



2020 Annual Report

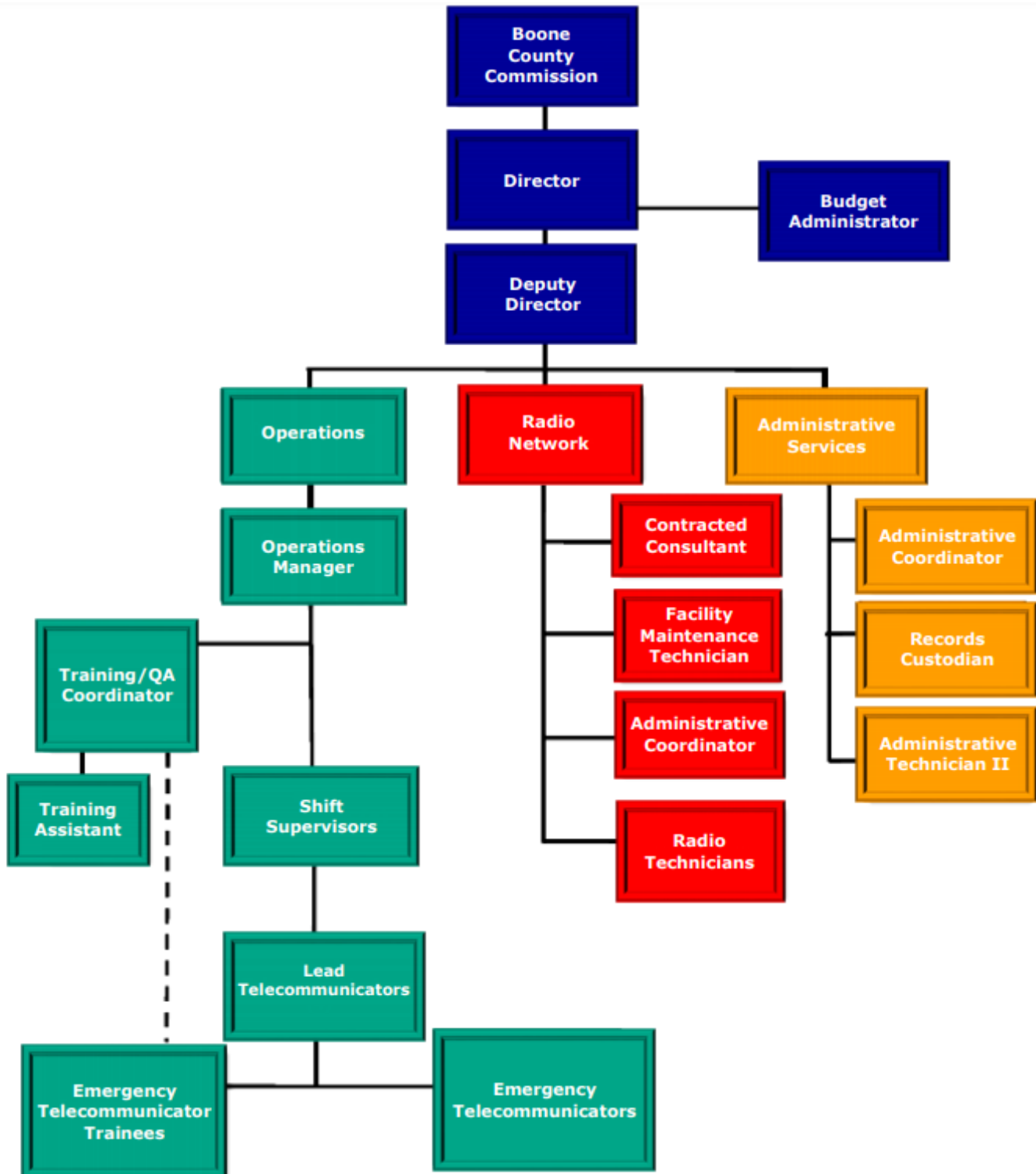
Boone County Joint Communications



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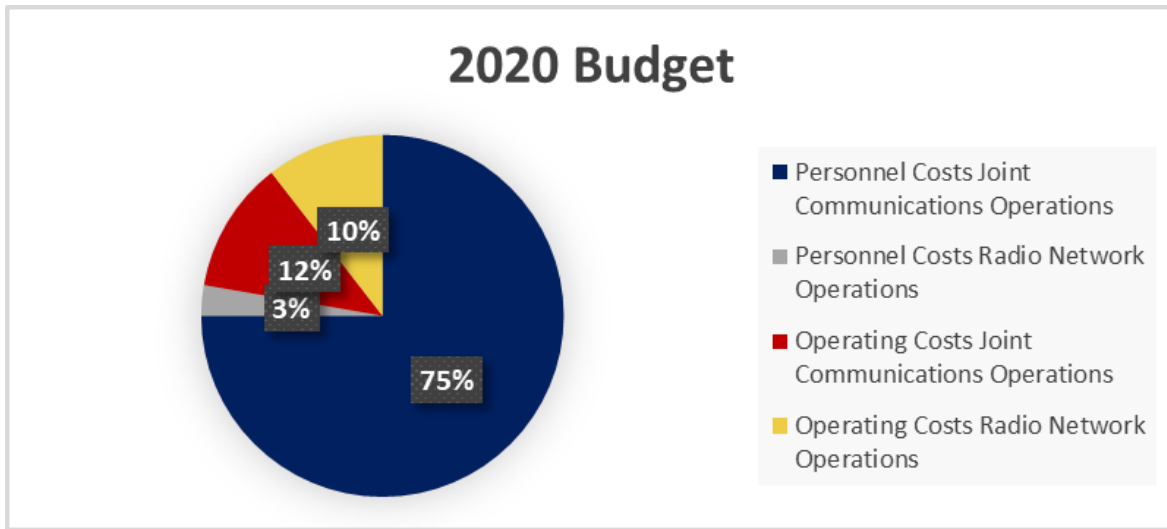
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Organizational Chart



The Deputy Director is the Manager of Administrative Services and takes over the responsibilities of the Director should his/her office be absent or vacant.

