

Health Disparities Conference

Charlottesville Fire Department's Role in the Community

February 8, 2022

Dr. Hezedeane A. Smith, Fire Chief



FAMILY **I**NTEGRITY **R**ESPECT **E**XCELLENCE

Fire Chief's Vision

To enhance the department's culture and service delivery
through Transparency, Innovation, Trust, and Integrity.
Charlottesville Fire Department | Dr. Hezedeon A. Smith, 2021

VALUES

PROFESSIONAL
STANDARDS

COMMUNICATIONS
& ACCOUNTABILITY

COMMUNITY
DRIVEN

DATA &
TECHNOLOGY

ENHANCEMENTS &
EVALUATIONS

INITIATIVES

PROCESSES

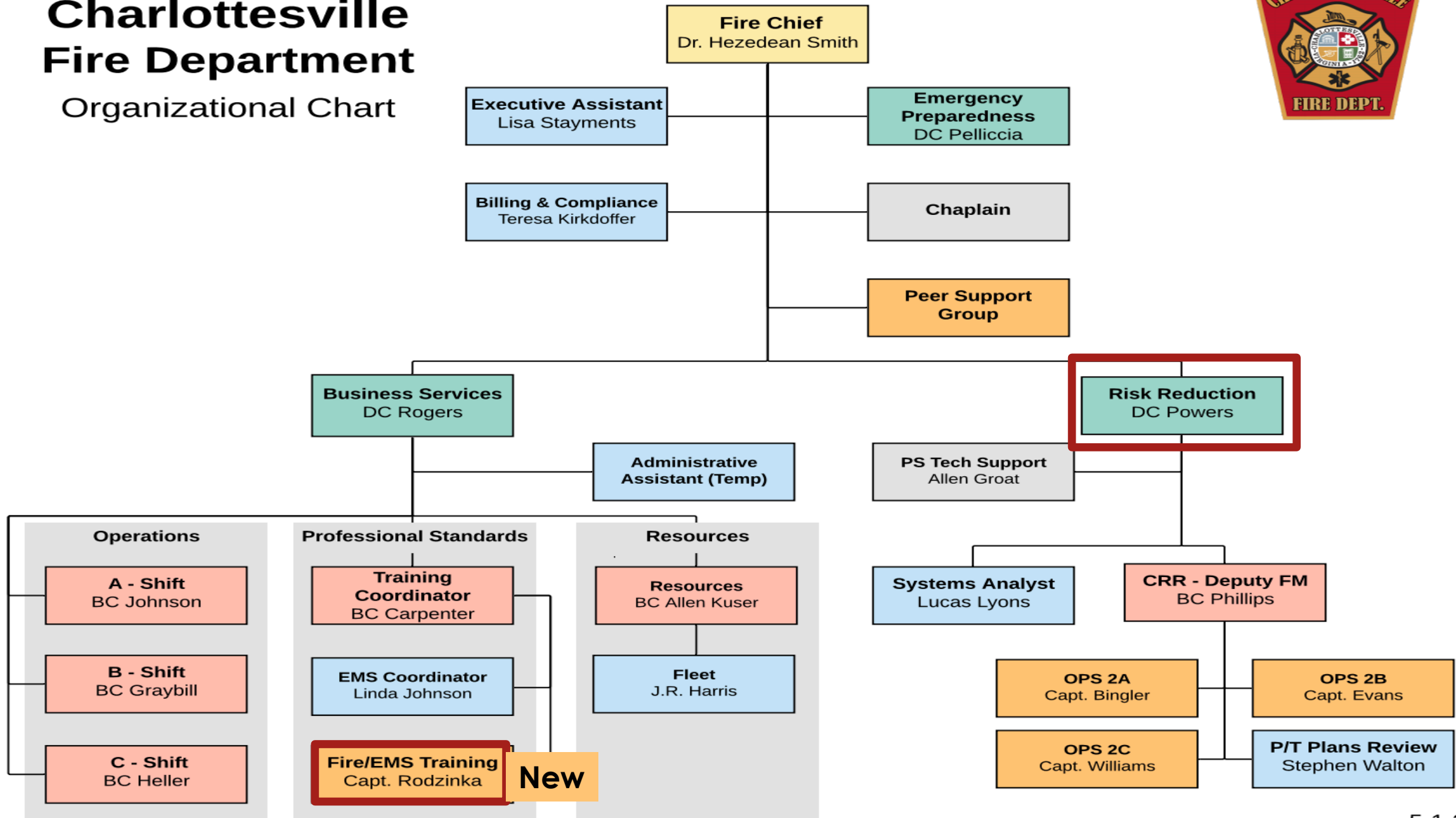
Family **I**ntegrity **R**espect **E**xcellence



FAMILY **I**NTEGRITY **R**ESPECT **E**XCELLENCE

Charlottesville Fire Department

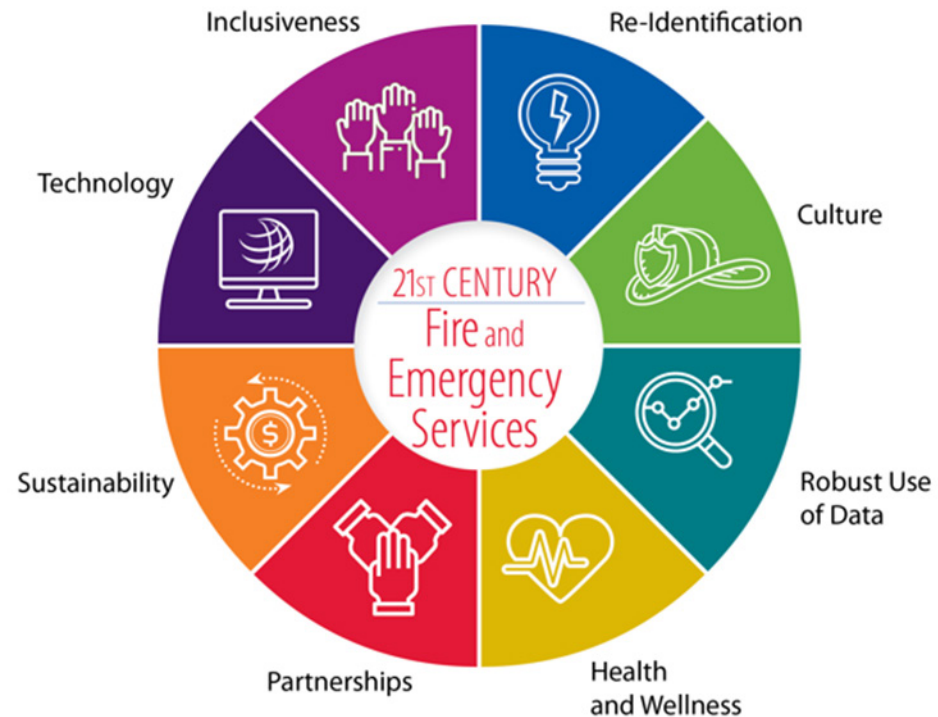
Organizational Chart





EMS AGENDA 2050)

A PEOPLE-CENTERED VISION FOR THE FUTURE
OF EMERGENCY MEDICAL SERVICES

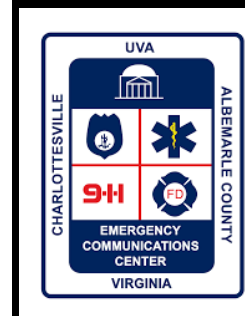


Forces impacting the 21st Century Fire and
Emergency Services



FAMILY INTEGRITY RESPECT EXCELLENCE





The Charlottesville Fire Department embraces the forces impacting the 21st Century Fire and Emergency Services



FAMILY INTEGRITY RESPECT EXCELLENCE

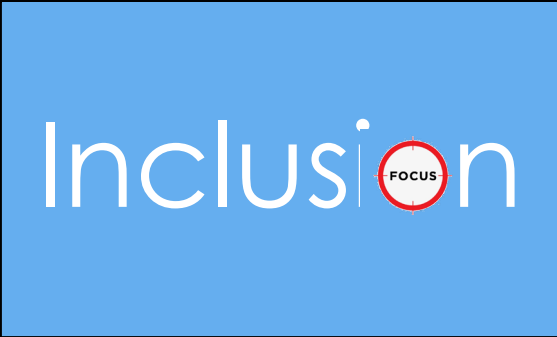


Ethnicity (before)	Count	Percentage
Black or African American	10	12%
Hispanic	1	1%
White/Not Hispanic origin	74	87%

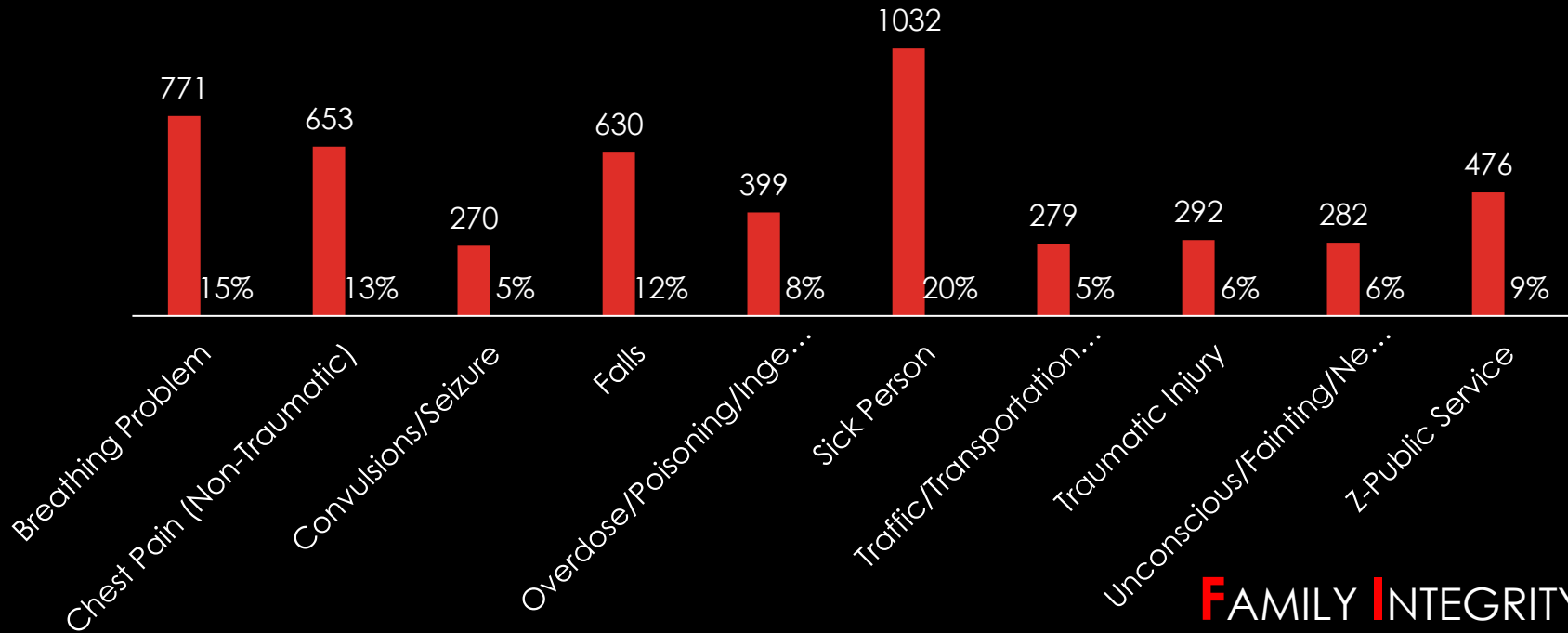
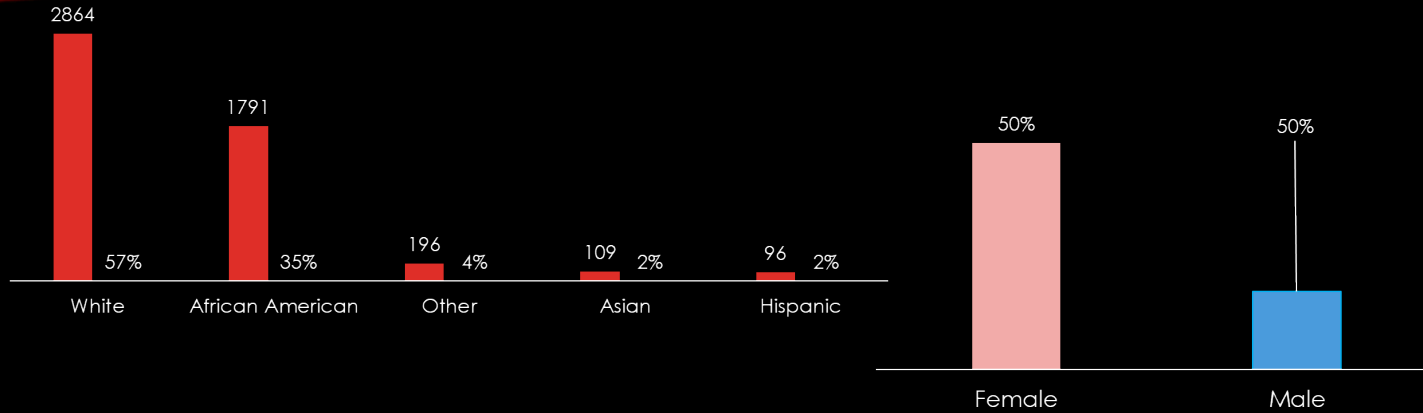
Ethnicity (Since Ch. Smith)	Count	Percentage
Black or African American	18	16%
Hispanic	1	1%
White/Not Hispanic origin	94	83%

