



Forsyth County
Emergency Services
2023 Annual Report

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Emergency Services

Vision

The vision of Forsyth County Emergency Services is to be trusted by our community, employees, and partners. We will accomplish this with well-trained, multi-disciplined, highly skilled personnel using ultramodern equipment, interventions, and technology. We shall strive to provide the highest quality emergency preparedness and response through 9-1-1 Communications, Fire and Emergency Medical Services.

Mission

The mission of Forsyth County Emergency Services is to provide the highest quality, most cost-efficient services to the citizens and visitors of Forsyth County. This will be accomplished through safe, professional, and prompt response to 9-1-1 calls involving fire, rescue, medical and environmental emergencies. This department is dedicated to the preservation of life and property through fire suppression, rescue, code enforcement, and investigation services. This department is dedicated to the overall improvement of health by providing high quality patient care services, proactive safety interventions, organizational sustainment, and the promotion of safety of citizens and visitors through public awareness and life safety education.

Values

Public Service and Community Engagement: We will work as a team, partnering with other agencies and our community to provide the best services possible.

Responsibility and Accountability: We will take pride in what we do, take responsibility for achieving results, and hold ourselves accountable for our actions.

Innovation and Sustainability: We will actively seek input and ideas that have a lasting, positive impact on our department, community, and the environment while striving for excellence.

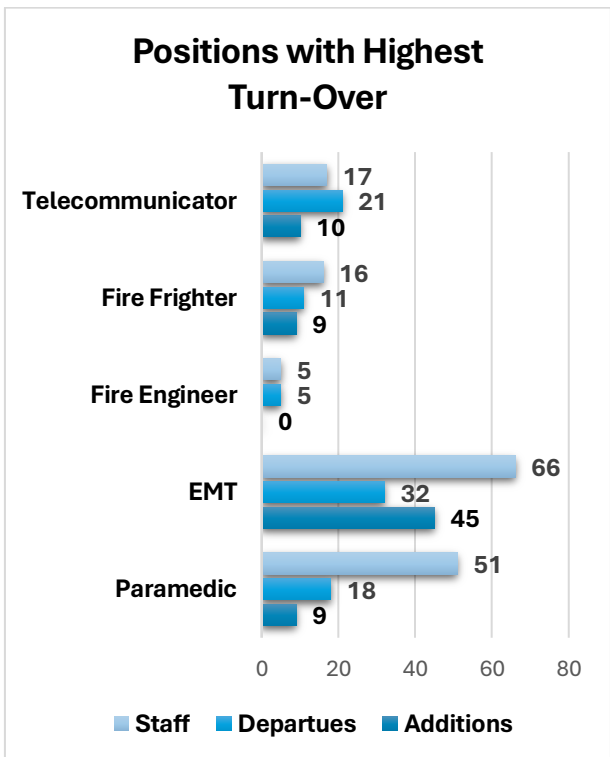
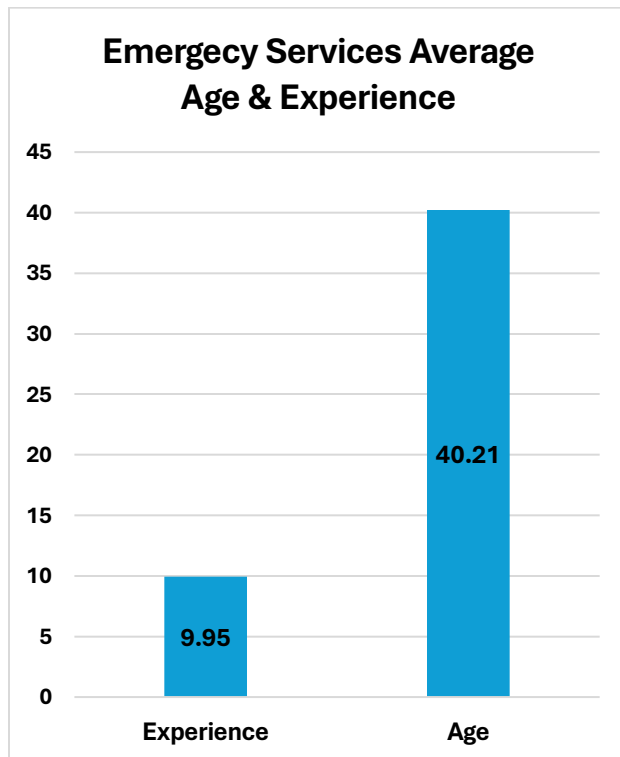
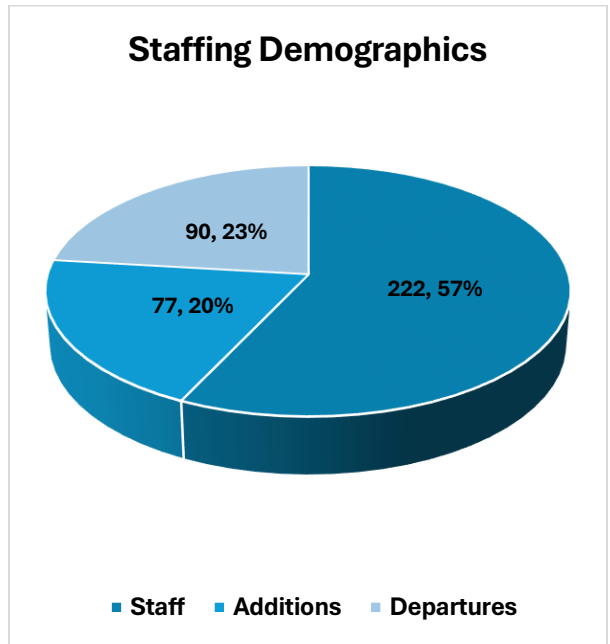
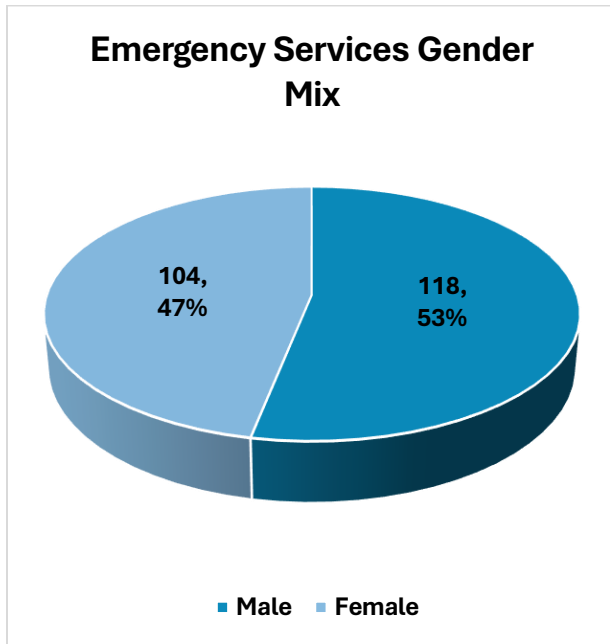
Diversity and Inclusion: We will recognize, encourage, and respect differing perspectives, experiences, and approaches that will help us achieve our organizational goals as we work to demonstrate the ideals of cultural humility.

Ethics and Integrity: We will maintain the trust and confidence of the public and the organization through a professional approach.

Teamwork: We will know and respect everyone's roles and responsibilities through collaboration to achieve department goals while sharing authority, responsibility, and credit.