2020 Budget



Personnel Costs

Joint Communications Operations	\$ 4,045,714
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Radio Network Operations	\$ 146,449
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Operating Costs

Joint Communications Operations	\$ 640,253
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Radio Network Operations	\$ 924,306
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Total 2020 Personnel & Operating Budgets	\$ 5,746,722
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Personnel costs for Joint Communications comprise 75% of the 2020 budget and reflect the primary functions of the 911 Center: emergency call-taking and dispatching by skilled Emergency Telecommunicators.

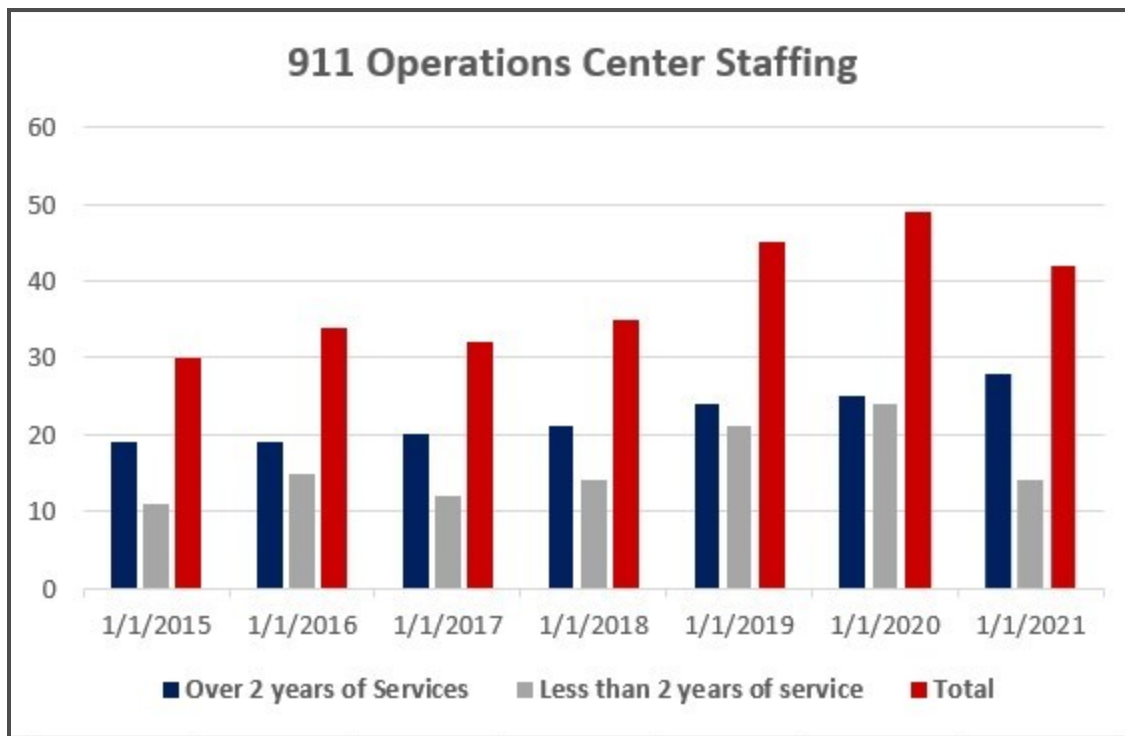
It should be noted that 911-related technology is not included in the BCJC budget, as these costs are under the oversight of the Boone County Information Technology department. Radio Network Operations is tracked as its own cost center since it represents a significant portion of operating costs.

In addition to the budget above for on-going costs, \$1,012,000 was set aside in the 2020 budget for Radio Network Improvements, to cover costs of planned multi-year projects such as addition of radio channels and establishing new radio tower locations to improve coverage in under-served geographic areas.

Staffing

The COVID-19 pandemic and associated public health measures had an impact on recruiting, hiring and turnover in 2020.

As of December 31, 2020, BCJC employed 42 staff in the 9-1-1 Operations Center, down from 49 at the beginning of the year. Despite this overall decrease, there was a rise in staff with two or more years of service, a benefit of aggressive hiring in recent years.



Overall turnover in 2020 was 33% compared to 24% average annual turnover in the past five years.

While COVID-19 influenced this trend in some ways, competition in the job market played a role as well.

9-1-1 Operations Center Staff Turnover

	2020 Ops Staff	2020 Turnover	Turnover Rate
Ops staff over 2 yrs service as of 1/1/20	25	-6	24%
Ops staff under 2 yrs service as of 1/1/20	24	-10	42%
2020 new hires	14	-5	36%
Overall turnover	63	-21	33%

Recruiting

While hiring fairs and other public events were cancelled due to COVID-19, radio and digital advertising continued in 2020. Advertising campaigns are continuously monitored and adjusted as needed to attain optimal response.

Hiring

Applicants for an ETC Trainee position must first pass initial screening and a computer-based skills test before participating in a panel interview and undergoing background checks. The processes previously conducted at the ECC building were disrupted during COVID-19 due to visitor restrictions. Hiring processes resumed after developing an online testing solution and switching to telephone interviews. A total of 14 ETC Trainees were hired in 2020, compared to 20 and 22 in 2019 and 2018.

Out of 393 applicants in 2020, about 3% accepted job offers and 4% were still in process as of year-end.