Gender (before)	Count	Percentage
Female	3	4%
Male	82	96%

Gender (Since Ch. Smith)	Count	Percentage
Female	11	10%
Male	102	90%



2021 CALLS FOR SERVICE SNAPSHOT



USE OF DATA IN CFD

Neighborhood Risk Reduction

- Response time analysis
- Unit Hour Utilization

Overtime Dashboard

- Drive-time analysis

- Call Volume Analysis
- Personnel Workload
- Incident Heat Mapping
- Patient Disposition Analysis
- Turn Out Time Tracking



View Charlottesville Neighborhood Risk Dashboard



Neighborhood Risk Assessment



Neighborhood Risk Profiles

City Risk Profile

WEATHER

RESPONSE

INCIDENTS

PRE-PLAN

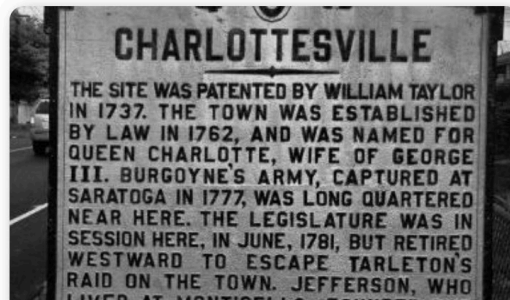
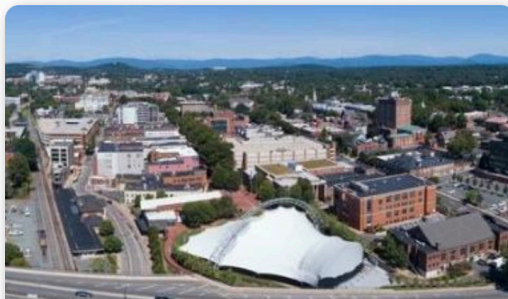
ENGAGEMENT

Neighborhood Risk Assessment

Charlottesville Fire Department | Community Risk Reduction

Search...

The Charlottesville Fire Department's Neighborhood Risk Assessment provides the framework to provide the best programs and services to meet our community's needs. This site is a community hub for information for our partners to plan for and deploy community-based services. The Charlottesville Fire Department is proud of our strategic partnerships and the collected work we do to improve the quality of life of our residents, students, and visitors.



FAMILY INTEGRITY RESPECT EXCELLENCE



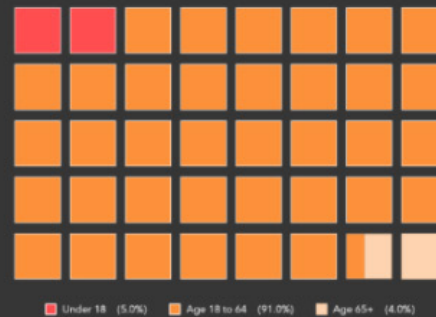
Neighborhood Risk Assessment



Neighborhood Risk Profiles City Risk Profile

LANGUAGE (ACS)	Age 5-17	18-64	Age 65+	Total
English Only	252	4,885	251	5,388
Spanish	0	187	13	200
Spanish & English Well	0	187	13	200
Spanish & English Not Well	0	0	0	0
Indo-European	44	389	0	433
Indo-European & English Well	44	380	0	424
Indo-Euro & English Not Well	0	9	0	9
Asian-Pacific Island	12	347	0	359
Asian-Pacific Isl & English Well	12	331	0	343
Aan-Pacific Isl & English Not Well	0	17	0	17
Other Language	39	75	5	119
Other Language & English Well	39	16	5	60
Other Lang. & English Not Well	0	59	0	59

POPULATION BY AGE



KEY INDICATORS: PLANNING

Venable

7,954

Population

2.77

Avg Size
Household

2,600

Households

23.3

Median
Age

\$21,747

Median
Household Income

\$632,353

Median
Home Value

20

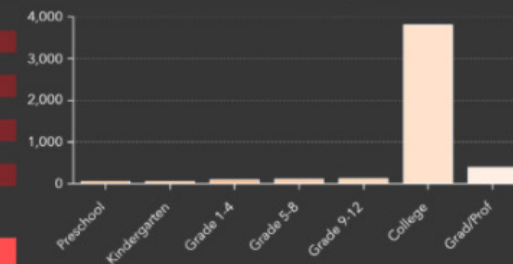
Housing
Affordability

96%

Internet at
Home

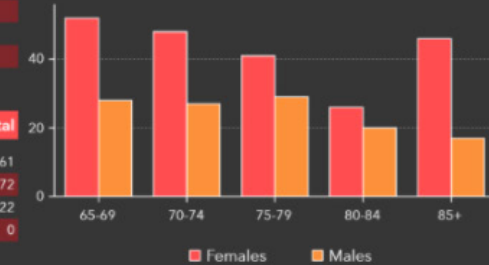
POPULATION AND POVERTY STATUS (ACS)	Total
Population for whom Poverty Status is Determined	5,436
Income to Poverty Ratio <0.50	2,697
Income to Poverty Ratio 0.50-0.99	396
Income to Poverty Ratio 1.00-1.24	180
Income to Poverty Ratio 1.25-1.49	103
Income to Poverty Ratio 1.50-1.84	210
Income to Poverty Ratio 1.85-1.99	187
Income to Poverty Ratio 2.00+	1,662

SCHOOL ENROLLMENT (ACS)



POVERTY LEVELS (ACS)	Below	Above	Total
Total	881	965	1,846
Married Couple Families	47	330	377
Other Families w/Male Householder	34	42	76
Other Families w/Female Householder	21	66	87
Nonfamilies w/Male Householder	337	284	621
Nonfamilies w/Female Householder	441	244	685

SENIOR POPULATION



NO HEALTH INSURANCE COVERAGE	(ACS) %	Total
Population <19	0.9%	61
Population Age 19-34	4.2%	272
Population Age 35-64	1.9%	122
Population Age 65+	0.0%	0



Source: En forecasts for 2025; U.S. Census Bureau 2014-2018 American Community Survey (ACS) Data; Businesses counts from Infogroup

Version 1.10
March 24, 2020



FAMILY INTEGRITY RESPECT EXCELLENCE

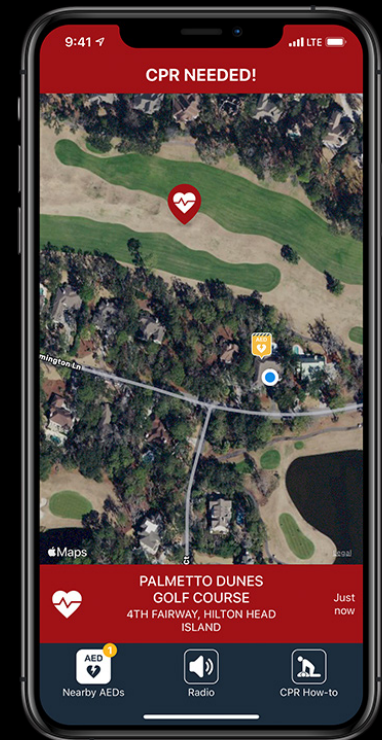
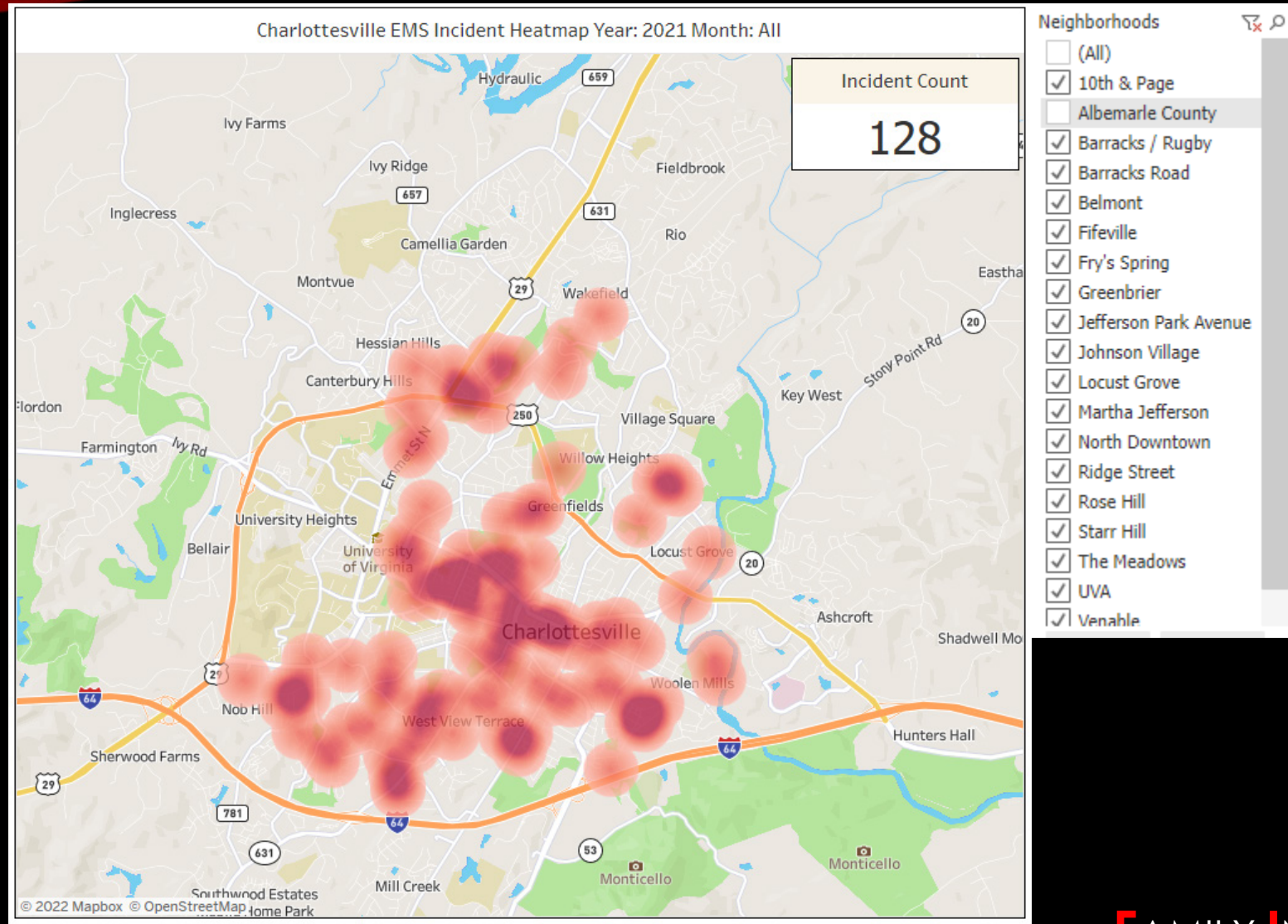
PROXIMITY DISPATCH

- CFD now sends the closest "appropriate" ambulance to ALS & BLS level calls
- Prior to change - ambulances were often sent to scenes with long response times and very frequently passed a fire station with an "appropriate" life support available in the station.
- Improvement was necessary for providing a timelier response with the highest level of out-of-hospital medical care to neighborhoods such as 10th & Page, Fifeville, Fry's Springs, Ridge Street, Woolen Mills, and others.
- 10th & Page neighborhood is #1 for Cardiac Arrests, #3 for Diabetic, Cardiac Emergencies, and Falls

Focus: timely responses to ALL neighborhoods *addresses healthcare disparities in the delivery of prehospital care.