Emergency Services Demographics

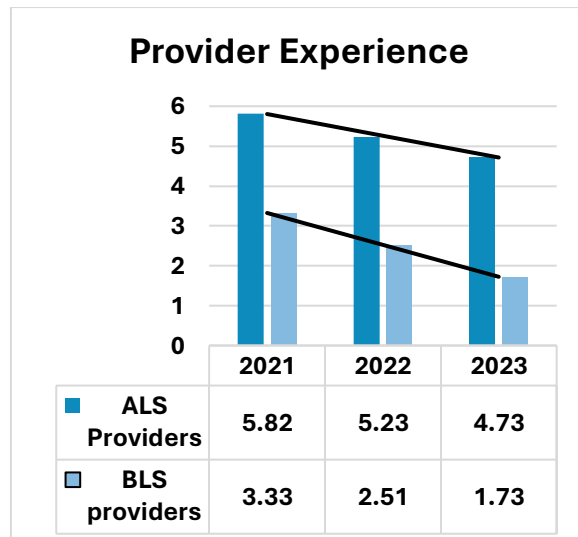
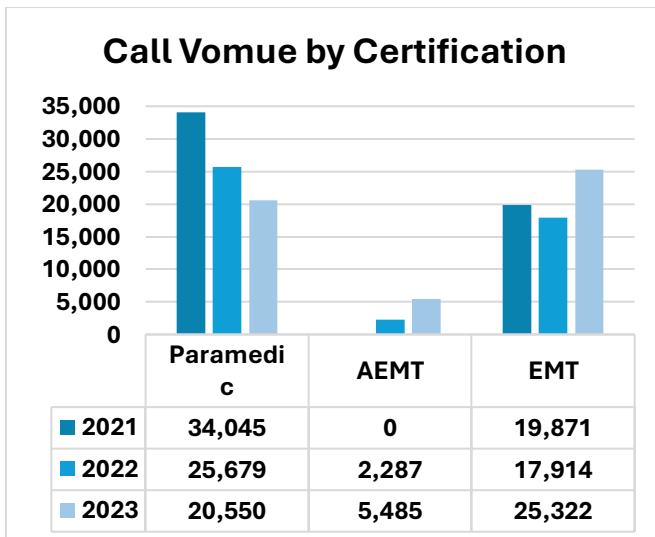
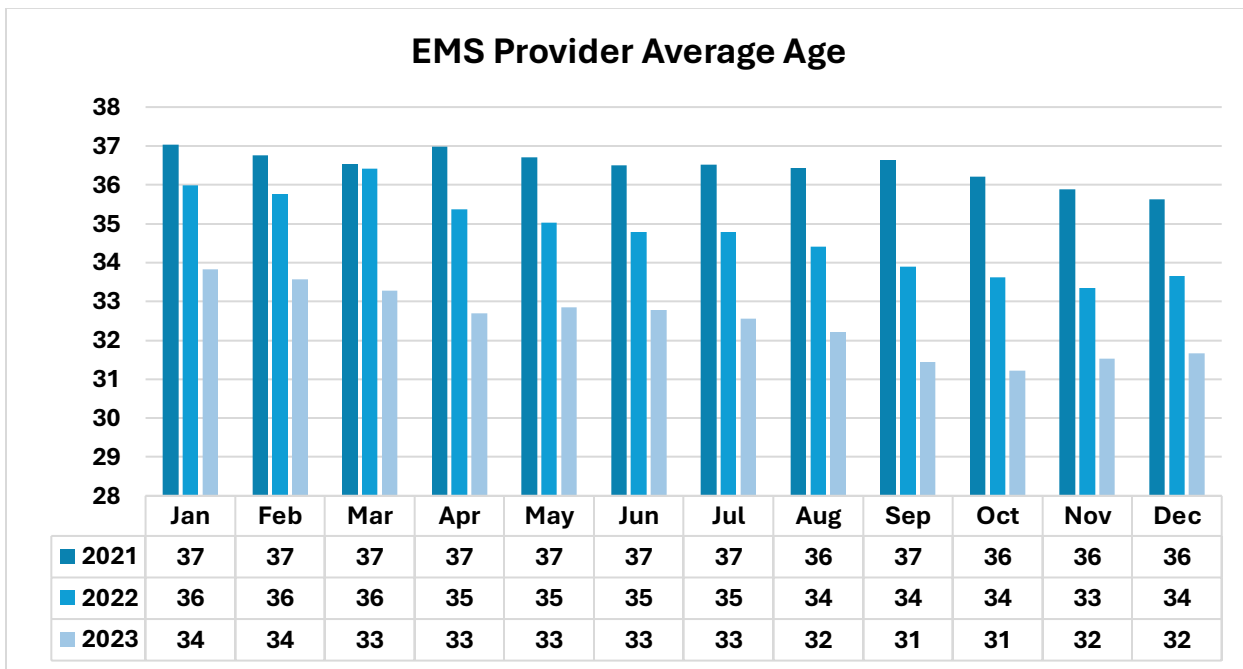
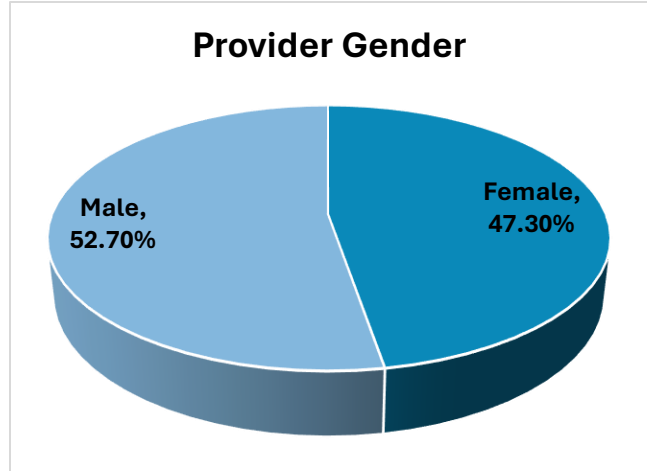
The following data shows staffing information for all Emergency Services. This includes EMS, Fire and Communications, with data representative of the entire organization. Staff is the total number of active employees as of 12/31/2023. Additions are the total number of new hires during the 2023 calendar year and departures are the total number of individuals who left for any reason during the same period.



Emergency Medical Services

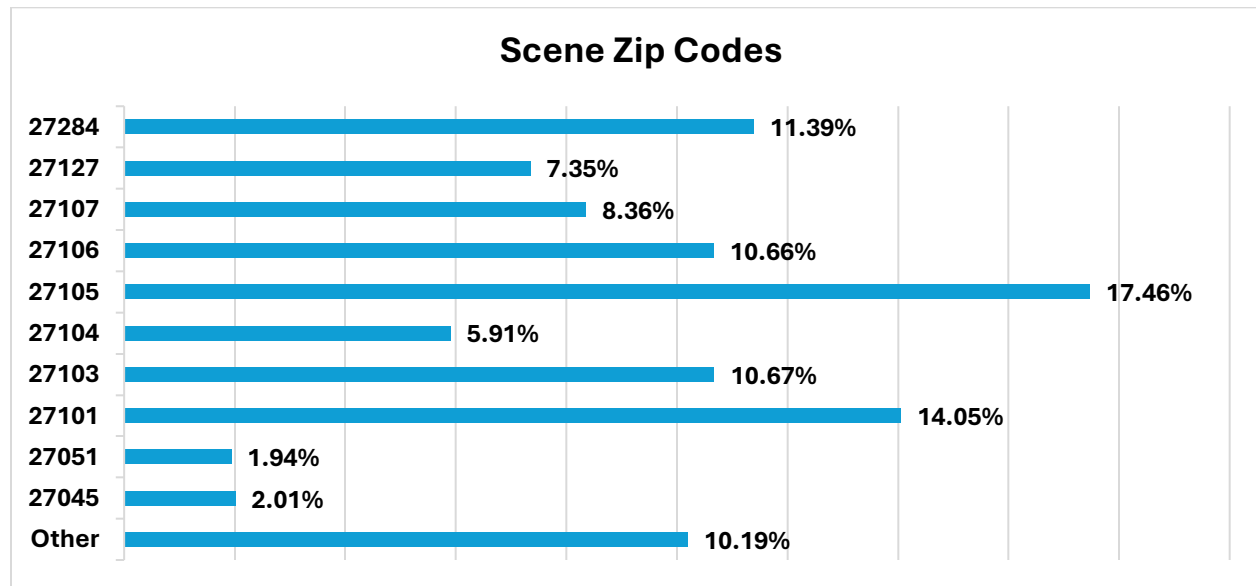
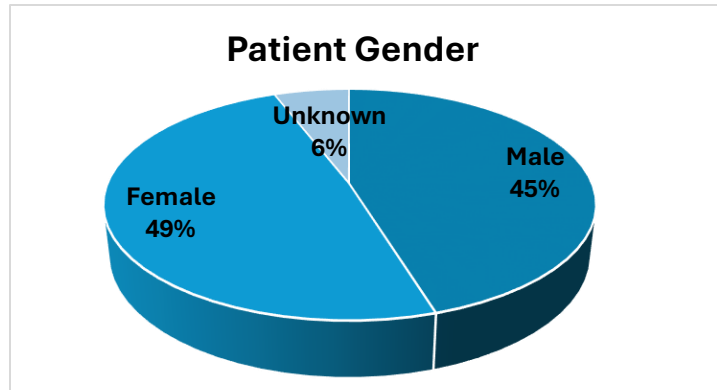
EMS Staff Demographics

The average age of EMS providers in 2023 was 32 years old, compared to an average age of 36 in 2021. This decreasing trend in provider age during this three-year period correlates with our provider experience level. Our gender ratio make up is almost equal.

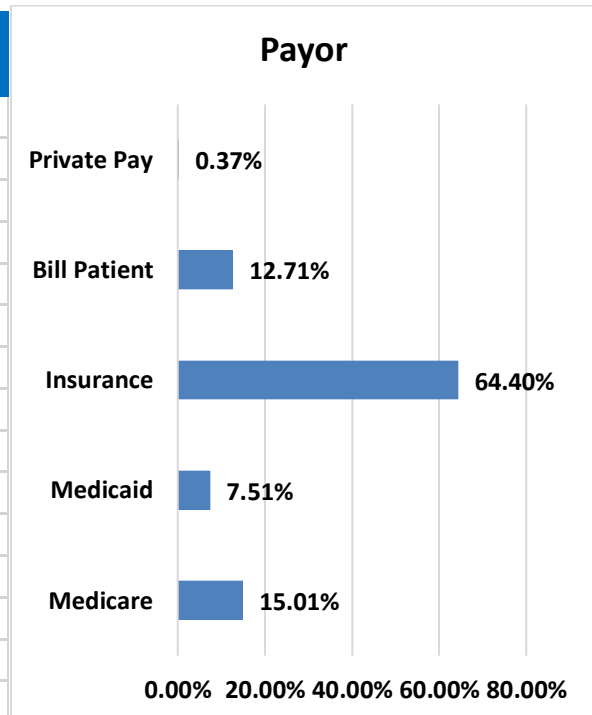


Our Patients

The patient's average age in 2023 was 43 years old and ranged from less than a month to our most senior patient being 99 years 9 months and 27 days young. The following charts show responses by Emergency Medical Dispatch (EMD) Complaint, Zip Code, and general patient demographic information.



