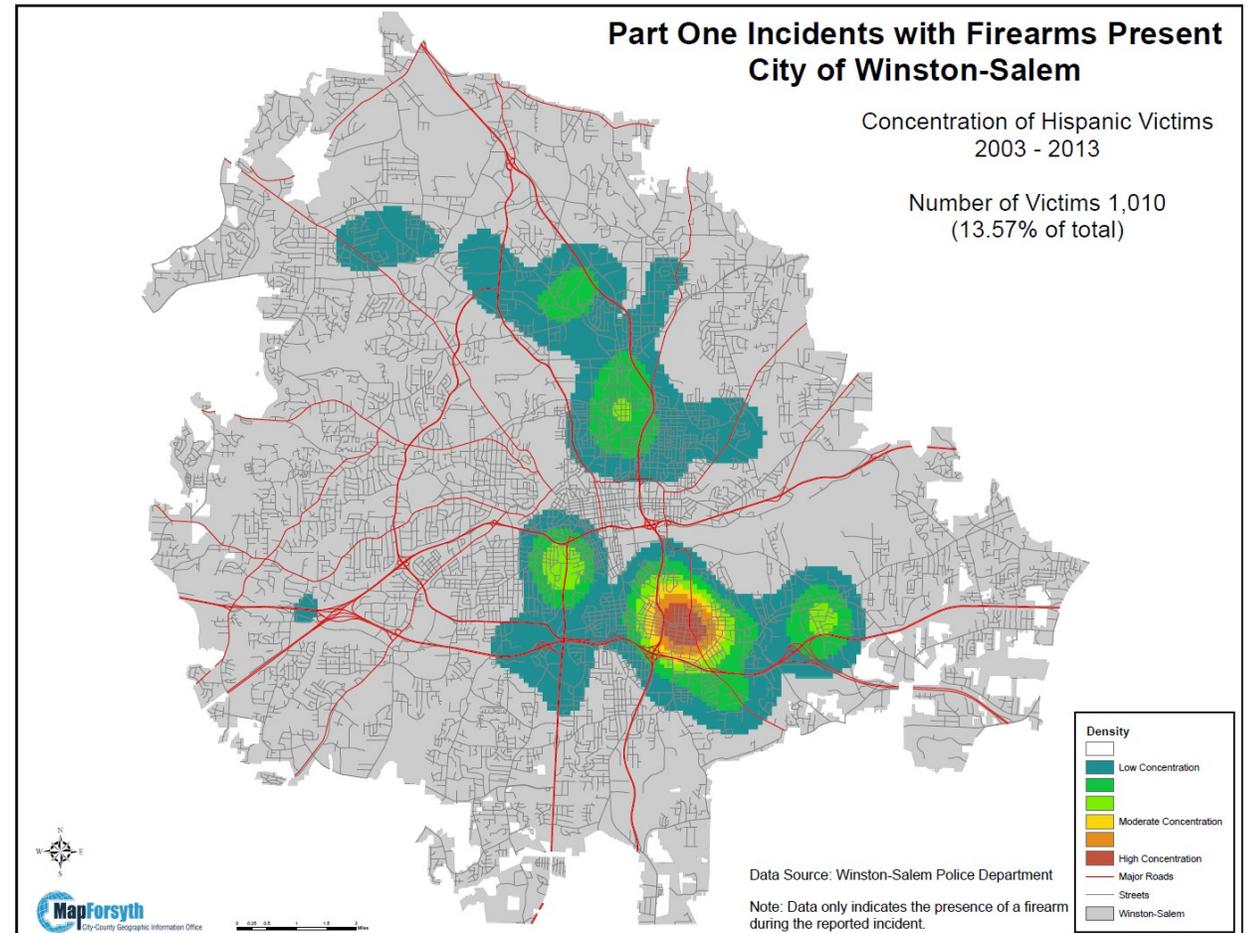
Gun Violence as a Health Disparity

(<https://brsa.wakehealth.edu/community/what-we-do/gun-violence-as-a-health-disparity>)

“MapForsyth has supported several projects of the Program in Community Engagement at the Wake Forest medical school. Their use of GIS documented the association of gun violence with other health and social disparities in specific Winston-Salem neighborhoods. **No other approach could provide this stark portrayal with such power. The ability of GIS to provide visual illustration of health and social issues lays an important foundation for planning and intervention.**”

Thomas A. Arcury, PhD

Professor and Vice Chair for Research, Department of Family and Community Medicine
Director, Program in Community Engagement, Wake Forest University Translational Science Institute Director, Center for Worker Health Wake Forest School of Medicine