CARDIAC ARRESTS C'VILLE

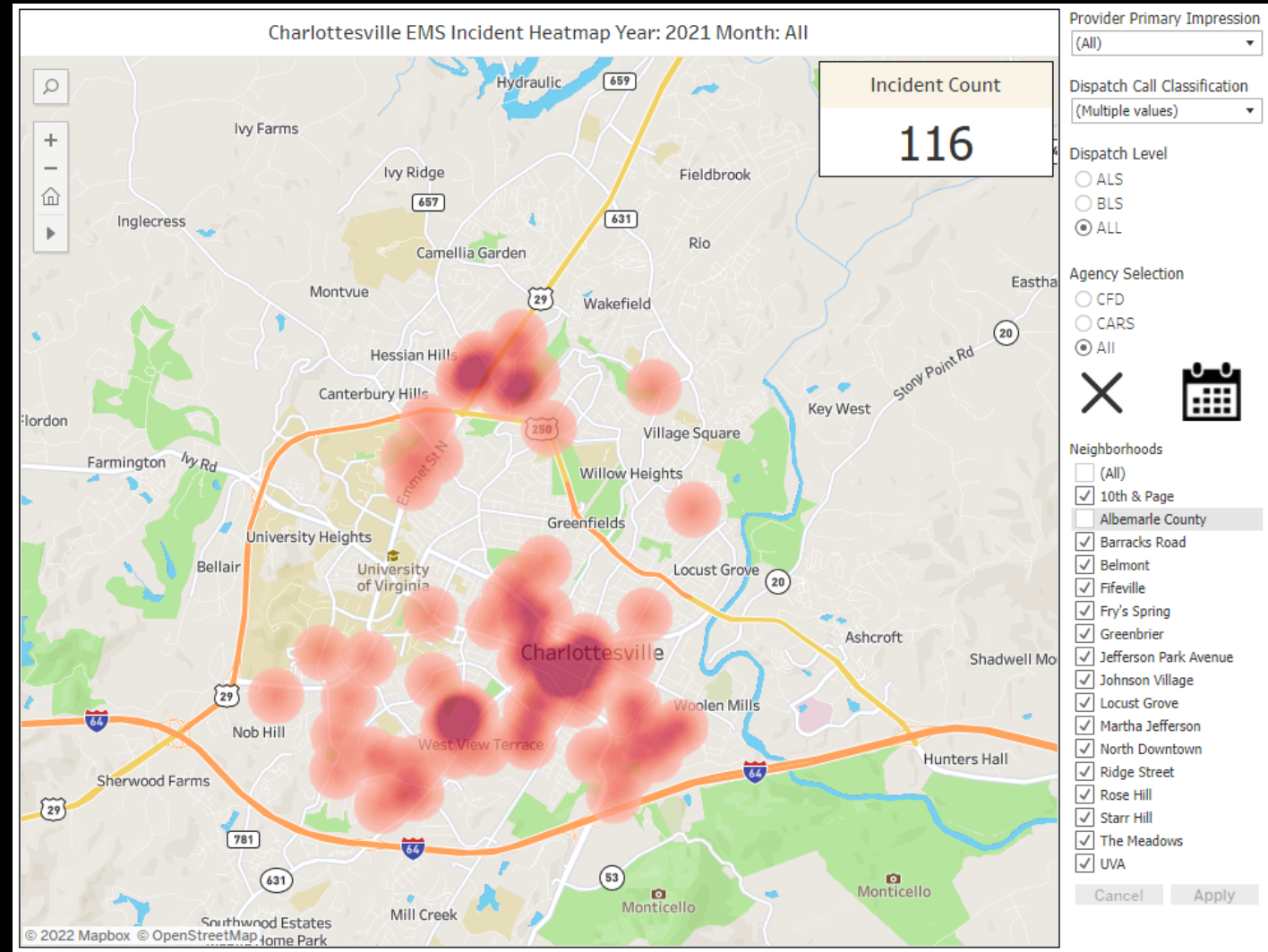


FAMILY **I**NTEGRITY **R**ESPECT **E**XCELLENCE

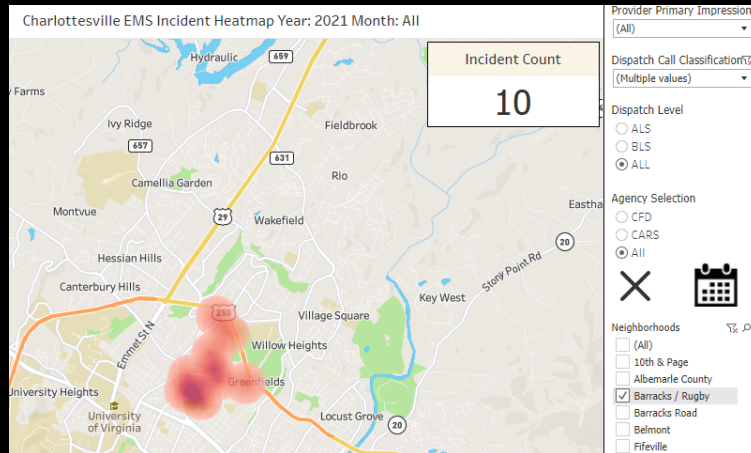
DIABETIC EMERGENCIES C'VILLE

Incident Response:

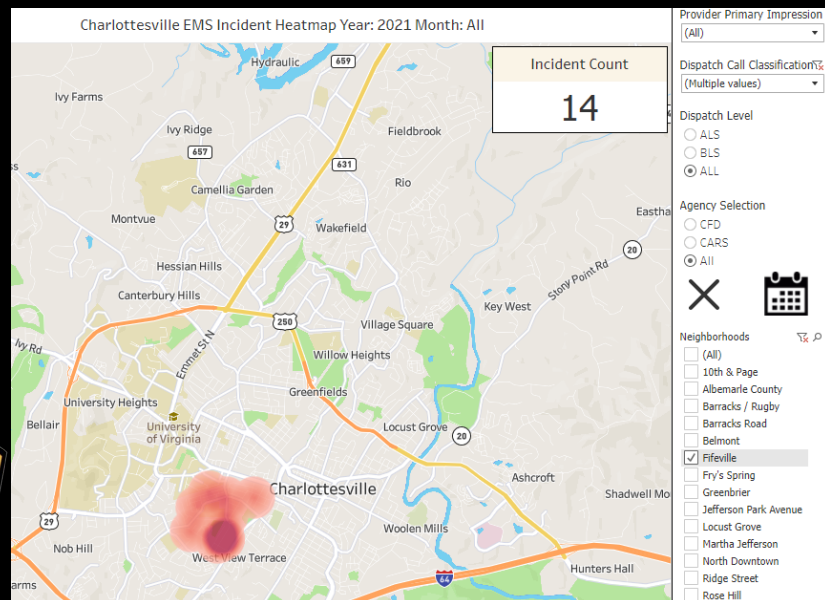
- 1st: Cardiac Arrest | 69.1 per sq. mile
- 2nd: Hazardous Conditions | 0.12 per 1,000
- 2nd: Allergic Reactions | 51.9 per sq. mile
- 3rd: Structure Fires | 5.05 per 1,000
- 3rd: Drug Use | 161.4 per sq. mile
- 3rd: Diabetic Emergencies | 115.3 per sq. mile
- 3rd: Cardiac Emergencies | 345.9 per sq. mile
- 3rd: Dispatched Falls | 305.5 per sq. mile
- 3rd: Asthma | 34.6 per sq. mile



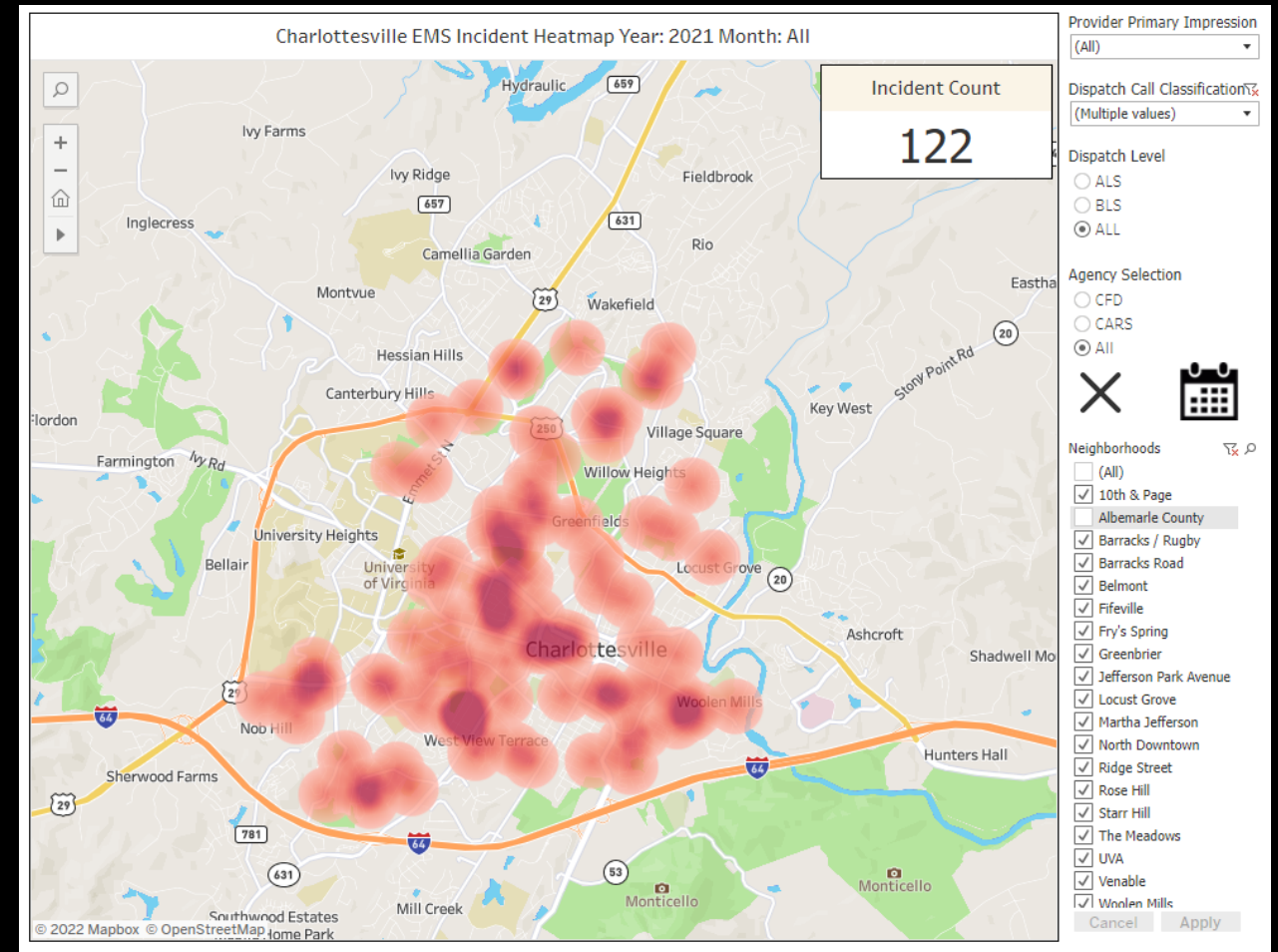
BARRACK/RUGBY



FIFEVILLE



STROKES C'VILLE



FAMILY INTEGRITY RESPECT EXCELLENCE



MENTAL HEALTH RESPONSES

Calendar Year

☐ (All)