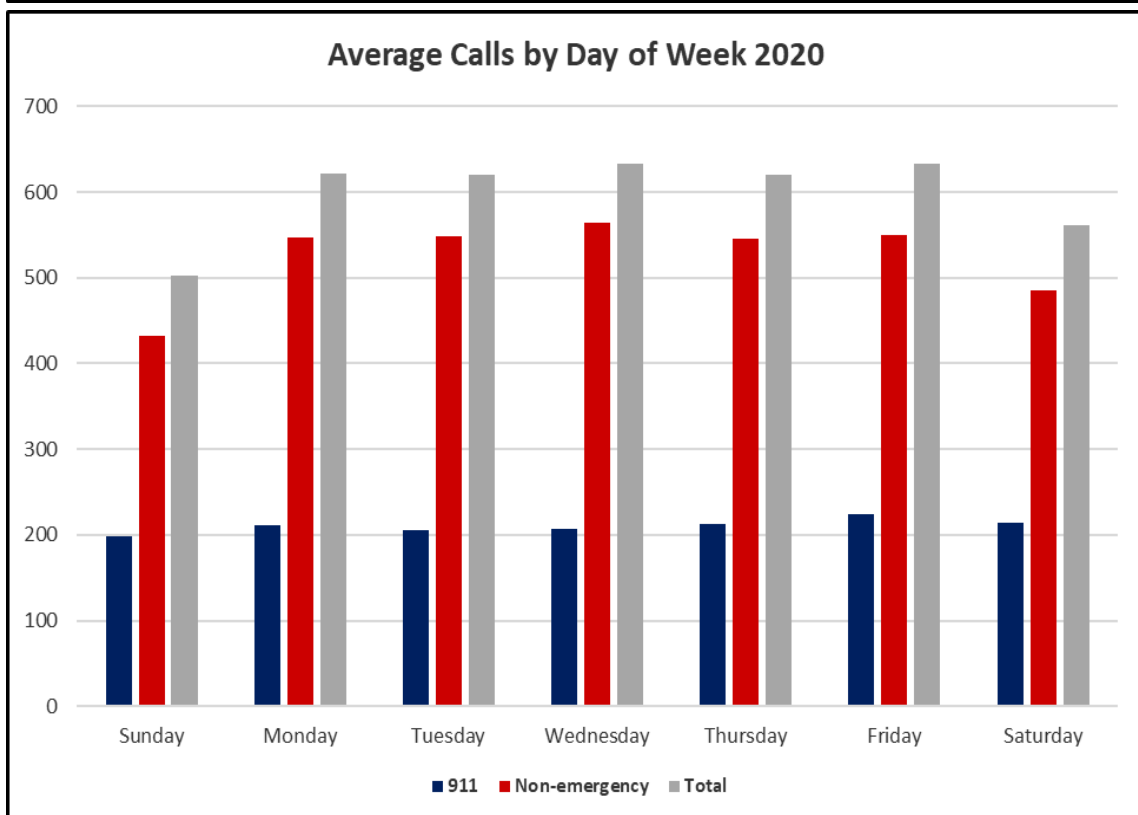
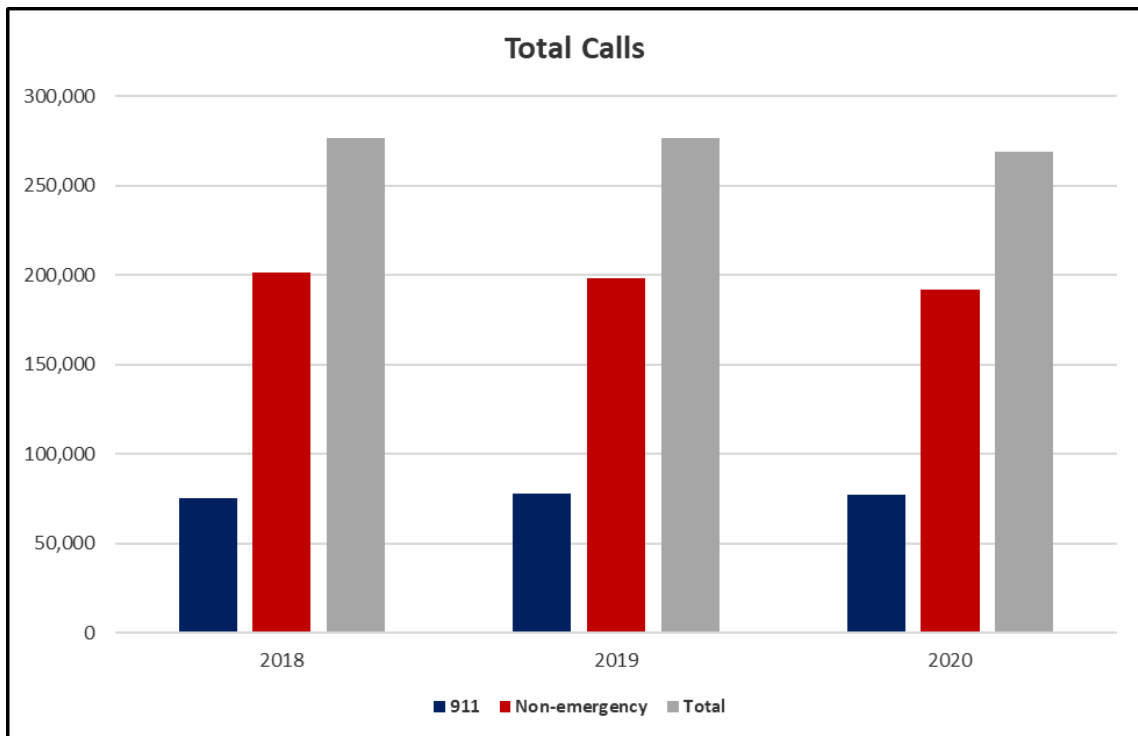
9-1-1 Administration