EMD Complaint	# of Calls	%
Breathing Problem	8,384	17.6%
Unconscious/Fainting	5,689	12.0%
Chest Pain (non-traumatic)	5,515	11.6%
Falls	4,010	8.4%
Traffic Accident	2,872	6.0%
Stroke/CVA	2,722	5.7%
Sick Person	2,647	5.6%
EDP	1,807	3.8%
Convulsions/Seizure	1,788	3.8%
Abdominal Pain/Problems	1,713	3.6%
Cardiac Arrest/Death	1,311	2.8%
Overdose/Poisoning/Ingestion	1,131	2.4%
Diabetic Problem	1,062	2.2%
Hemorrhage/Laceration	936	2.0%
Medical Alarm	923	1.9%



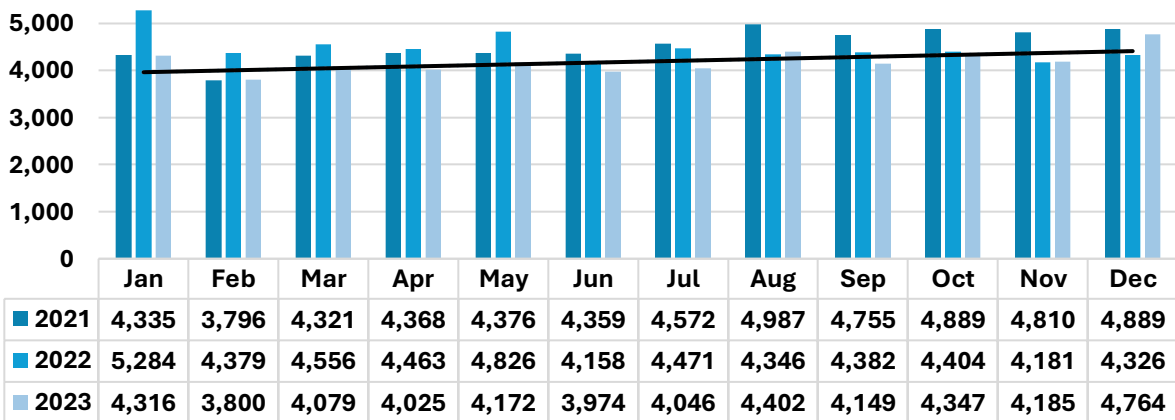
Statistics

Incidents

An incident is a singular event or request for emergency medical services through the 9-1-1 center (Communications). Communications receives the call and after a series of questions discerns the patient’s chief complaint (EMD Complaint) and gives it a response priority 1, 2 or 3. Priority 1 responses are the most critical. In 2023, FCEMS responded to **50,259** EMS incidents.

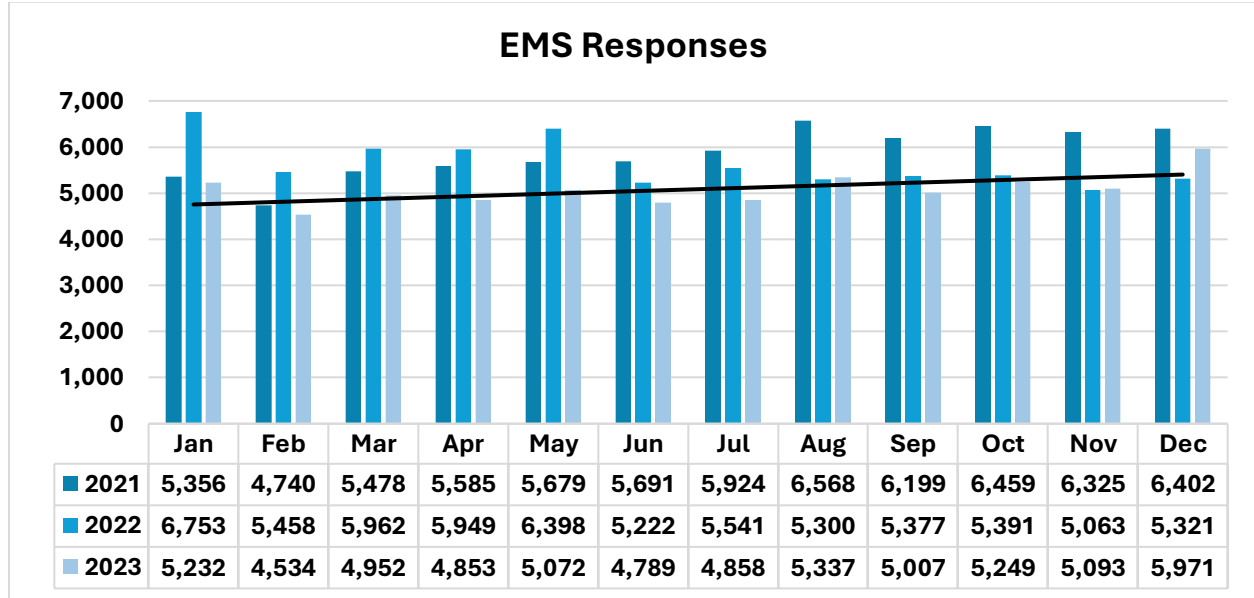


EMS Incidents



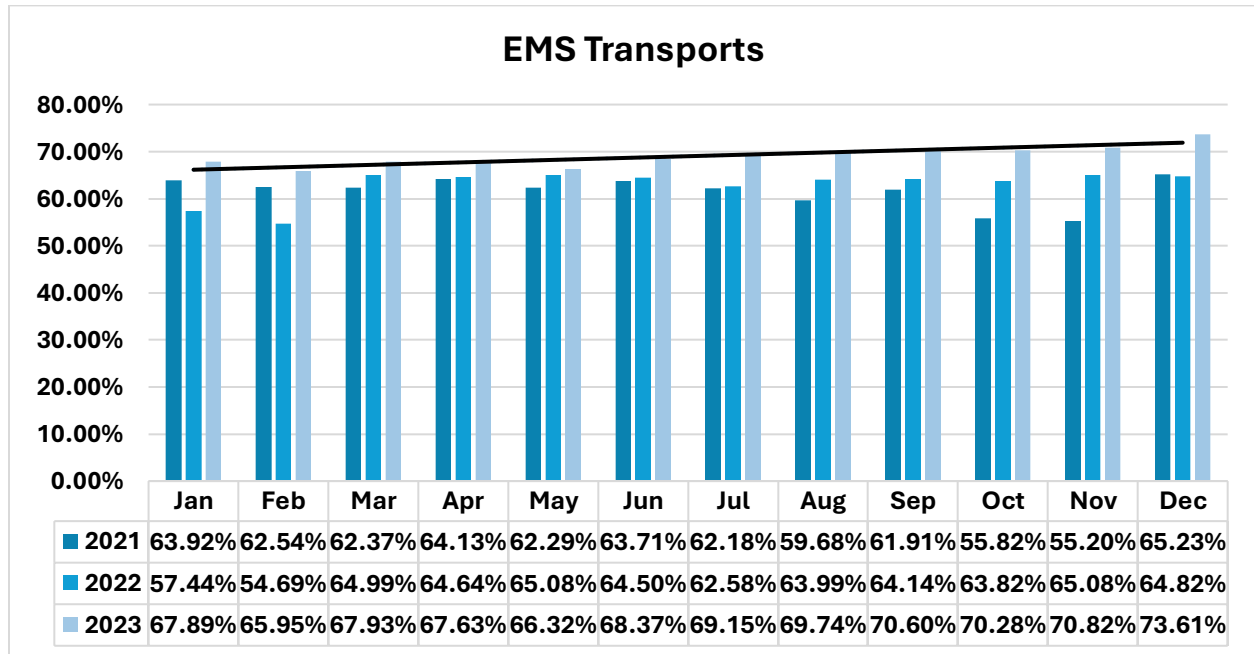
Responses

A single EMS Event (Incident) may require multiple resources to respond. These resources could include supervisors, QRV medics and/or additional ambulances. Examples of this are motor vehicle accidents, critical patients, and Mass Causality Events. In 2023, EMS responses totaled **60,947**.



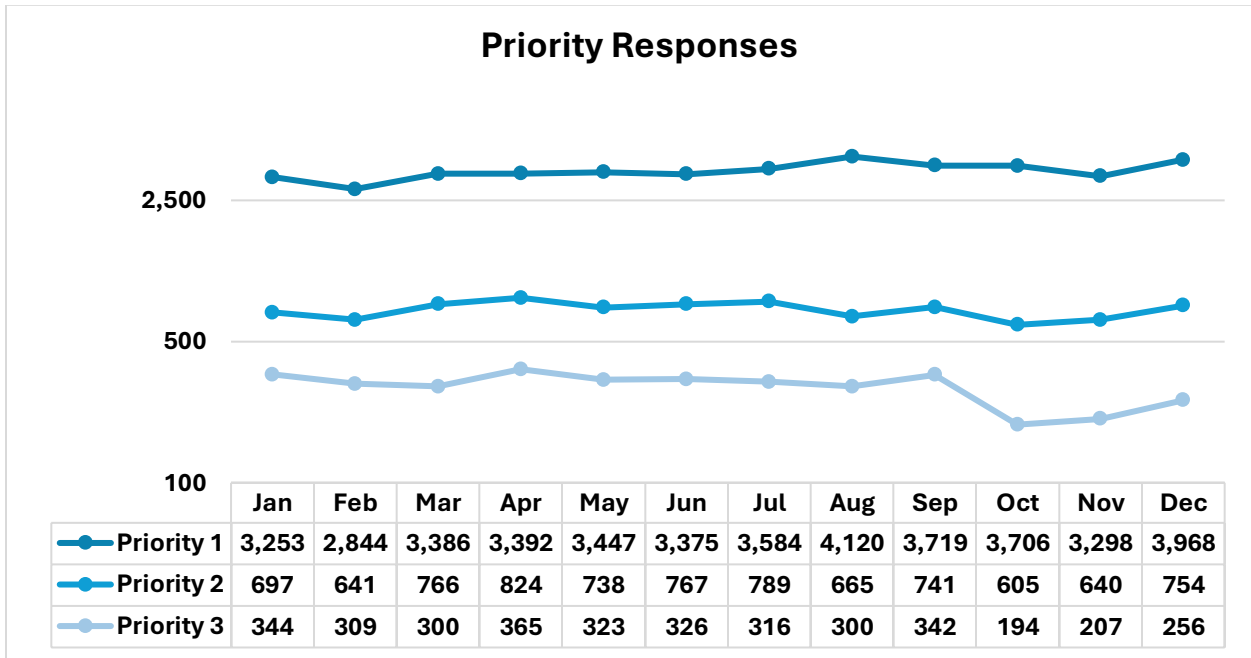
Transports

In 2023, FCEMS transported **34,736** patients to the hospital, which represented **69%** of incident responses. This is an increase of about **6%** compared to the previous year.