☐ 2017

☐ 2018

☐ 2019

☐ 2020

☒ 2021

Neighborhoods

☐ (All)

☒ 10th & Page

☐ Albemarle County

☒ Barracks / Rugby

☒ Belmont

☒ Fifeville

☒ Johnson Village

☒ Locust Grove

☒ Martha Jefferson

☒ North Downtown

☒ Ridge Street

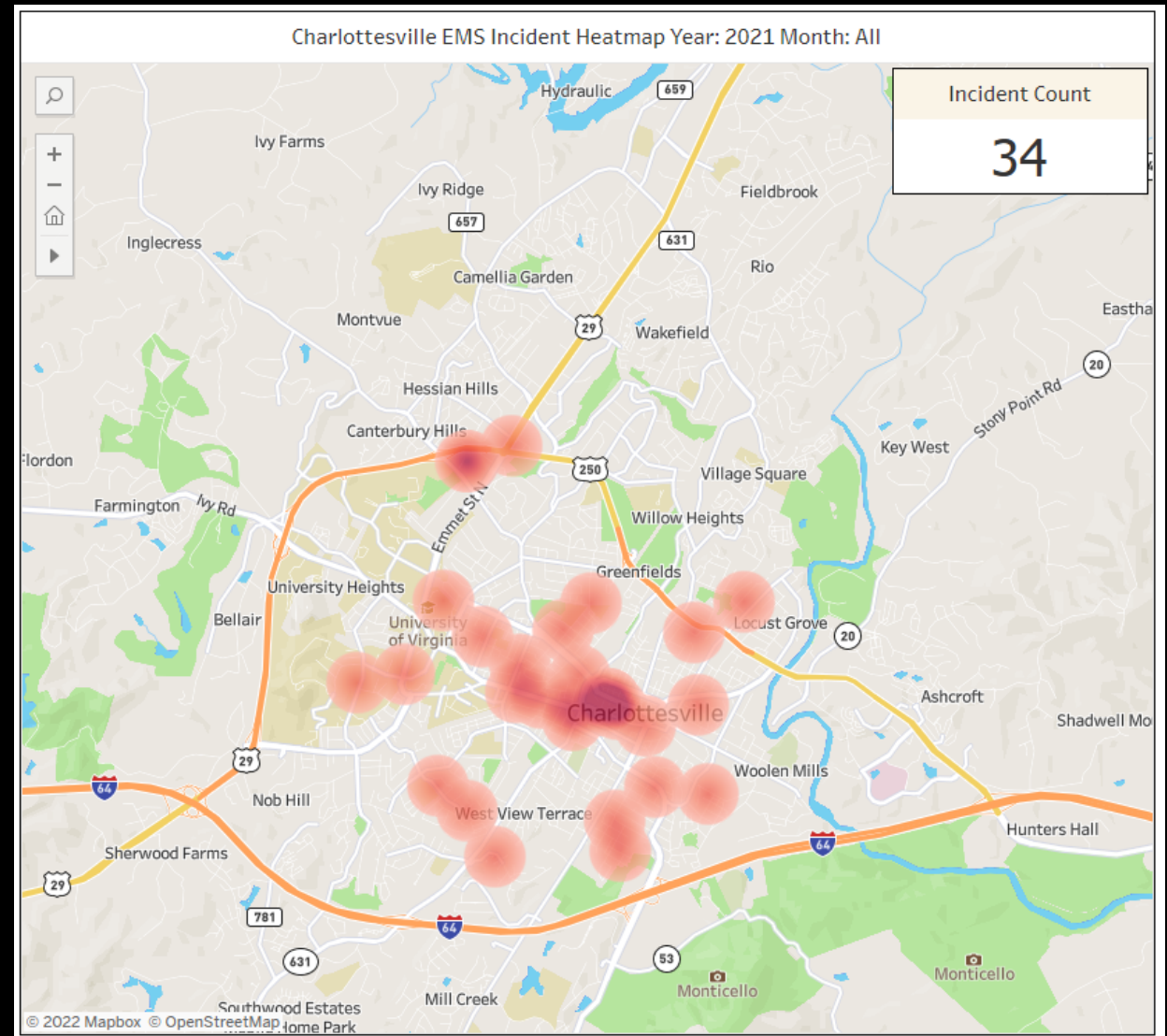
☒ Rose Hill

☒ Starr Hill

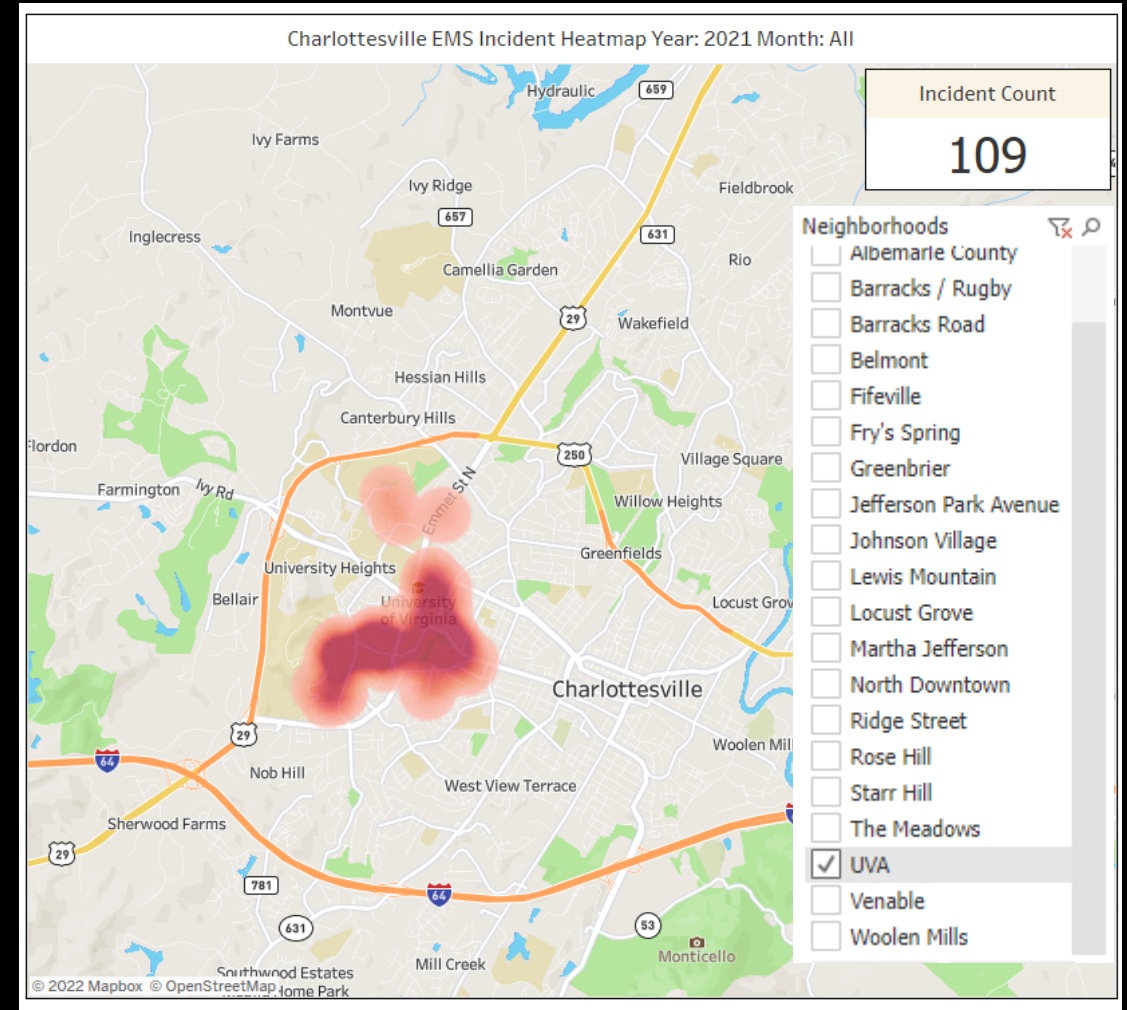
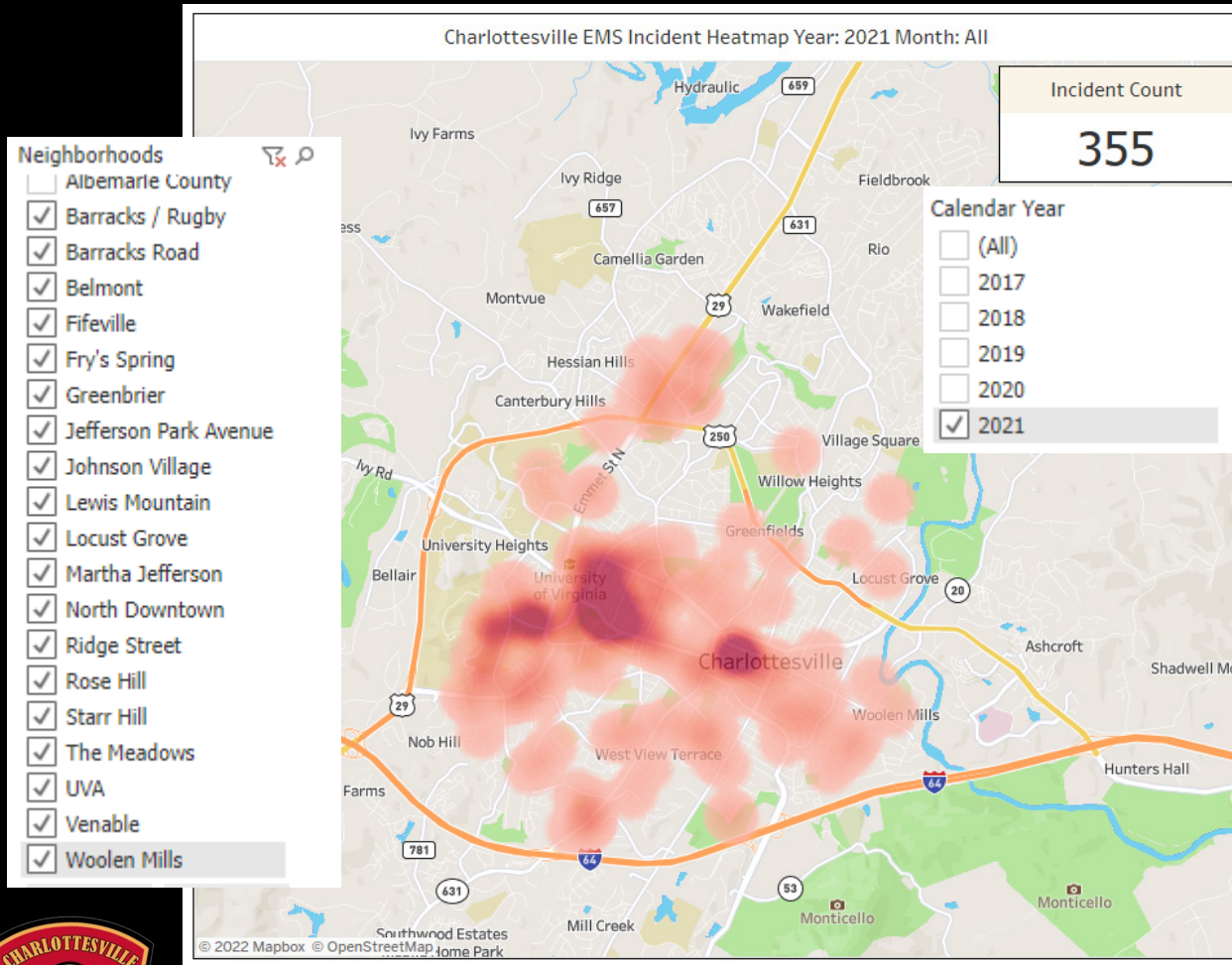
☒ The Meadows