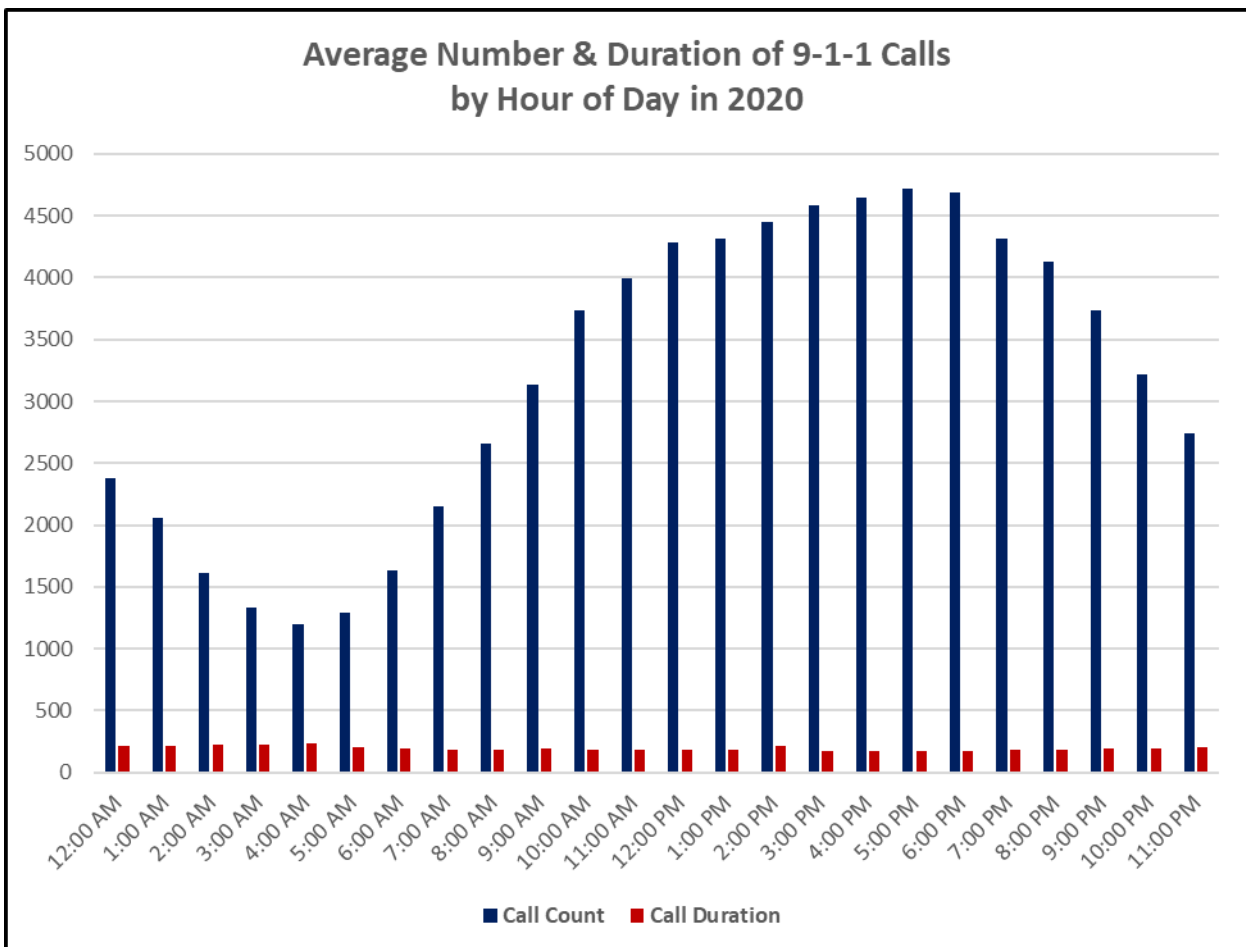
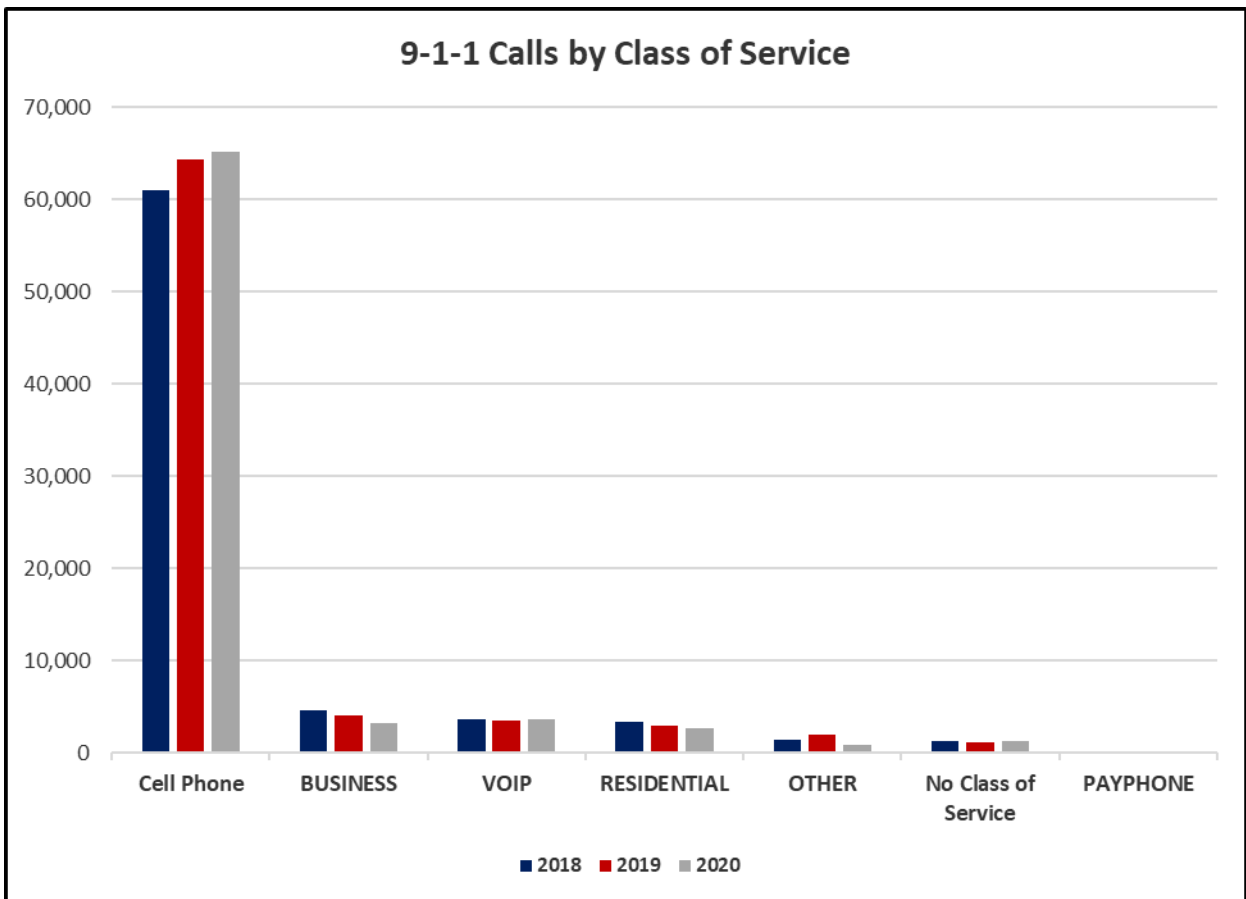
9-1-1 Operations is supported by nine administrative staff, two radio system technicians and one part time maintenance technician.