Response Priority

In 2023 FCEMS responded to **44,988** priority 1 incidents, **4,516** priority 2 & **2,234** priority 3.



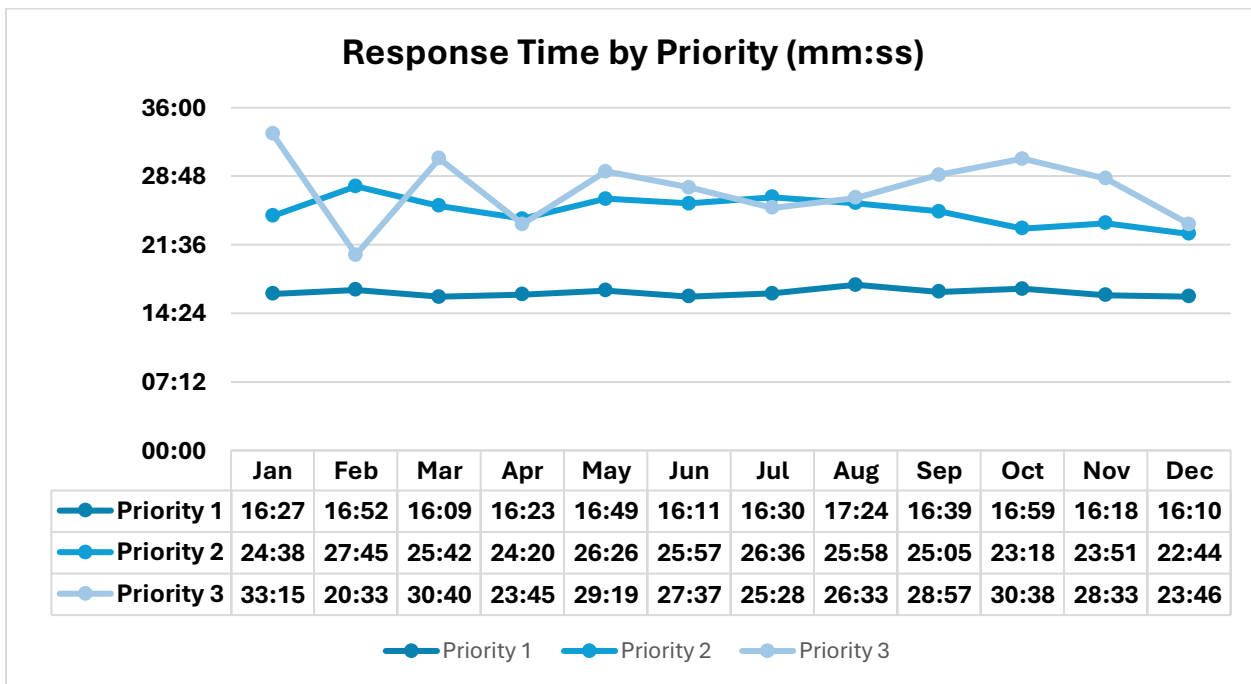
Response Times by Priority (90th k):

Priority 1: 16:33

Priority 2: 24:47

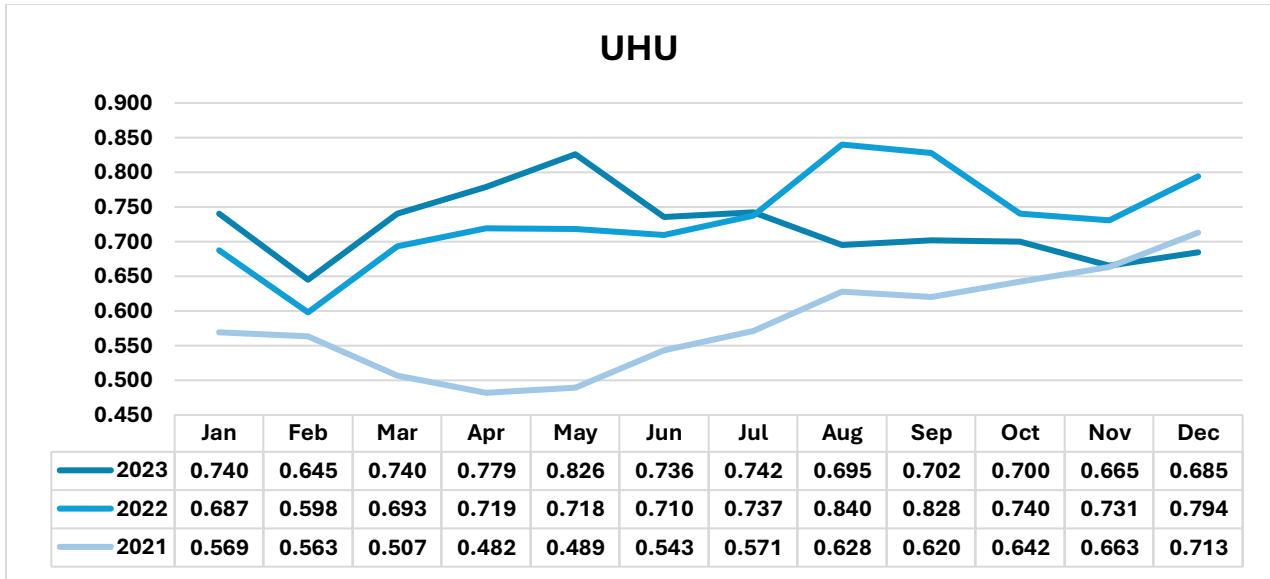
Priority 3: 27:00

(Response times are calculated from dispatch to scene arrival)



UHU

Unit Hourly Utilization (UHU) is a measure of workload. UHU is the percentage of a shift an ambulance is on a call (i.e., total call time). Total call time is calculated from the time a unit is dispatched until they check back in service. This metric does not consider time spent completing documentation, checking off unit, training, cleaning unit or restocking supplies. The agency has set a goal of **0.450** as a standard UHU. The 2023 average UHU was **0.721**, which was an increase from 2021 (**0.583**).



Billing

Patients are billed based on the level of care provided on-scene and transport status.

Month	2021				2022				2023			
	# of Transports	Average \$ Collected	Average \$ Billed	% Collected	# of Transports	Average \$ Collected	Average \$ Billed	% Collected	# of Transports	Average \$ Collected	Average \$ Billed	% Collected
Jan	2,820	\$293.68	\$434.36	67.6%	3,111	\$318.77	\$467.84	68.1%	2,981	\$345.13	\$531.83	67.6%
Feb	2,428	\$294.52	\$432.30	68.1%	2,439	\$318.37	\$471.79	67.5%	2,587	\$350.13	\$522.66	68.1%
Mar	2,766	\$284.24	\$425.30	66.8%	3,020	\$316.24	\$466.70	67.8%	2,845	\$349.06	\$519.31	66.8%
Apr	2,867	\$281.95	\$432.21	65.2%	2,961	\$316.43	\$466.74	67.8%	2,791	\$345.44	\$521.51	65.2%
May	2,846	\$284.98	\$430.07	66.3%	3,228	\$315.15	\$470.12	67.0%	2,830	\$349.38	\$523.07	66.3%
Jun	2,874	\$277.53	\$426.93	65.0%	2,783	\$311.16	\$472.99	65.8%	2,772	\$348.77	\$525.03	65.0%
Jul	2,922	\$308.86	\$457.03	67.6%	2,900	\$312.32	\$464.50	67.2%	2,769	\$348.26	\$527.67	67.6%
Aug	3,058	\$315.62	\$469.14	67.3%	2,813	\$316.18	\$471.89	67.0%	3,097	\$338.45	\$530.33	67.3%
Sep	3,005	\$318.63	\$465.82	68.4%	2,928	\$316.53	\$464.46	68.2%	2,941	\$338.83	\$541.96	68.4%
Oct	2,817	\$319.45	\$465.45	68.6%	2,927	\$326.11	\$469.81	69.4%	3,072	\$320.85	\$549.30	68.6%
Nov	2,722	\$324.43	\$461.02	70.4%	2,822	\$319.75	\$469.66	68.1%	3,005	\$296.59	\$560.35	70.4%
Dec	3,263	\$322.94	\$464.33	69.5%	2,867	\$338.57	\$476.97	71.0%	3,462	\$216.00	\$586.79	69.5%
Year Average	2,866	\$302.24	\$447.00	67.57%	2,900	\$318.80	\$469.45	67.91%	2,929	\$328.91	\$536.65	67.57%



Mobile Integrated Health (MIH)

Mission

The mission of the MIH program at Forsyth County Emergency Services is to connect prehospital EMS patients with resources that definitively address their underlying behavioral, medical, and environmental needs to reduce dependency on the 9-1-1 system.

9-1-1 system high-risk and high-frequency users are defined as individuals who are likely to use the 9-1-1 EMS system for correctable behavioral, medical, and environmental problems.