☒ UVA

☒ Venable



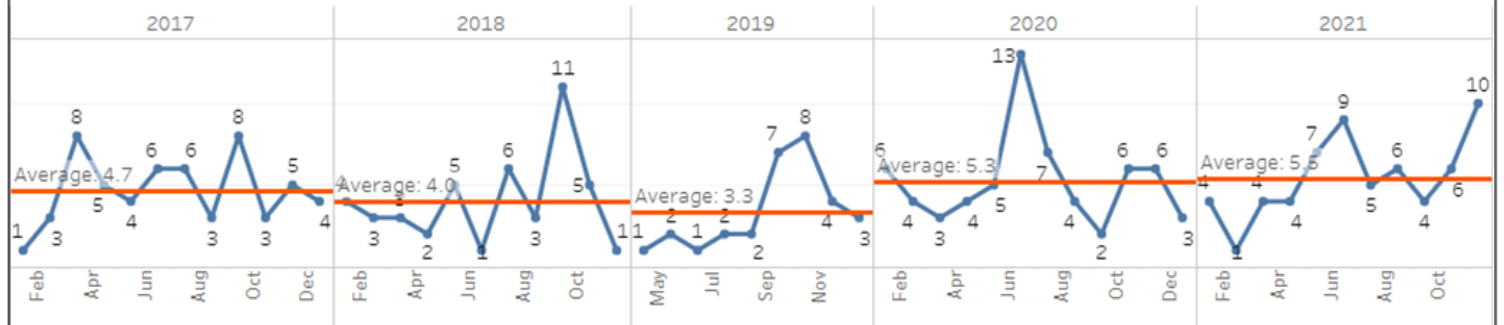
OVERDOSES



Charlottesville-Albemarle Rescue Squad/Charlottesville Fire Opioid Overdoses current as of 12/1/21

All graphs act as filters on data.

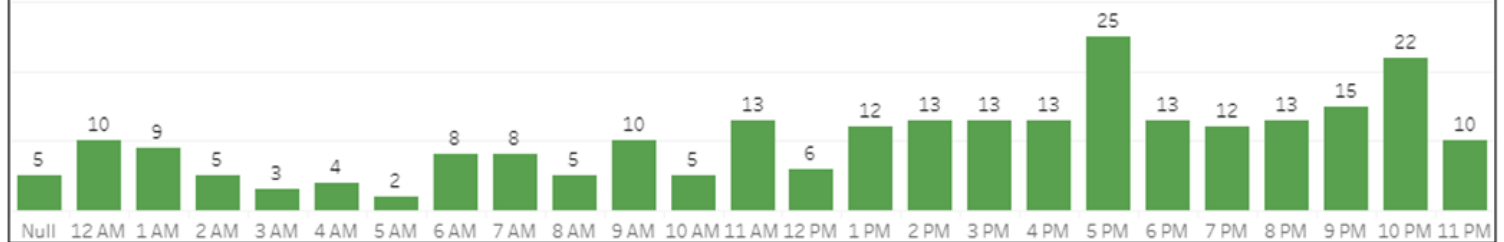
CARS/CFD Opioid Overdose Incidents by Year/Month

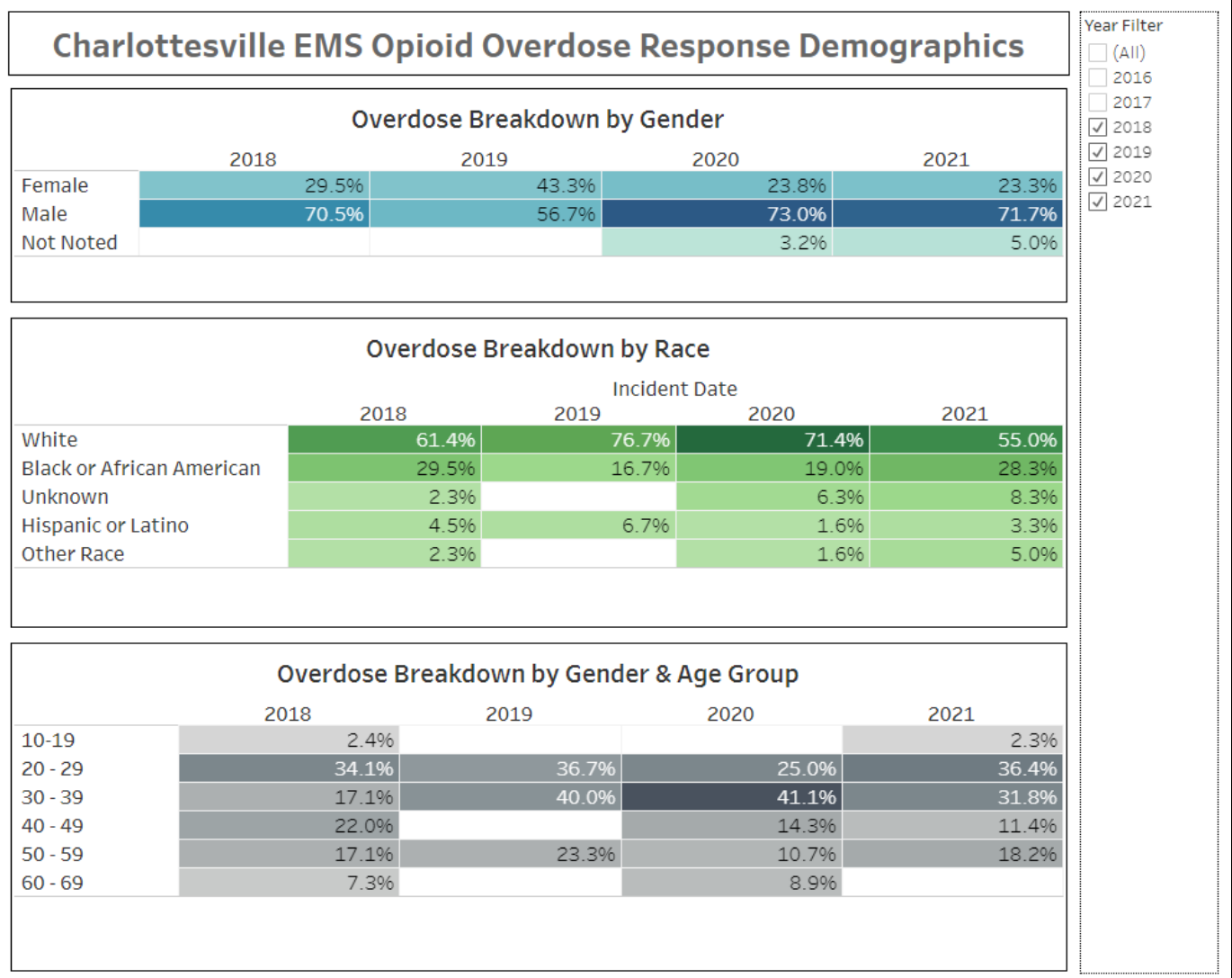
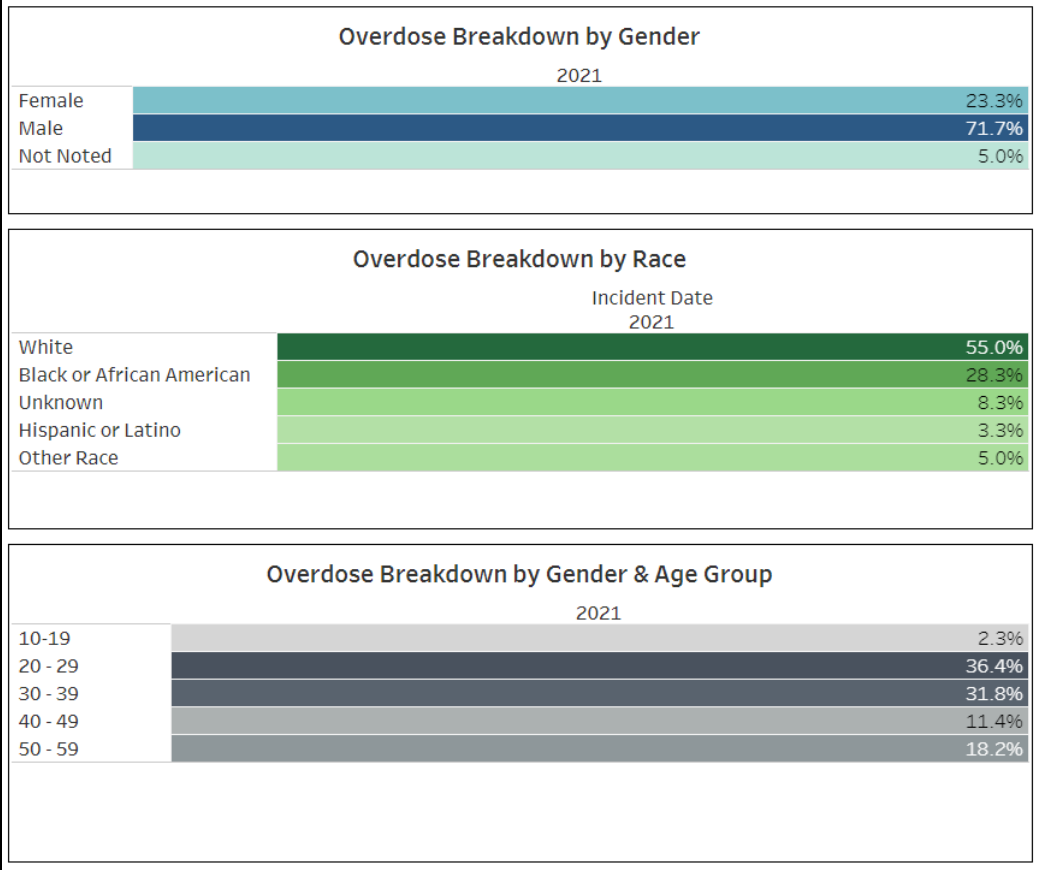


CARS/CFD Opioid Overdoses by Day of Week



CARS/CFD Opioid Overdoses by Hour of Day





OPERATIONAL EFFICIENCY

New World Enterprise CAD - Dispatch - CADLive

File View Spec Logs Options Tabs Version About ProQA

Dispatch Search Maintenance Help

Create Call Quick Call Scheduled Calls Queue

Unit Assignments Unit List Unit List Event Ticker

Command Line

Entry KQ PDVCEI DLS Summary

Case Entry Additional Information CC Selection Rules

What's the address of the emergency?

Phone number is:

Caller's problem description is:

Chief Complaint is:

Enter the most accurate location of the emergency and verify whether this is a house, apartment, business, or intersection. Obtain the building access code or GPS coordinates if available and appropriate.