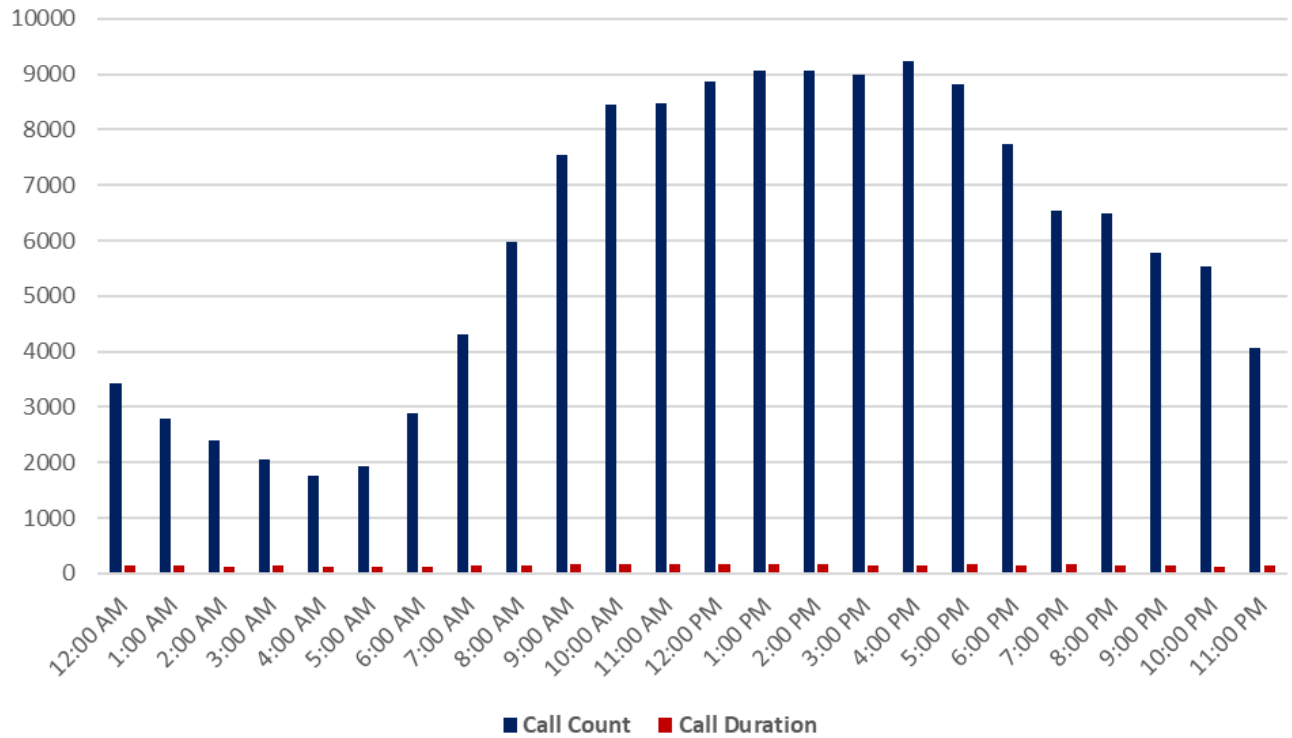
Telephone Data

Computerized telephone technology is utilized to manage incoming emergency (9-1-1) and non-emergency (3-1-1) calls for service and to provide operational support to first responders in the field. Telephone system activity is a key indicator of the workload of emergency telecommunicators working in the Emergency Communications Center.