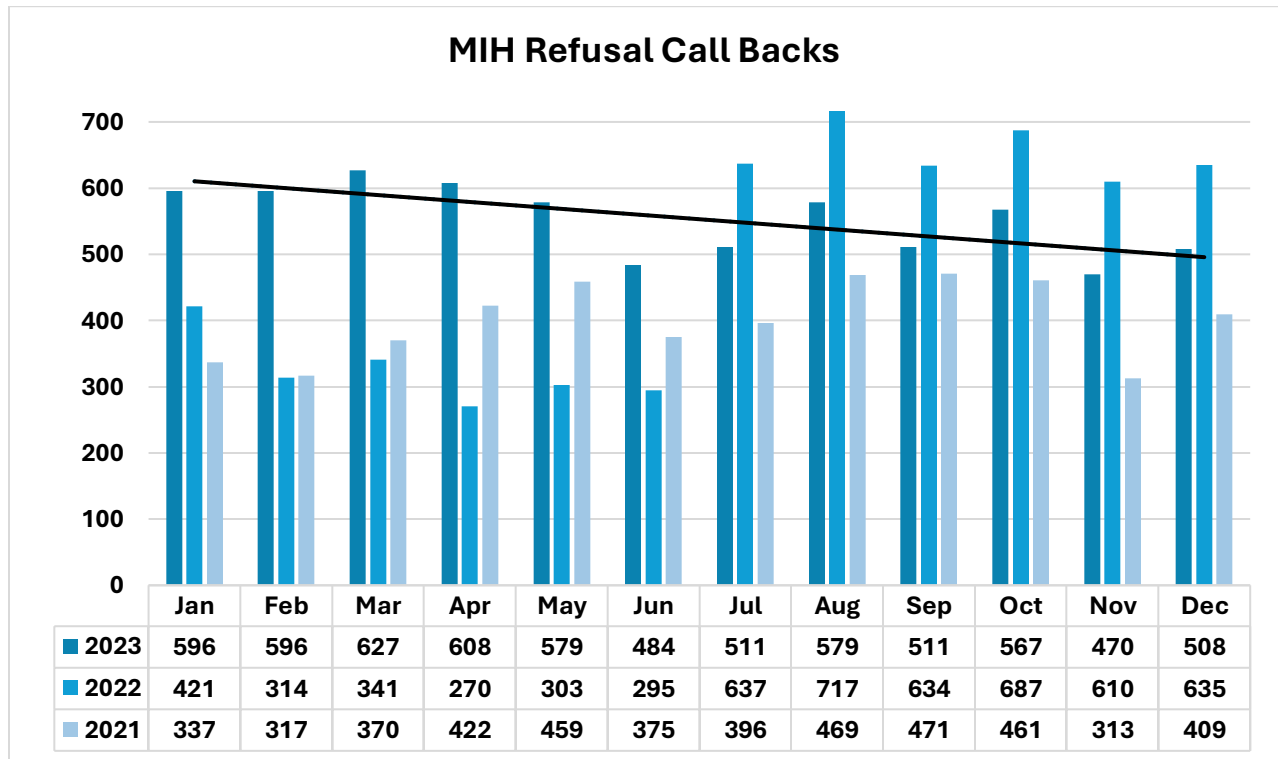
Examples of high-risk users:

- Patients treated on scene by EMS and refuse transport
- Overdose patients
- Behavioral/Mental Health Diversion, i.e., alternate destination, includes Police Department
- Falls (based on fall assessment)
- Other (identified as data is collected)

Statistics

Refusal Call Backs

Every EMS incident that has patient contact and does not result in transport to definitive care is contacted the following day by MIH staff. This offers an opportunity to speak with potential clients in a stress-free and non-intrusive manner about their health status.



Overdose /Behavioral Health

Behavioral health (BH) and Overdose (OD) calls make up a large portion of MIH responses. These also tend to be underlying issues with many displaced individuals dealing with food and shelter insecurities as well as medical concerns. Diagnosing these types of responses through communications is also difficult and primary impression of same outnumber EMD complaints.

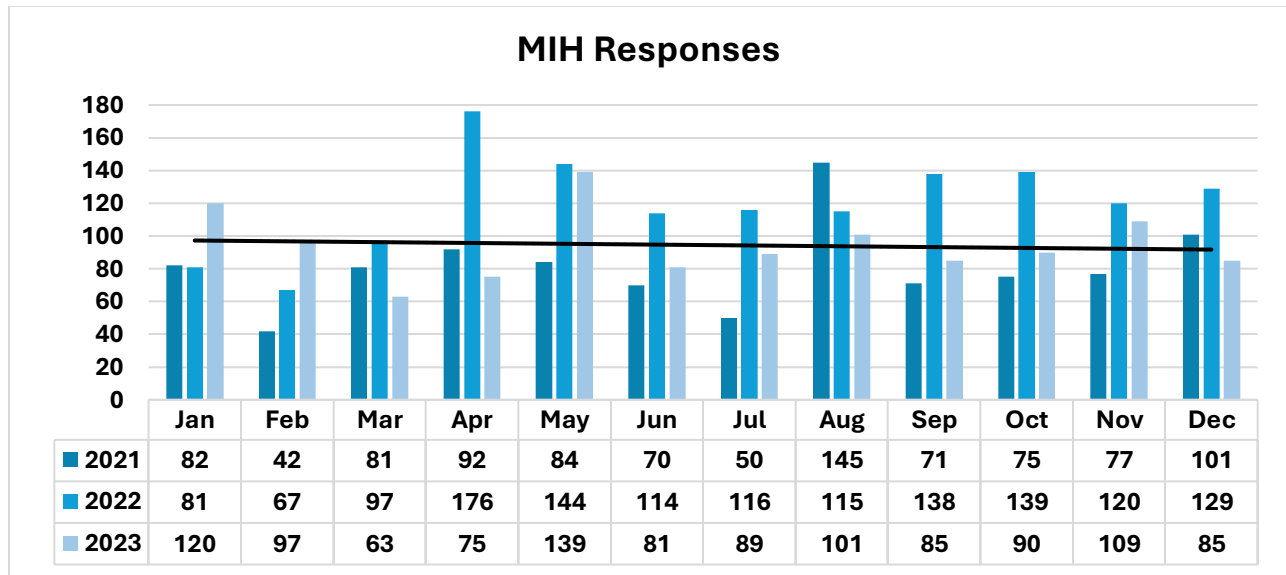
FCEMS EDP Calls/Narcan Administration/Diversions						
Month	BH			OD		
	EMD	Primary Impression	Diversion	EMD	Primary Impression	Narcan Admin
Jan-23	226	379	4	212	444	123
Feb-23	258	339	5	195	423	103
Mar-23	154	297	2	274	477	110
Apr-23	218	321	6	288	508	110
May-23	196	353	7	314	606	157
Jun-23	197	300	2	188	485	144
Jul-23	190	305	1	225	532	146
Aug-23	192	367	2	297	554	147
Sep-23	231	319	5	198	408	107
Oct-23	226	366	2	194	354	82
Nov-23	214	324	3	171	392	86
Dec-23	236	321	5	199	411	116
Total	2,538	3,991	44	2,755	5,594	1,431

Quarter	BH			OD		
	EMD	Primary Impression	Diversion	EMD	Primary Impression	Narcan Admin
Q1	638	1,015	11	681	1,344	336
Q2	611	974	15	790	1,599	411
Q3	613	991	8	720	1,494	400
Q4	676	1,011	10	564	1,157	284
Total	2,538	3,991	44	2,755	5,594	1,431

Diversions are calls that require services outside of the normal transport model to locations that better address the patients needs. This may be rehabilitation or detoxification centers as well as mental health or counselling facilities.

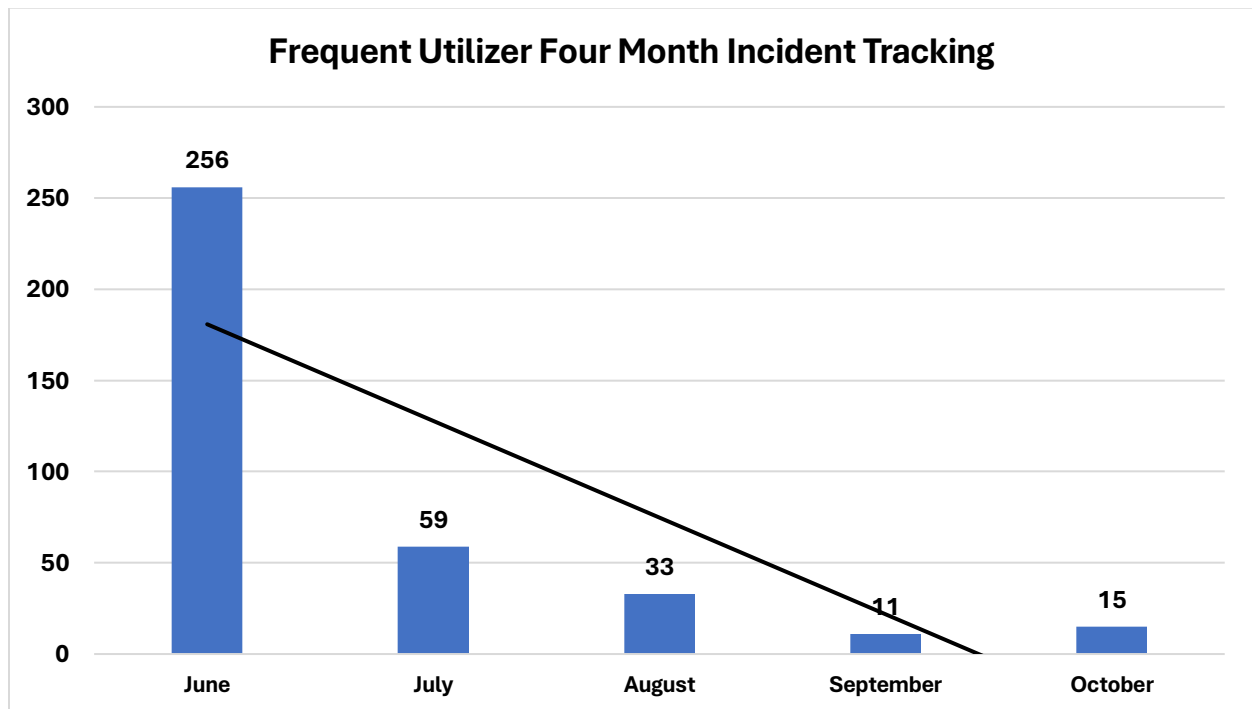


MIH Responses



Frequent Utilizers

MIH defines high utilizer clients as anyone who employs emergency services more than three times in any given month. MIH paramedics research patients’ history and contact them to identify unmet needs, which often involve both social and medical support services. Partner agencies, such as DSS & Public Health, are used to support MIH in meeting client needs. The below example is for June 2023 and shows the tracking of patient activity for the next four months. In June there were **69** patients who used EMS three or more times with a total usage of **256** incidents. By October 2023, those same patients represented **15** incidents. A decrease of almost **95%**.