Pre-Plan Print Call Alerts Cancel Agency Launch ProQA

Qualifier Venue Sector: S6-4 ESN: 1127

Location Type: Address

Recommendations

Map It

Service Vehicle Rotation

Alerts 9 Alerts 0 Associated Calls Dispositions Personnel Questionnaire GIS Linked Calls Alarm

Critical Narrative

- AP220 NOTIF
- NO ETA AVAIL
- CALLER COULD NOT SAY WHAT DIAM WAS
- TREE DOWN BLOCKING BOTH LANES - BLOCKING ACCESS TO APARTMENTS AS WELL - LINES INVOLVED - NOT PROVIDING DETAILS

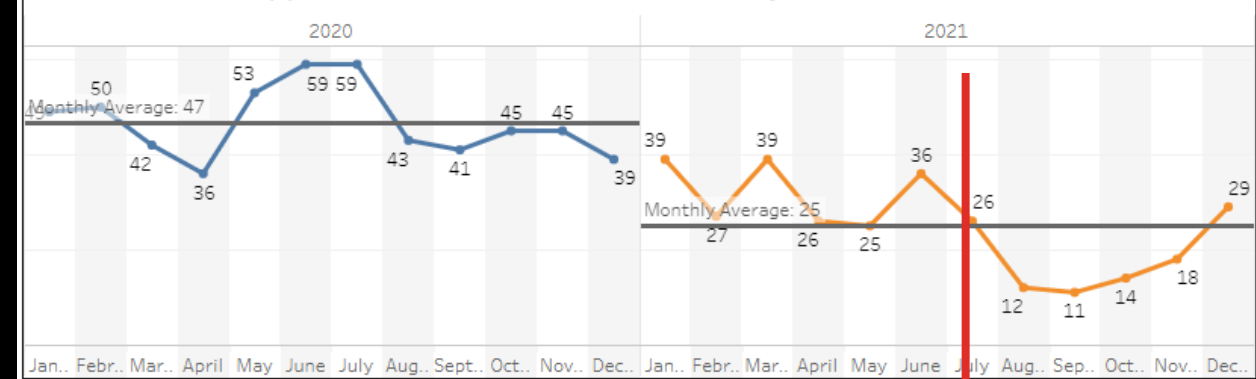
Unit # Type Status Assigned C

Unit #	Type	Status	Assigned C
ABC900	Rapid Response	Not Available	
ABC901	ABC	Off Duty	
ABC902	ABC	Off Duty	
ABC903	ABC	Off Duty	
ABC904	ABC	Off Duty	
ABC905	ABC	Off Duty	

Caller Danger - Not Trapped



Suppression Units on EMS Incidents by Date 2020 & 2021

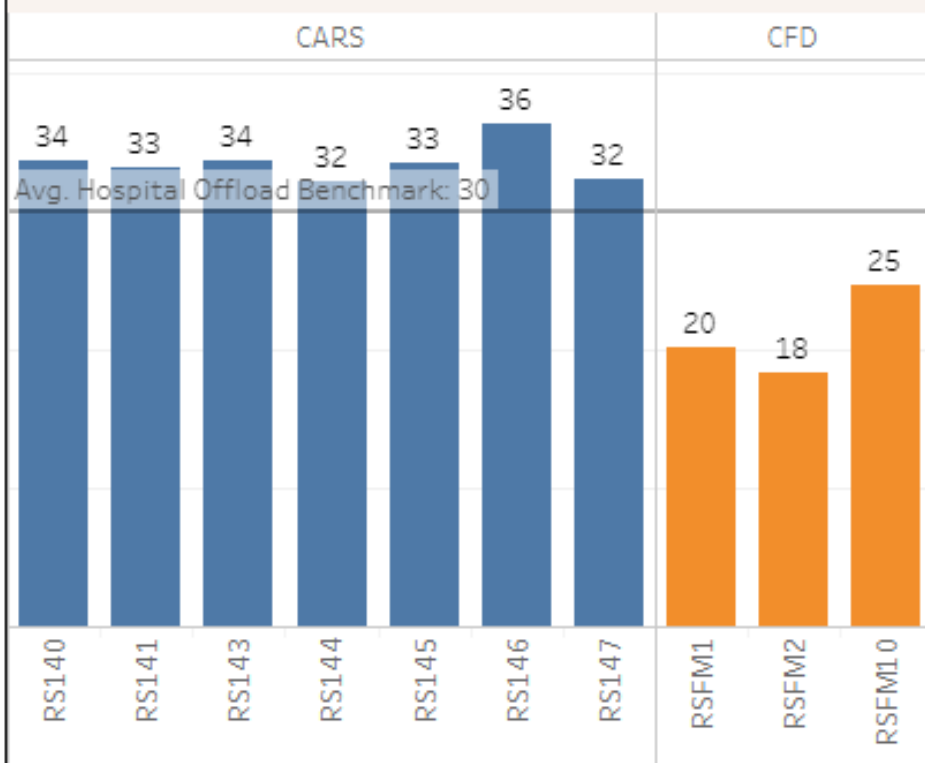


FAMILY INTEGRITY RESPECT EXCELLENCE

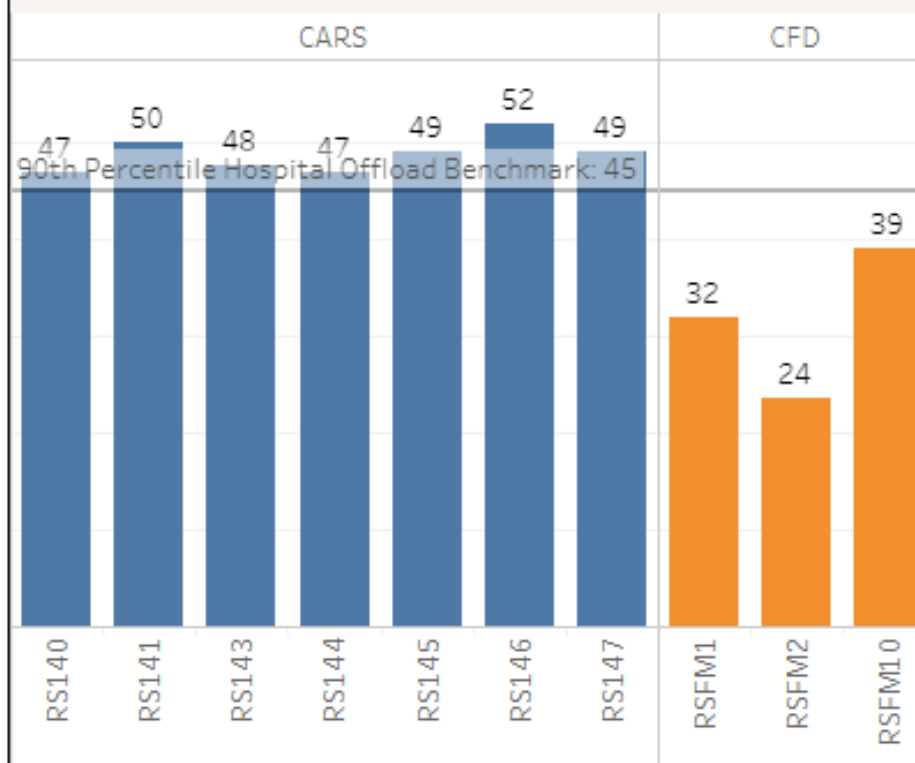


HOSPITAL OFFLOAD

Average Hospital Offload Time 2020 & 2021



90th Percentile Hospital Offload Time 2020 & 2021



Quarter

☒ (All)

☒ Q3

☒ Q4

Cancel

Apply

Month

☒ October

☒ November

☒ December

Cancel

Apply



LUCAS LYONS

SYSTEMS PERFORMANCE ANALYST
CHARLOTTESVILLE FIRE DEPARTMENT





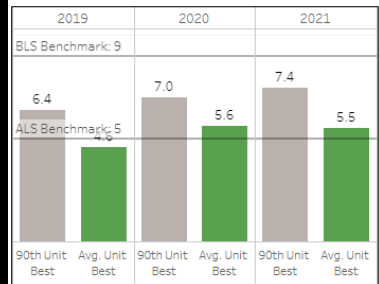
CLOSEST UNIT GOES



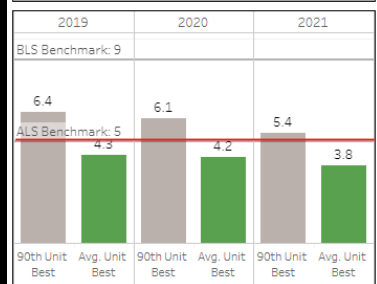
Incident Response:

- 1st: Cardiac Arrest | 69.1 per sq. mile
- 2nd: Hazardous Conditions | 0.12 per 1,000
- 2nd: Allergic Reactions | 51.9 per sq. mile
- 3rd: Structure Fires | 5.05 per 1,000
- 3rd: Drug Use | 161.4 per sq. mile
- 3rd: Diabetic Emergencies | 115.3 per sq. mile
- 3rd: Cardiac Emergencies | 345.9 per sq. mile
- 3rd: Dispatched Falls | 305.5 per sq. mile
- 3rd: Asthma | 34.6 per sq. mile

Unit Best Time (turnout+travel) 2019, 2020, 2021	
90th Unit Best	6.7
Avg. Unit Best	5.1



Unit Best Time (turnout+travel) 2019, 2020, 2021	
90th Unit Best	6.0
Avg. Unit Best	4.1



Neighborhoods Filter

- ☐ (All)
- ☐ Null
- ☒ 10th & Page
- ☐ Albemarle County
- ☐ Barracks / Rugby
- ☐ Barracks Road
- ☐ Belmont
- ☐ Fiveville
- ☐ Fry's Spring
- ☐ Greenbrier
- ☐ Jefferson Park Avenue
- ☐ Johnson Village
- ☐ Lewis Mountain
- ☐ Locust Grove
- ☐ Martha Jefferson
- ☐ North Downtown
- ☐ Ridge Street
- ☐ Rose Hill

Cancel Apply

120 Day Proximity Analysis Dashboard

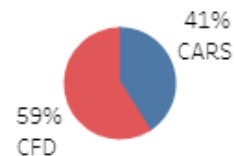
90th Percentile 1st Arriving Unit Response Times

	3/26-7/23/21	7/24-11/20/21
Call Handling Time	3:32	2:50
Turnout Time	1:49	1:48
Travel Time	4:55	4:35
Total Response Time	8:37	8:45
Unit Best Time	6:17	5:35

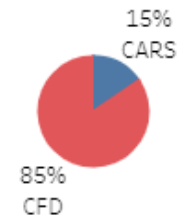
% Change 120 Days Prior and Post-Proximity Implementation

	-19.9%
	-0.5%
	-6.9%
	1.6%
	-11.1%

First Arriving Unit by Agency: 3/26/21-7/23/21



First Arriving Unit by Agency: 7/24/21-11/20/21

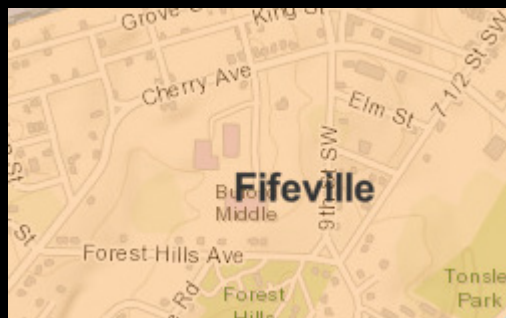


Unit Best Performance Change: -11%

Neighborhood Notes

A minimum of ten unique records are required to provide a statistically significant percentile calculation. This restriction does not apply to any neighborhoods in the 120 day analysis.