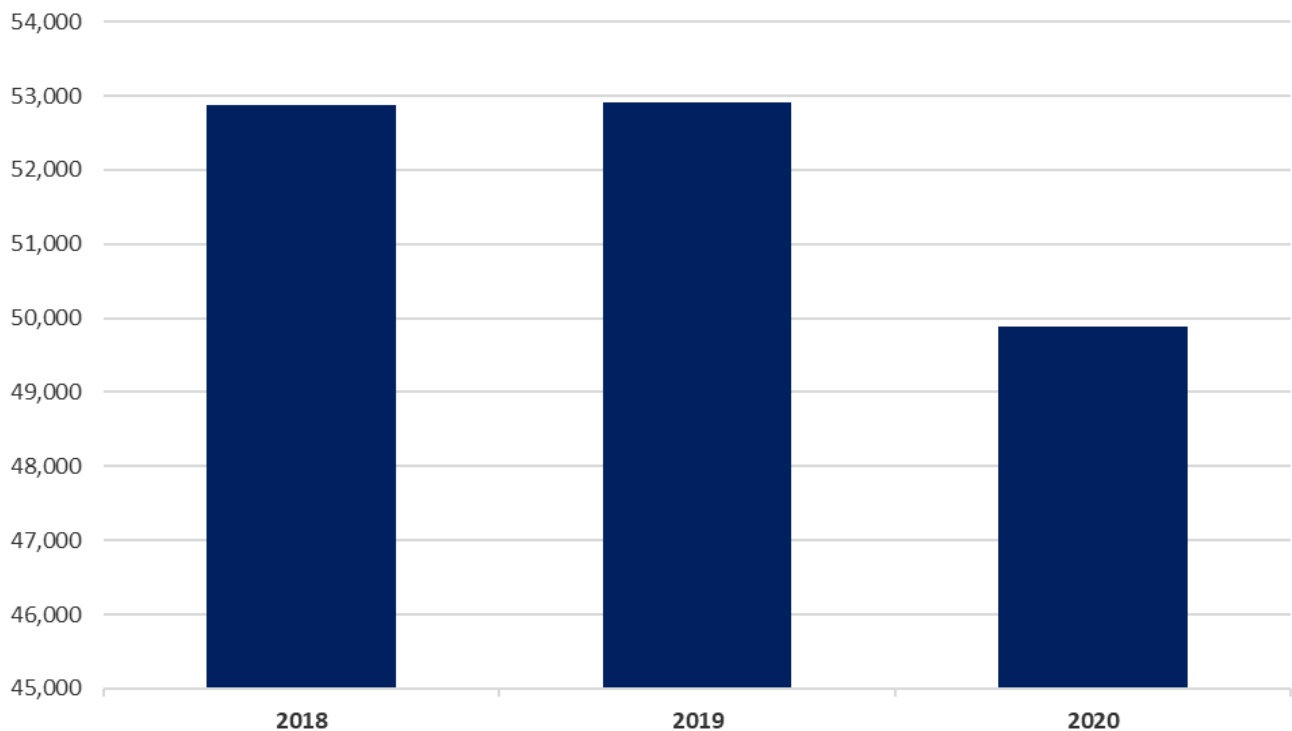




Average Number & Duration of Non-emergency Calls by Hour of Day in 2020

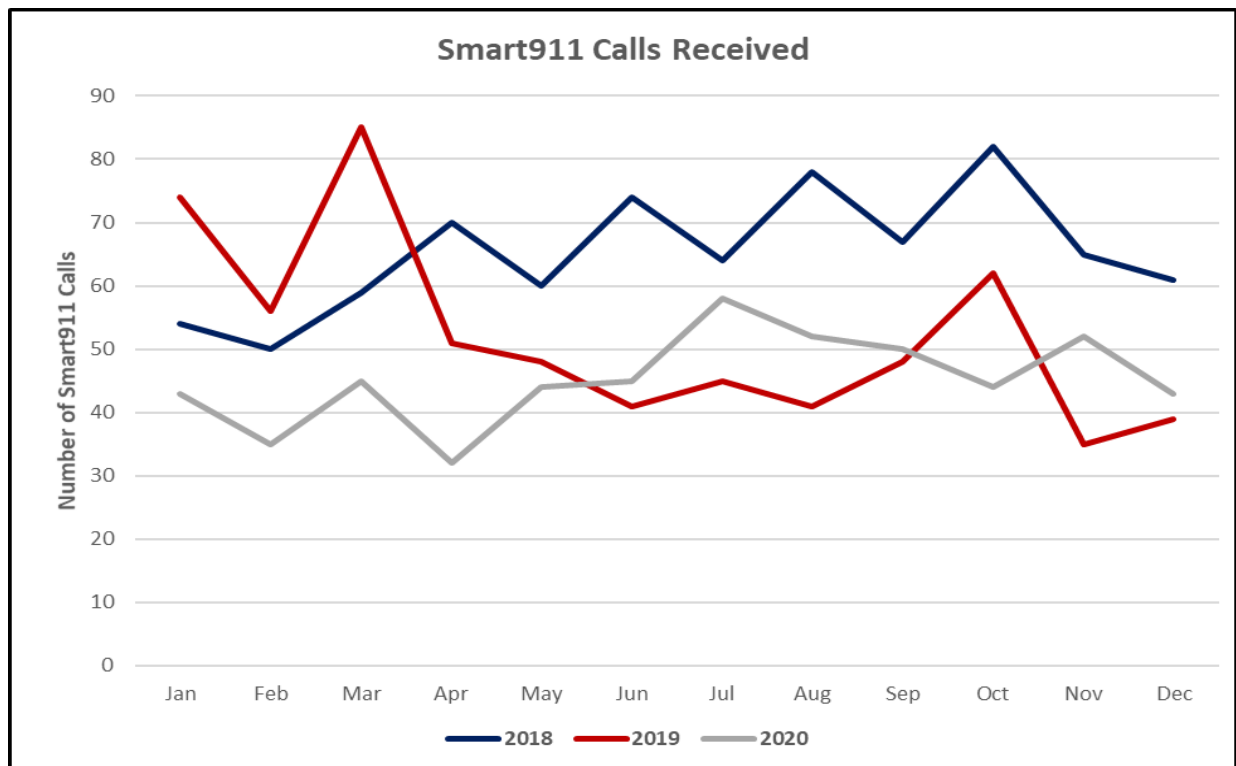
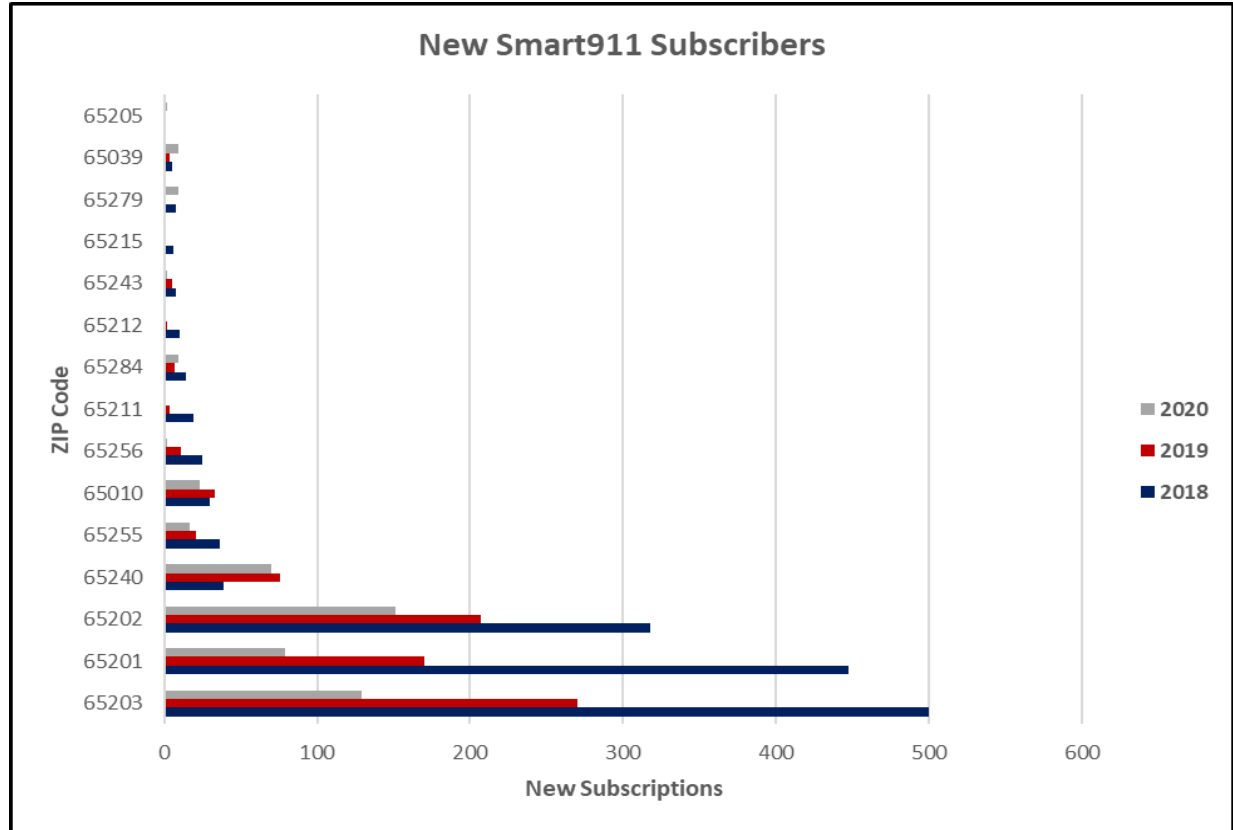