Bike Team

The Forsyth County Emergency Services Bike Team provides rapid medical response in congested areas where an ambulance would be delayed due to high traffic, large crowds, and restricted access. With the capability for all types of terrain in the area, the bike team is used in parks, large parking lots, congested downtown events, and local 5K's or other road races.

The Forsyth County Emergency Services Bike Team uses a Trek Mountain bike and can deploy up to five teams/ten bikes at an event. From Basic Life Support to Advanced Life Support, our bike team is adaptable to any event and situation. The bikes and equipment are stored in an enclosed trailer that can be transported anywhere needed in the county, for any event.

Emergency Medical Services bike teams have been in existence since the 1980's. There are reported to be over 300 EMS bike teams across the country today. EMS bike teams are one of the most effective public relations and education tools used in EMS today. Children and adults alike are much more likely to approach Paramedics on bikes than those stationed in a transport unit. Public recognition and acceptance have been tremendous. The most important benefit of a bike team is reduced response times. At events, such as the Wake Forest Football games and downtown festivals, the Forsyth County Emergency Services Bike Teams routinely make patient contact in less than two minutes after receiving a call.



Tactical Team

The FCES Tactical team is organized to provide tactical medical care to Forsyth County Sheriff's Office (FCSO), Winston-Salem Police Department (WSPD), and Kernersville Police Department (KPD) S.W.A.T teams. Tactical Medics also provide coverage for the WSPD's Hazardous Device Unit (HDU). The team consists of six Nationally Registered Paramedics, three AEMT's, an EMT and an MD who serves as another functioning tactical medic and provides medical oversight. Selection is based on completion of a try-out which tests physical, mental, and operational stamina under stressful conditions. Each tactical team member must complete a 7-month Tactical Emergency Medical Specialist (TEMS) course which includes training in the areas of firearms, Close Quarter Combat (CQB) tactics, land navigation, K-9 medical care, Tactical Casualty Combat Care (TCCC) and hand to hand combat. Upon completion these candidates are placed on a 6-month probationary period and meet individually with the medical director and administrative officer to determine their placement on the team.

Each medic responds to many calls for service throughout the year. Also, each medic attends monthly training courses for each dept. WSPD trains every first and third Tuesday of each month. WSPD HDU Team trains twice monthly. KPD trains every other Monday and provides a list of training for the current calendar year. We adhere to 100% response and presence to all calls for service and training.

Calls for Service

- High Risk Search Warrants
- Felony Apprehensions
- Hostage Rescue
- Barricaded Subject
- Officer Down



Team members work with the full-time WSPD SWAT team and rotate on a weekly basis providing full-time support. When the medic responds to training, we take part in physical training with that team. We train in whatever evolutions that team may be training in that day. We incorporate medical situations in all the training we encounter and prepare the officers and ourselves for the ever-potential officer down.

In summary this team is ever growing and serves as an integral part of this agency and to the citizens of Forsyth County. It takes dedication and commitment to serve with this team and each member that serves shows this level of commitment continuously.

9-1-1 Communications

Staff

The Communications offices are located at the Forsyth County Public Safety building in downtown Winston-Salem. Many team members have previous experience serving as Paramedics, EMT's and Fire Fighters both volunteer and paid. Although not required, this firsthand knowledge of the 9-1-1 system gives staff a unique insight into all phases of operations.

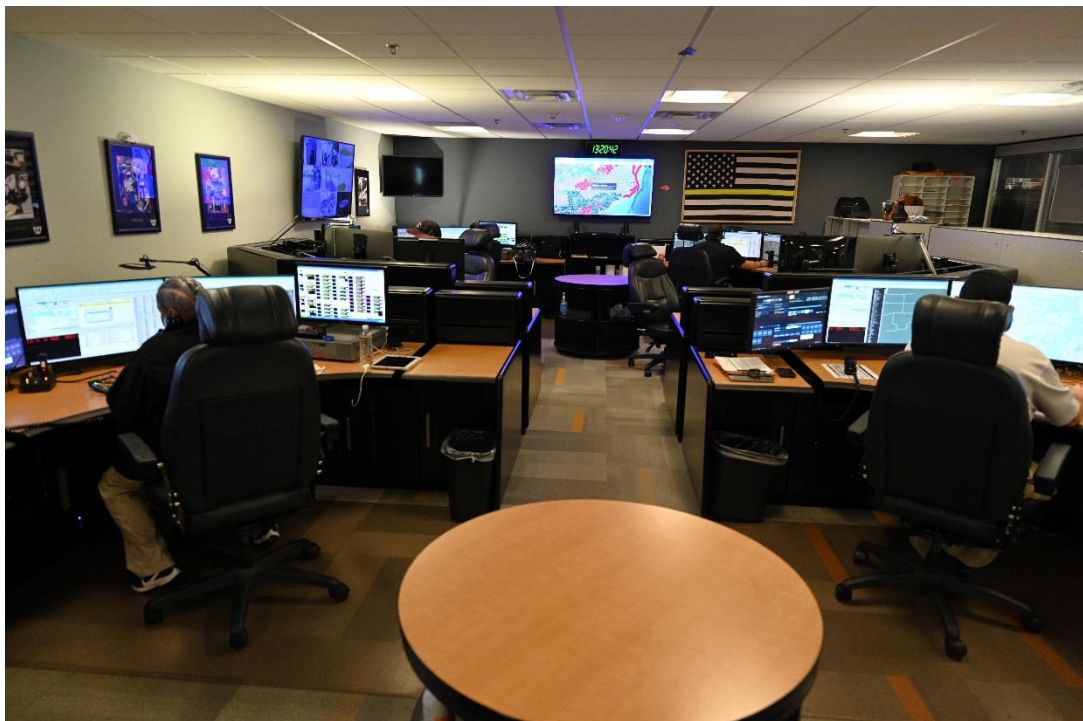
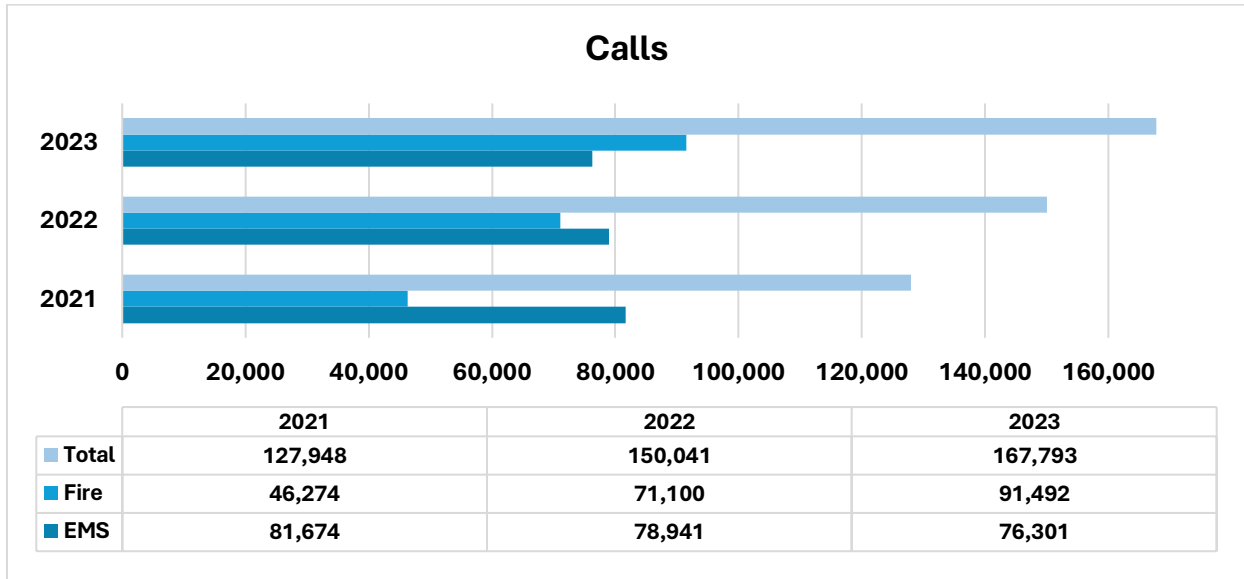
Communications			
Job Title	# of Employees	Experience	Age
E 9-1-1 Systems Manager	1	13.6	47.5
Communications Training Officer	1	15.1	42.8
Telecommunicator	17	2.9	35.4
Telecommunicator II	2	3.0	25.6
Telecommunicator Shift Supervisor	4	14.2	43.1
Total/Average	25	9.8	38.9