Incident Response Rankings:

- 2nd: Asthma | 38.9 per sq. mile
- 2nd: Strokes | 74.0 per sq. mile
- 3rd: Seizures | 188.9 per sq. mile

120 Day Proximity Analysis Dashboard

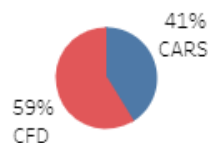
90th Percentile 1st Arriving Unit Response Times

	3/26-7/23/21	7/24-11/20/21
Call Handling Time	3:34	2:35
Turnout Time	1:53	1:55
Travel Time	6:53	5:06
Total Response Time	10:11	8:14
Unit Best Time	7:24	6:35

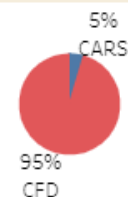
% Change 120 Days Prior and Post-Proximity Implementation

	-27.8%
	2.0%
	-25.8%
	-19.2%
	-11.1%

First Arriving Unit by Agency: 3/26/21-7/23/21



First Arriving Unit by Agency: 7/24/21-11/20/21

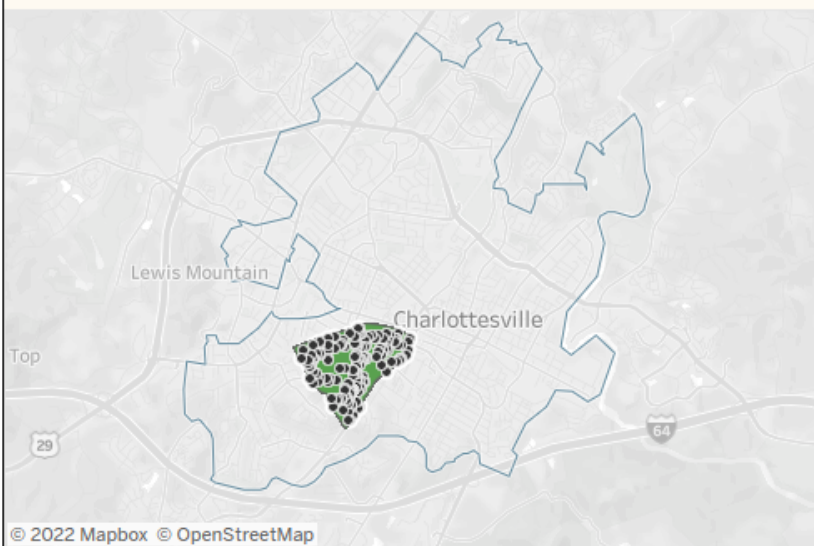


Unit Best Performance Change: -11%

Neighborhood Notes

A minimum of ten unique records are required to provide a statistically significant percentile calculation. This restriction does not apply to any neighborhoods in the 120 day analysis.

Incidents 120 Days Prior & Post-Proximity Dispatch



Distinct Incidents in Each Period

	3/26-7/23/21	7/24-11/20/21
Fifeville	177	216





Incident Response Rankings:

- No Incident Response Rankings

120 Day Proximity Analysis Dashboard

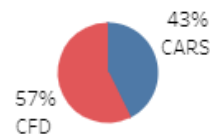
90th Percentile 1st Arriving Unit Response Times

	3/26-7/23/21	7/24-11/20/21
Call Handling Time	3:23	2:30
Turnout Time	1:34	2:01
Travel Time	7:58	4:19
Total Response Time	11:33	7:55
Unit Best Time	8:34	6:09

% Change 120 Days Prior and Post-Proximity Implementation

	-26.1%
	28.4%
	-45.7%
	-31.4%
	-28.3%

First Arriving Unit by Agency: 3/26/21-7/23/21



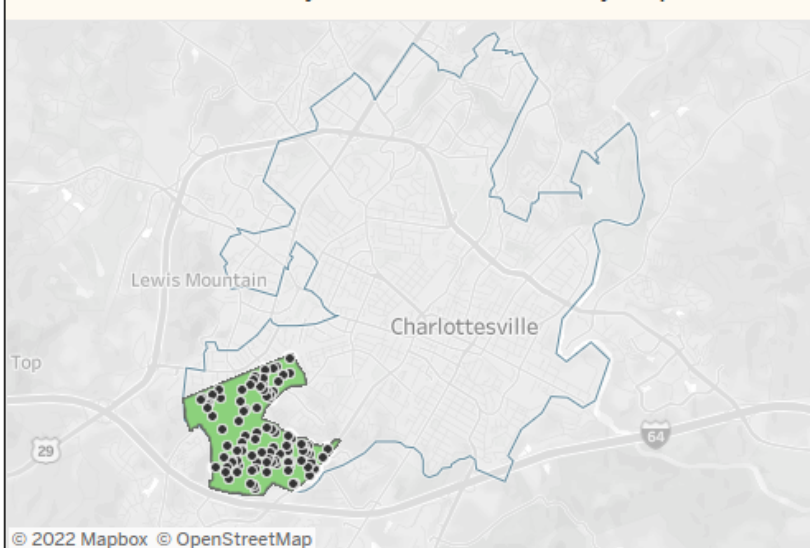
First Arriving Unit by Agency: 7/24/21-11/20/21



Neighborhood Notes

A minimum of ten unique records are required to provide a statistically significant percentile calculation. This restriction does not apply to any neighborhoods in the 120 day analysis.

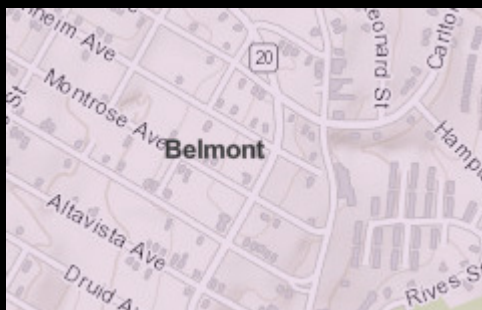
Incidents 120 Days Prior & Post-Proximity Dispatch



Distinct Incidents in Each Period

	3/26-7/23/21	7/24-11/20/21
Fry's Spring	110	115





Incident Response Rankings:

- No Top 3 Incident Rankings

120 Day Proximity Analysis Dashboard

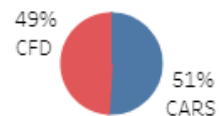
90th Percentile 1st Arriving Unit Response Times

	3/26-7/23/21	7/24-11/20/21
Call Handling Time	3:48	2:43
Turnout Time	1:52	1:49
Travel Time	7:45	6:00
Total Response Time	11:35	8:59
Unit Best Time	9:11	6:54

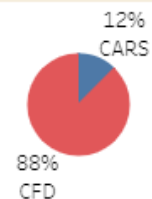
% Change 120 Days Prior and Post-Proximity Implementation

	-28.4%
	-2.4%
	-22.5%
	-22.4%
	-24.7%

First Arriving Unit by Agency: 3/26/21-7/23/21



First Arriving Unit by Agency: 7/24/21-11/20/21

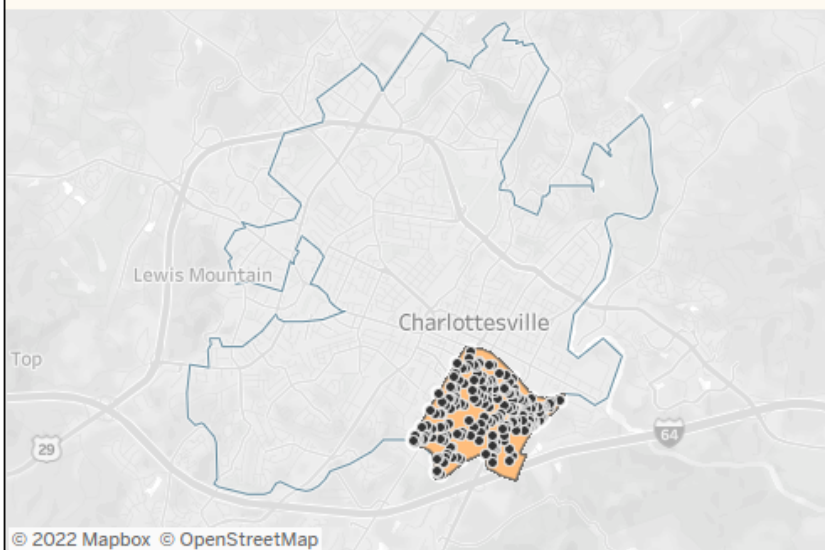


Unit Best Performance Change: -25%

Neighborhood Notes

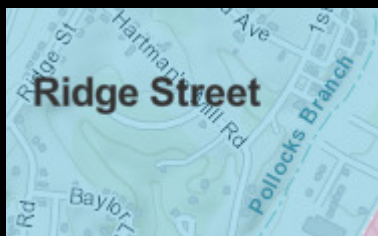
A minimum of ten unique records are required to provide a statistically significant percentile calculation. This restriction does not apply to any neighborhoods in the 120 day analysis.

Incidents 120 Days Prior & Post-Proximity Dispatch



Distinct Incidents in Each Period

	3/26-7/23/21	7/24-11/20/21
Belmont	267	249



Incident Response Rankings:

- 2nd: Cooking Fires | 3.9 per 1,000
- 3rd: Alcohol Intoxications | 76.4 per 1,000
- 3rd: Cardiac Arrest | 61.6 per sq. mile

120 Day Proximity Analysis Dashboard

90th Percentile 1st Arriving Unit Response Times

	3/26-7/23/21	7/24-11/20/21
Call Handling Time	3:24	2:46
Turnout Time	1:39	1:52
Travel Time	6:06	4:49
Total Response Time	9:42	7:42
Unit Best Time	7:03	5:49

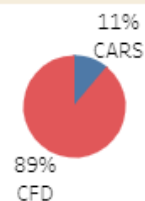
% Change 120 Days Prior and Post-Proximity Implementation

	-18.4%
	13.6%
	-21.0%
	-20.6%
	-17.5%

First Arriving Unit by Agency: 3/26/21-7/23/21



First Arriving Unit by Agency: 7/24/21-11/20/21

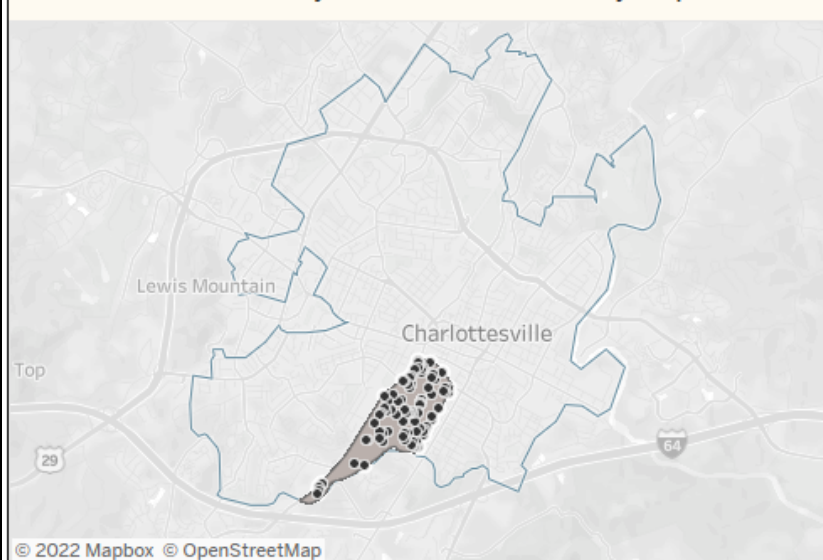


Unit Best Performance Change: -18%

Neighborhood Notes

A minimum of ten unique records are required to provide a statistically significant percentile calculation. This restriction does not apply to any neighborhoods in the 120 day analysis.