Total Outbound Calls



Smart911

Smart911 allows rapid information sharing of quality information with emergency telecommunicators when a subscriber of the system calls 9-1-1. In 2020, there were 513 new subscriptions added to the Boone County system, and there were 543 calls received from subscribers of the service.



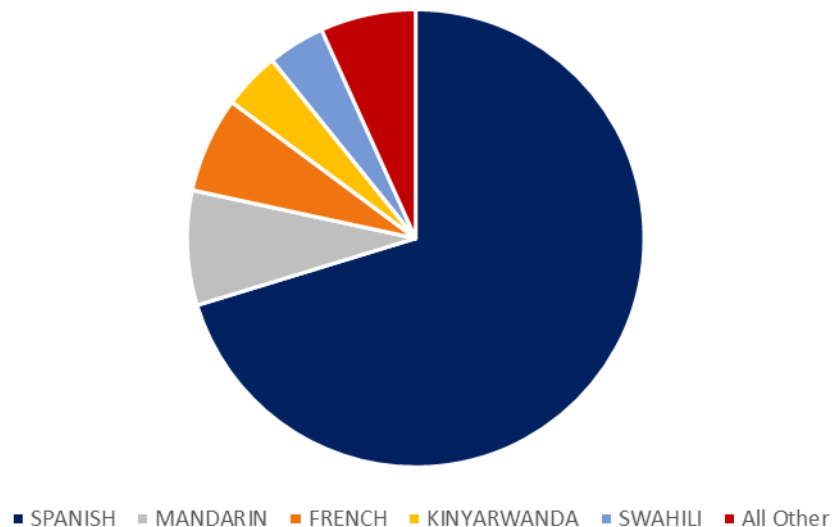
Serving a Multilingual Community

911 and non-emergency calls sometimes require the use of a translator. In 2020, 74 calls required translation assistance, most of which were for Spanish speakers. The comprehensive list below shows the diversity of languages requiring translation services.

Emergency telecommunicators connect with specially trained interpreters within seconds to obtain essential information and deliver help.