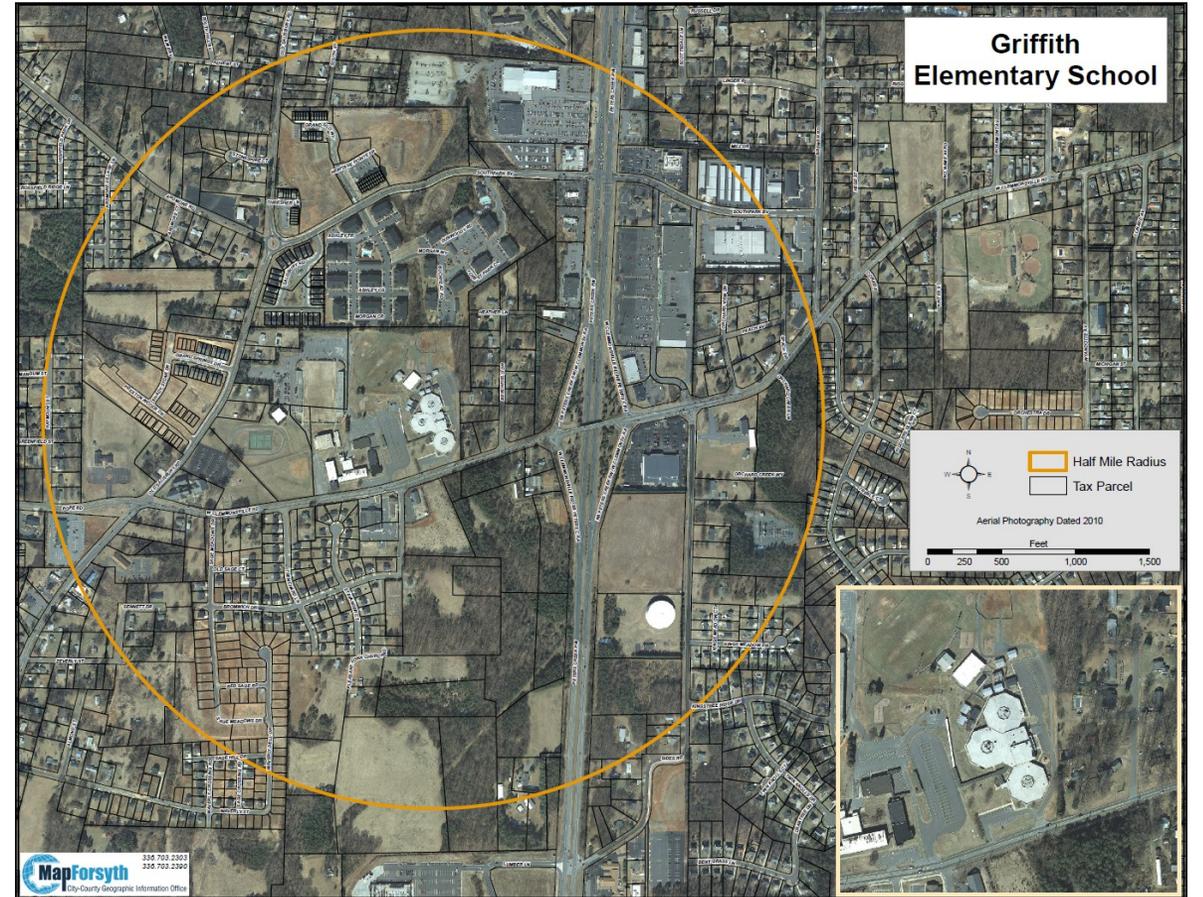
Winston-Salem Forsyth County Schools

“MapForsyth has been a tremendous partner with the Winston-Salem Forsyth County Schools. The WSFCS has planned for some time to implement a crisis mapping system for our district to provide information and collaboration with law enforcement, fire, ems and county agencies other than those noted in case of a school emergency. With the assistance and cooperation above and beyond by MapForsyth we are well on our way to this accomplished task. The concept has been shared with the state of NC and has been seen as a catalyst for a statewide approach for all school districts. As a member of the Piedmont Triad Educational Consortium I have shared this working relationship and end product. Out this has come similar relationships with school districts and their county government to work hand in hand to establish a similar product. I’m very proud of what MapForsyth has done for our Students, Administrators and Parents within our community. Thanks to Mr. Joseph Sloop for his leadership and vision to create such a wonderful resource. **They say pictures are worth a thousand words and no doubt the end product has been just that for our community.**”

Darrell Walker

Assistant Superintendent-Operations

Winston-Salem Forsyth County Schools



GIS Champion

Forsyth County, NC

Dudley Watts, Jr.
County Manager



“GIS is the tool that allows us to gain a much deeper **understanding of our communities challenges**. It can serve as a dashboard to let us know how we're doing and as a **testing site for potential solutions**.

Data tells a story, and stories are imperative if we are going to build effective solutions across what seem to almost impossible political and social boundaries.

If used effectively, GIS can be the master storyteller.”

What is the value of GIS on a local level?

A word cloud of GIS-related terms. The words are arranged in a roughly circular pattern. The colors used are red, blue, and brown. The sizes of the words vary, with 'Collaboration' and 'Solutions' being the largest. Other prominent words include 'Safety', 'Storage', 'Stories', 'Analysis', 'Spatial Data', 'Benefits', 'Non-tangible', 'Orthos', 'Creation', 'Information', 'Statistics', 'Automation', 'Knowledge', 'Preparedness', 'Tools', 'Maps', 'ROI', 'WebGIS', 'Access', 'Tangible', 'Databases', and 'Information'.

Collaboration
Tangible Databases Solutions
Analysis Spatial Data Benefits
Knowledge Preparedness Tools Maps ROI
Non-tangible Orthos
Testing Safety WebGIS Access
Storage Stories Information Creation
Automation Statistics

Thank You

Joseph Sloop, CGCIO, GISP

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