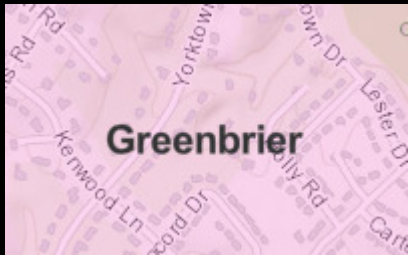
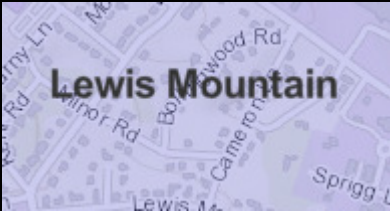
Incidents 120 Days Prior & Post-Proximity Dispatch



Distinct Incidents in Each Period

	3/26-7/23/21	7/24-11/20/21
Ridge Street	119	117





120 Day Proximity Analysis Dashboard

90th Percentile 1st Arriving Unit Response Times

	3/26-7/23/21	7/24-11/20/21
Call Handling Time	3:34	2:45
Turnout Time	1:55	1:54
Travel Time	7:32	5:33
Total Response Time	10:40	8:25
Unit Best Time	8:29	6:41

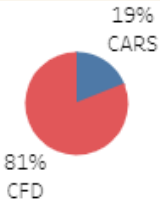
% Change 120 Days Prior and Post-Proximity Implementation

	-22.9%
	-1.0%
	-26.4%
	-21.0%
	-21.2%

First Arriving Unit by Agency: 3/26/21-7/23/21



First Arriving Unit by Agency: 7/24/21-11/20/21

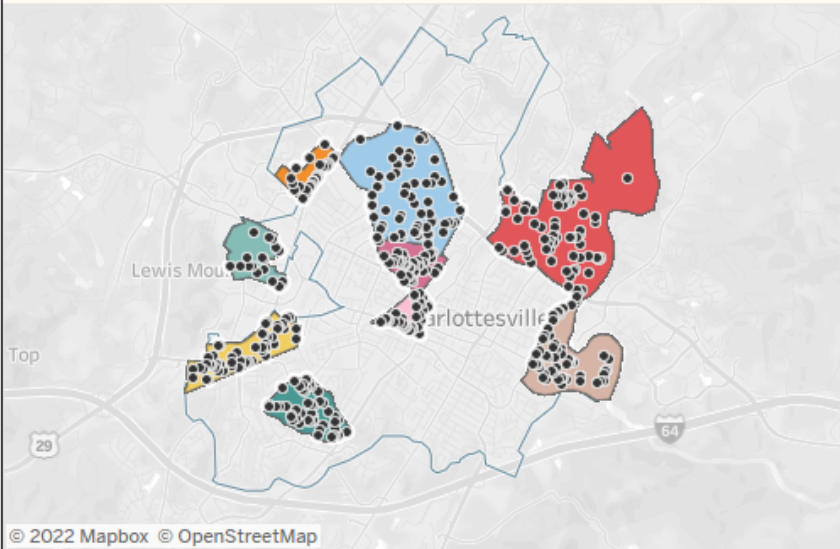


Unit Best Performance Change: -21%

Neighborhood Notes

A minimum of ten unique records are required to provide a statistically significant percentile calculation. This restriction does not apply to any neighborhoods in the 120 day analysis.

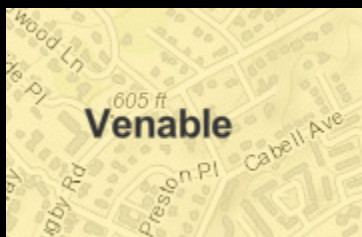
Incidents 120 Days Prior & Post-Proximity Dispatch



Distinct Incidents in Each Period

	3/26-7/23/21	7/24-11/20/21
Barracks / Rugby	40	57
Barracks Road	31	43
Jefferson Park Avenue	52	41
Johnson Village	31	44
Lewis Mountain	13	15
Locust Grove	53	63
Rose Hill	51	42
Starr Hill	71	71
Woolen Mills	60	62





Incident Response Rankings:

- 1st: Cooking Fire Incidents | 12
- Lower Cooking Fire Incidents per Pop | 1.51
- 3rd: Alcohol Intoxication | 627.3 per sq. mile

120 Day Proximity Analysis Dashboard

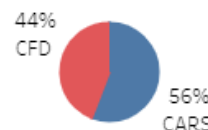
90th Percentile 1st Arriving Unit Response Times

	3/26-7/23/21	7/24-11/20/21
Call Handling Time	3:37	2:48
Turnout Time	1:46	1:54
Travel Time	6:37	5:48
Total Response Time	9:54	8:59
Unit Best Time	7:40	7:07

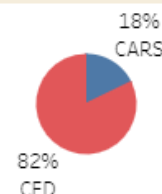
% Change 120 Days Prior and Post-Proximity Implementation

	-22.7%
	6.7%
	-12.3%
	-9.3%
	-7.1%

First Arriving Unit by Agency: 3/26/21-7/23/21



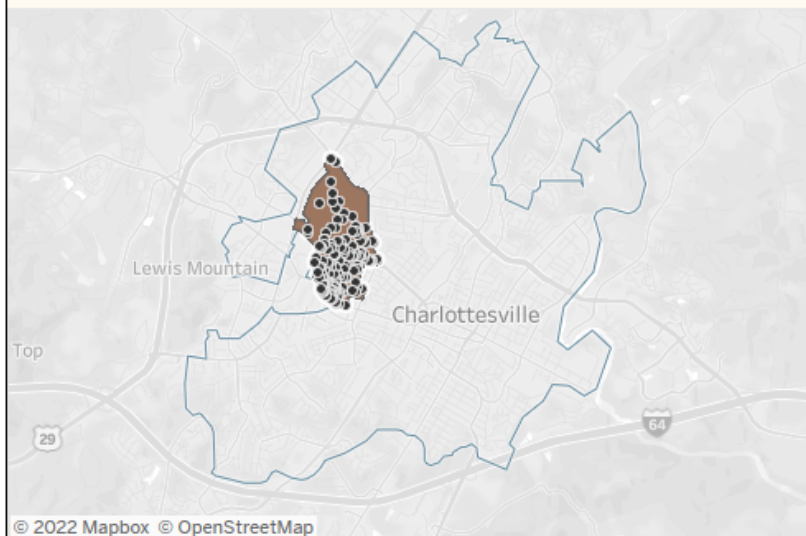
First Arriving Unit by Agency: 7/24/21-11/20/21



Neighborhood Notes

A minimum of ten unique records are required to provide a statistically significant percentile calculation. This restriction does not apply to any neighborhoods in the 120 day analysis.

Incidents 120 Days Prior & Post-Proximity Dispatch



Distinct Incidents in Each Period

	3/26-7/23/21	7/24-11/20/21
Venable	111	146



THE 21ST CENTURY CFD

CRITICAL ISSUE E:



PARTNERSHIPS

A partnership is often thought to be a form of business, where two or more people come together to share ownership, responsibility, and profits from a given business venture. In every community across our nation, a partnership exists between the fire and emergency services and the general public that is built upon a shared commitment to the health and safety of its residents. The fire and emergency services are in an enviable position in communities, as they are well positioned to be the hub of service provision for many supporting services already found within their community, and that align with organization's core mission. The importance of this has been clearly proven during homeland security threats, through the interagency cooperation, intelligence sharing, and joint response to those events by law enforcement and the fire and emergency services. There are significant opportunities to create partnerships with allied health care, mental and behavioral health providers, and various social service agencies to leverage the talents of each agency with a focus on improving service to the community. Too often agencies respond multiple times to the same individual who calls 911 as their only known access for assistance, when the need is truly not an emergency, but could be met by another service provider in the community. Over the next 30 years, the fire and emergency services will need to partner with related service providers to create a local response network that can provide a host of services under the umbrella of a multifaceted organization, if it hopes to meet the needs of the community served.



- Opportunities to create partnerships with allied health care, mental and behavioral [mental] health providers, and various social service agencies
- Partner with related service providers to create a local response network that can provide a host of services not only focused on emergency response but under the umbrella of a multifaceted volunteer organization

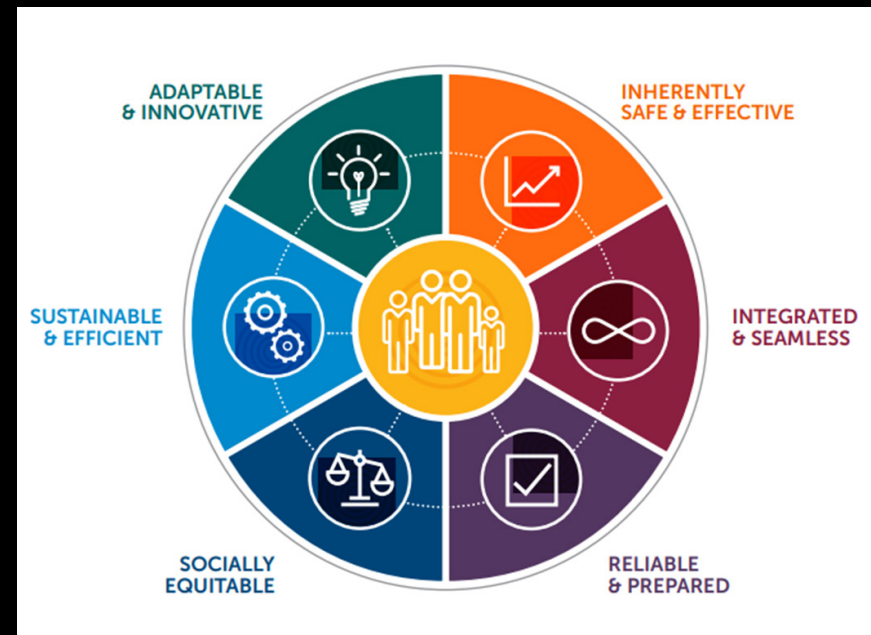
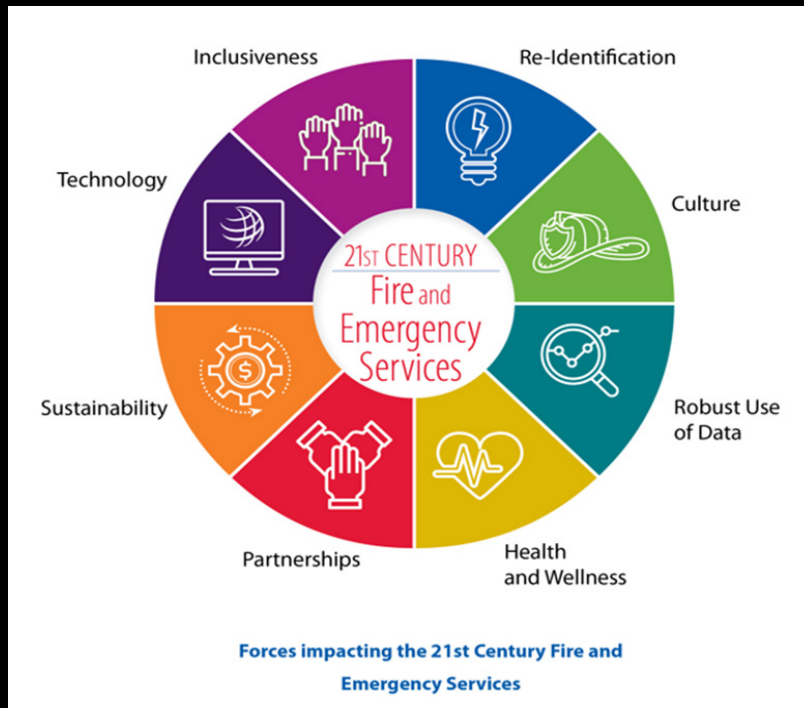
Dr. Hezedeane A. Smith, Fire Chief

Phone: 434-970-3323

Email: smithhez@Charlottesville.gov



Neighborhood
Risk Site



FAMILY INTEGRITY RESPECT EXCELLENCE



QUESTIONS



FAMILY **I**NTEGRITY **R**ESPECT **E**XCELLENCE