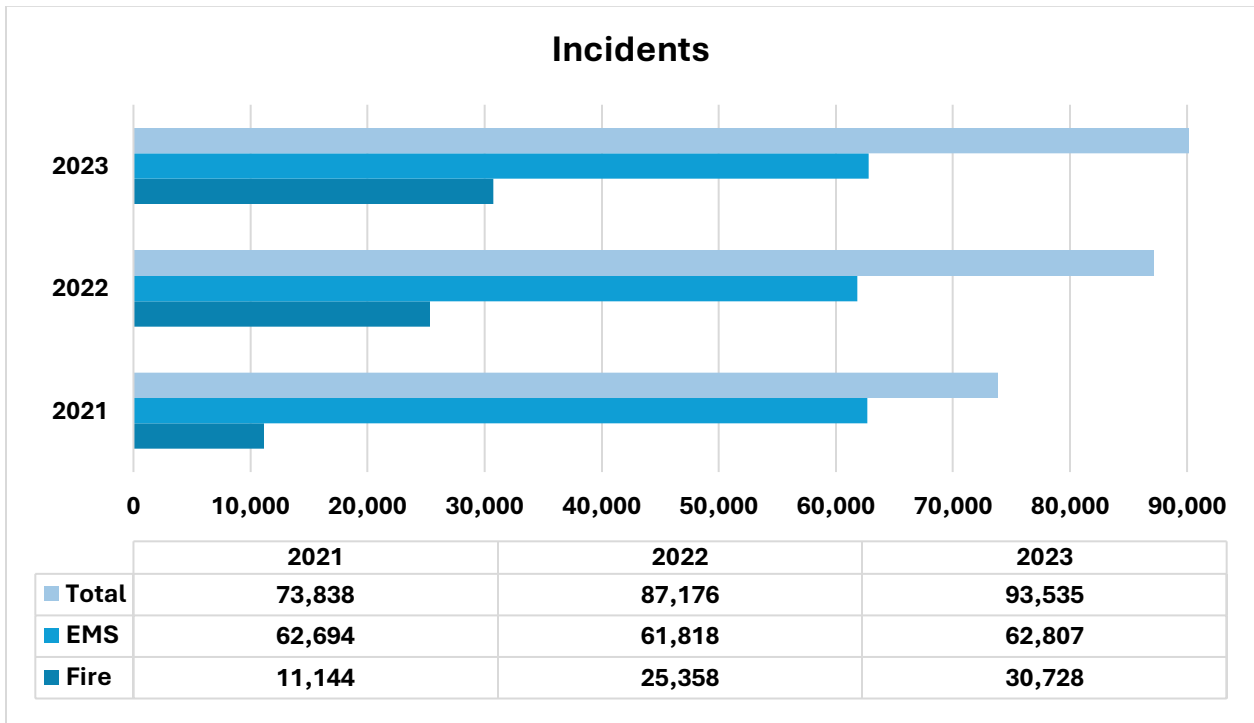
Statistics

Incidents

Forsyth County 9-1-1 accepts emergency calls for medical services and fire response across Forsyth County and calls transferred from Winston-Salem communications center. We dispatch fire resources from the Winston-Salem Fire Department, Kernersville Fire Department and Volunteer Fire Departments around the county. Calls are received and the proper resources are dispatched to best meet the needs of the caller. Multiple agencies, apparatus and skills may be needed for a single call and exact timely communication to all involved is critical.

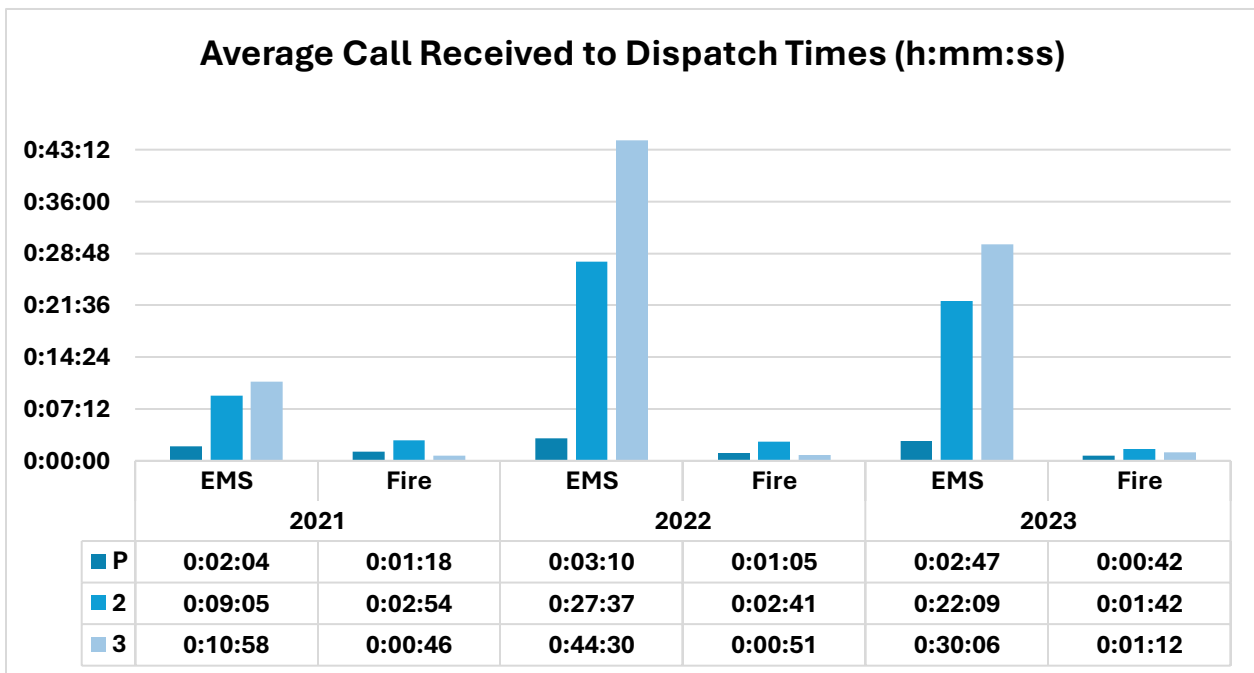


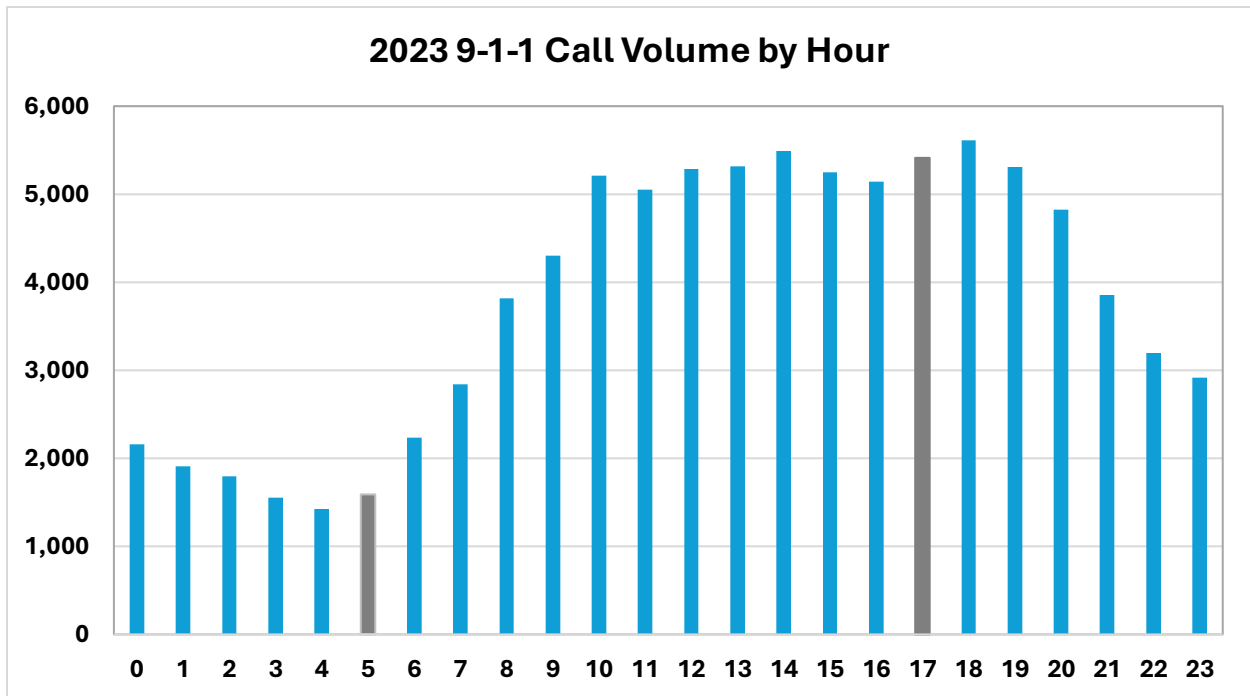
Incidents



Times

Dispatch times are calculated from the time the call was picked up by communications until the time units are activated through CAD and radio system. In the chart titled "Call Volume by Hour" the bars in gray represent times when staff is changing shifts.





Fire Division

Staffing

Forsyth County Fire Division			
Job Title	# of Employees	Experience	Age
Fire Marshal	1	21.1	46.5
Fire Operations Manager	1	5.1	39.5
Fire Training Officer	1	12.3	41.9
Fire Suppression Shift Supervisor	3	12.6	51.0
Fire Prevention Officer	5	13.4	45.2
Fire Engineer	7	7.6	35.7
Firefighter	16	2.1	29.6
Total/Average	34	10.6	41.3

Statistics

Reponses by 09's

09 units respond to fire incidents in support of county fire stations. They provide resources in the way of equipment and manpower. Units are based in Clemmons (209), Kernersville (109) and Rural Hall (309) but respond countywide.

FCFD Responses by Unit													
TOTAL RESPONSES BY UNIT	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Total by Unit
SR109	69	60	67	61	74	66	76	60	51	53	81	69	787
SR209	81	47	62	73	73	74	95	83	61	69	91	90	899
SR309	51	29	43	45	55	49	42	44	47	37	53	35	530
Totals	201	152	190	210	241	219	248	208	182	187	260	225	2,544



09's Average Response Times

The goal of the expansion of the 09 program was to reach **85%** of the county in 10 minutes or less and 100% of the county in 15 minutes or less for emergency incidents.

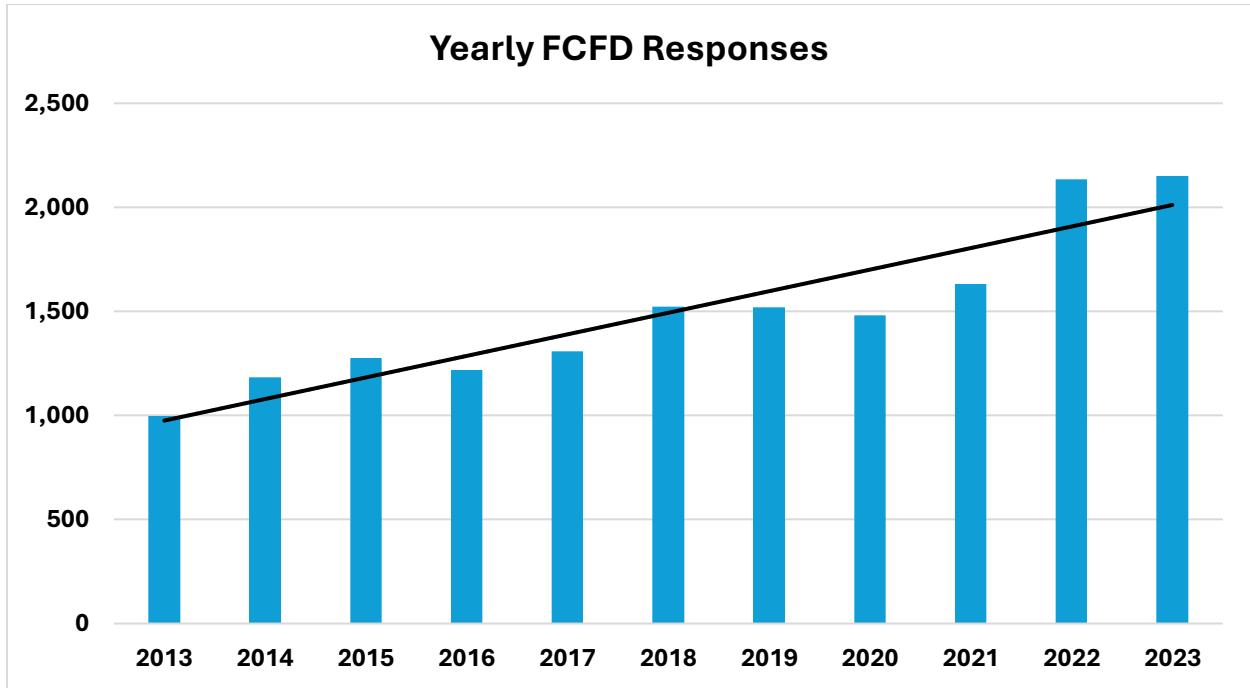
09's Average Response Time													
2023	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Average
109	7:52	7:03	8:41	6:51	9:02	7:13	9:12	10:57	10:28	8:54	9:03	8:17	8:37
209	7:35	7:06	9:29	6:35	9:52	6:06	6:28	6:44	7:04	7:32	8:21	6:48	7:28
309	6:54	7:07	7:02	6:39	8:57	9:15	7:59	10:39	7:39	9:55	9:55	8:39	8:23
2022	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Average
109	8:37	10:22	11:02	10:10	10:25	8:38	9:00	9:16	7:47	9:17	9:56	9:31	9:30
209	11:02	11:23	11:41	9:51	10:57	6:35	7:28	8:44	6:57	8:04	7:22	7:26	8:57
309	11:16	11:46	12:37	11:32	13:26	7:00	6:55	8:42	6:47	6:34	7:15	7:57	9:18
2021	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	Average
109	9:36	7:51	7:46	8:12	9:09	8:54	10:25	10:31	8:36	8:56	8:52	9:16	9:00
209	9:52	11:43	9:29	9:00	10:52	9:44	12:29	10:42	8:51	11:55	11:20	12:44	10:43
309	13:41	12:20	13:52	10:47	14:17	12:57	14:28	12:38	9:30	12:05	12:20	14:51	12:48

Responses by Incident Type

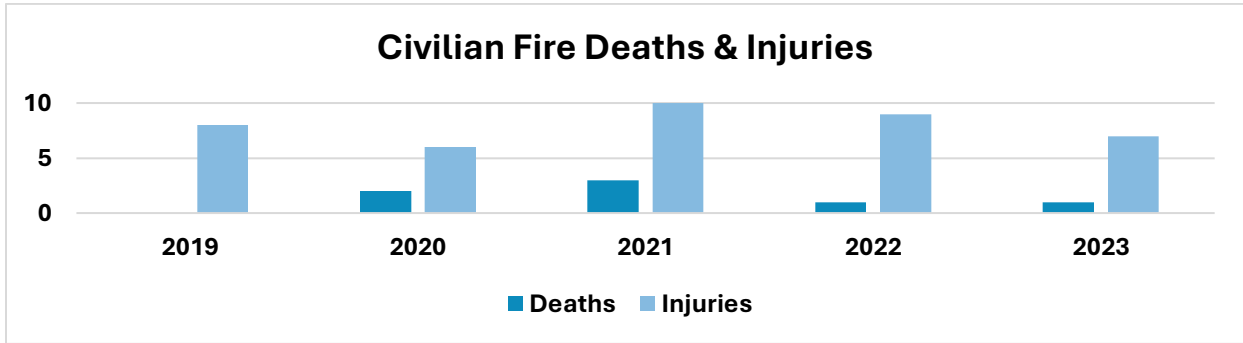
FCFD Incidents by District by Incident Type										
	Fire	Overpressure	Medical/Rescue	Hazardous Cond.	Service	Good Intent	False Alarm	Weather	Special	Total
Beeson Crossroads	1	0	8	2	1	28	2	0	0	42
Belews Creek	5	0	21	2	6	21	1	0	0	56
Clemmons	29	0	113	30	22	131	128	1	1	455
Griffith	1	0	6	2	1	41	2	0	1	54
Gumtree	0	0	1	0	0	10	0	0	0	11
Horneytown	9	0	7	0	0	23	3	1	0	43
King	4	1	7	0	0	12	4	0	0	28
Lewisville	23	1	53	11	6	144	38	0	0	276
Mineral Springs	8	1	15	0	4	52	1	0	0	81
Old Richmond	9	0	16	0	3	41	6	0	1	76
Piney Grove	9	0	25	3	14	40	6	0	0	97
Rural Hall	22	0	86	15	17	67	41	0	0	248
Salem Chapel	2	1	1	0	1	5	0	0	0	10
Union Cross	3	1	10	1	2	31	3	0	0	51
Vienna	8	0	24	7	3	67	12	0	1	122
Walkertown	21	0	53	8	5	148	26	0	2	263
FCFD	0	0	2	8	28	7	0	0	0	45
KFD	33	2	53	7	6	40	3	0	0	144
WSFD	0	1	26	0	3	15	4	0	1	50
Total	187	8	527	96	122	923	280	2	7	2,152

09's Yearly Responses

Three units make up the 09 responses with 109 being in operation for the entire period charted below. 209 started operations in 2016 and 309 2020. This increased response capability drove the consistently increasing response volume.

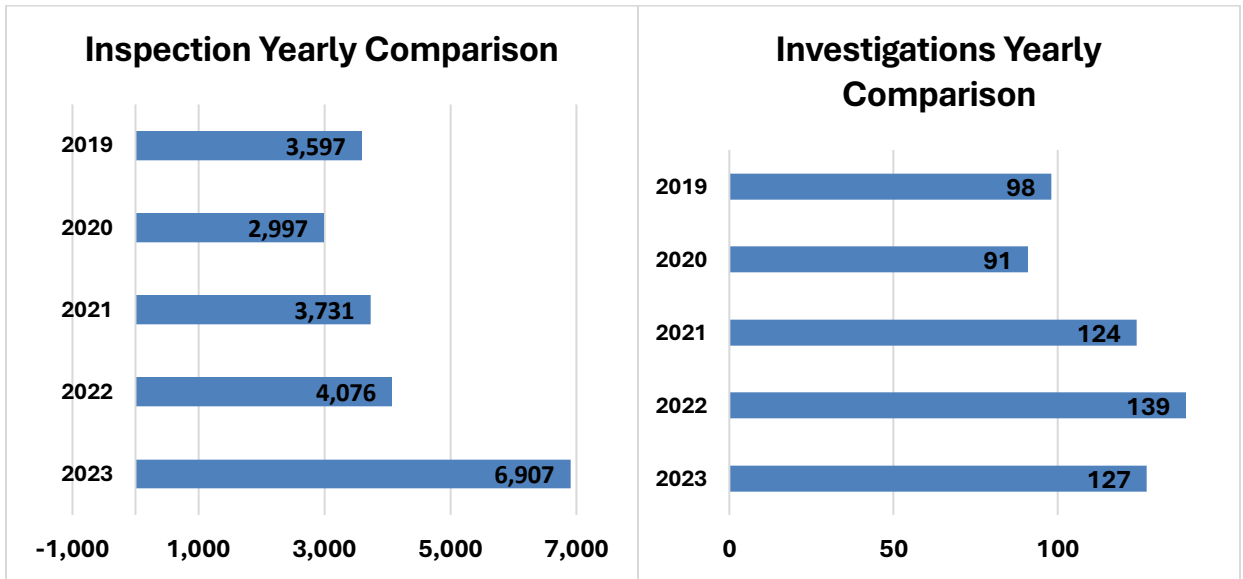


Yearly Civilian Deaths and Injuries



Inspection & Investigation

This is a historic look at the number of investigations and inspections conducted by prevention and suppression staff members.



2023	Prevention	Suppression
Inspections	3,931	2,976
Total Inspections	6,907	
Investigation Conducted	50	77
Total Investigations	127	
Total Incendiary Cases	11	
% of Incendiary Cases Cleared	27%	