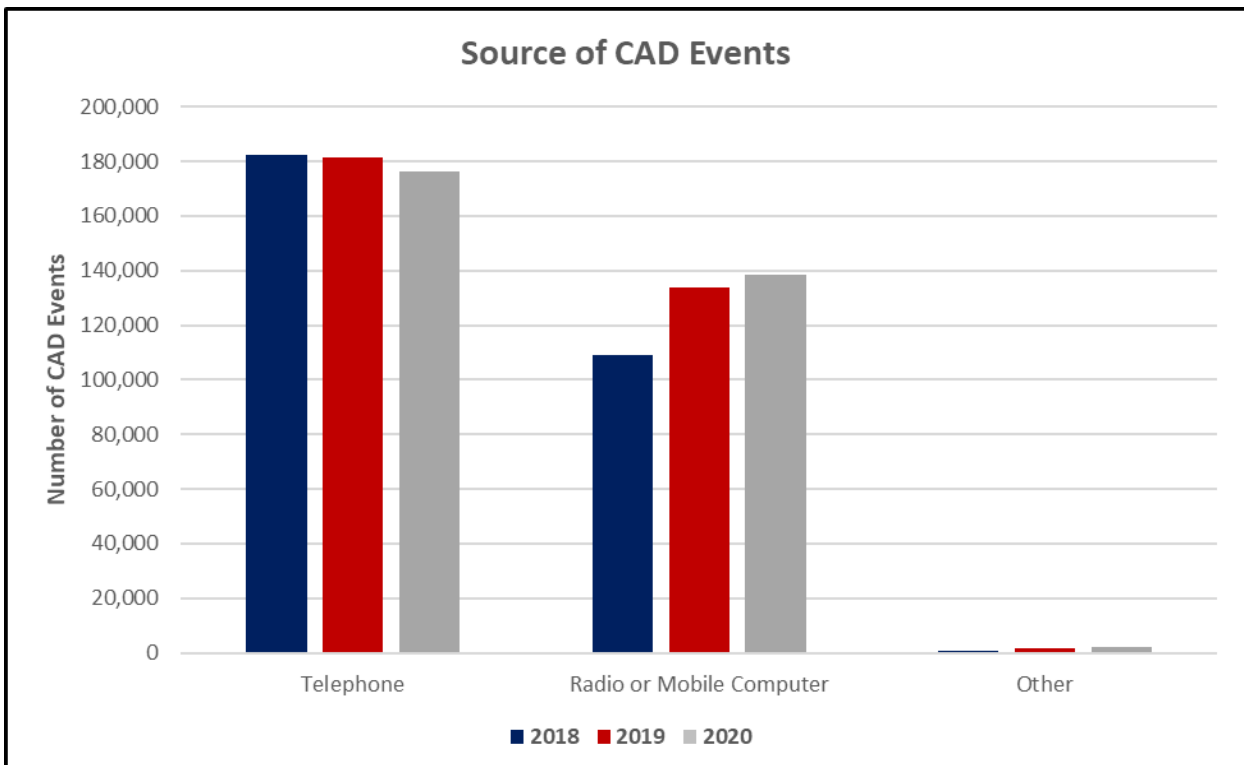
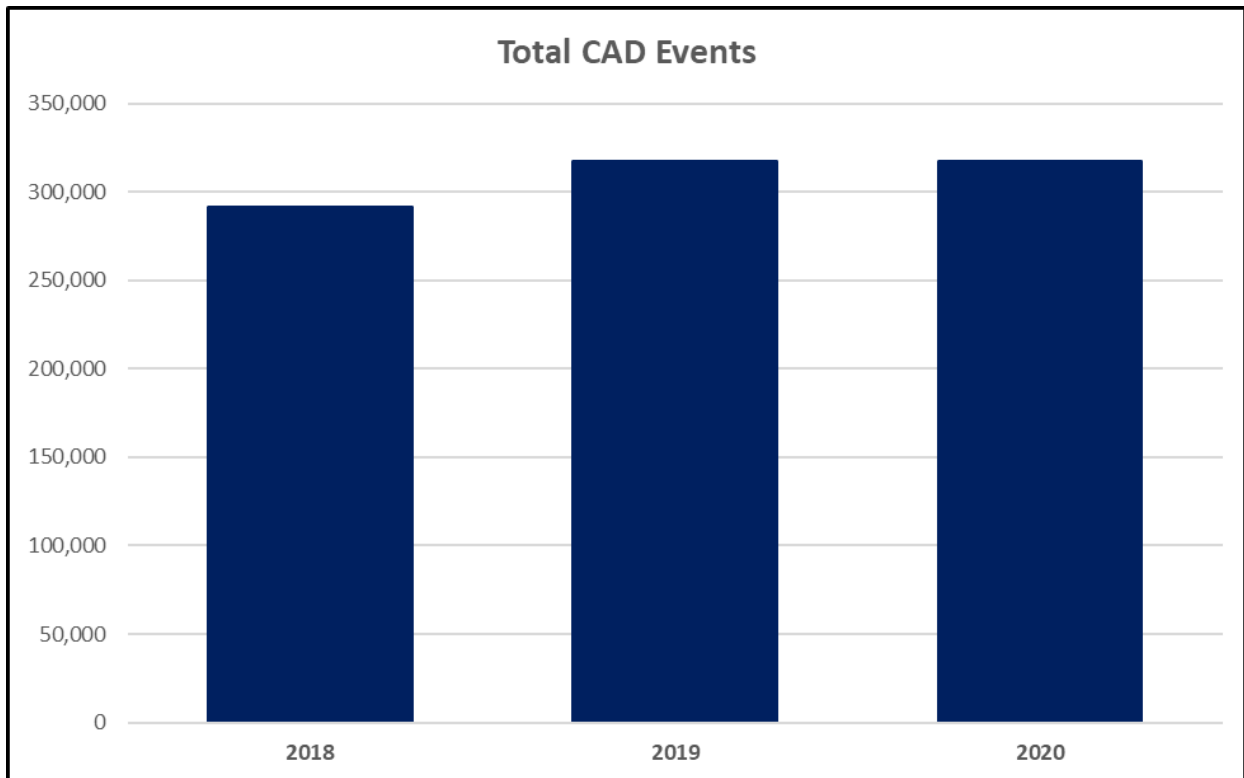
Language	Calls	Minutes	% of Total Calls
SPANISH	52	493	70.27%
MANDARIN	6	35	8.11%
FRENCH	5	26	6.76%
KINYARWANDA	3	31	4.05%
SWAHILI	3	46	4.05%
BURMESE	1	5	1.35%
CAMBODIAN	1	11	1.35%
RUSSIAN	1	10	1.35%
KOREAN	1	14	1.35%
ARABIC	1	7	1.35%
Languages: 10	74	678	100.00%

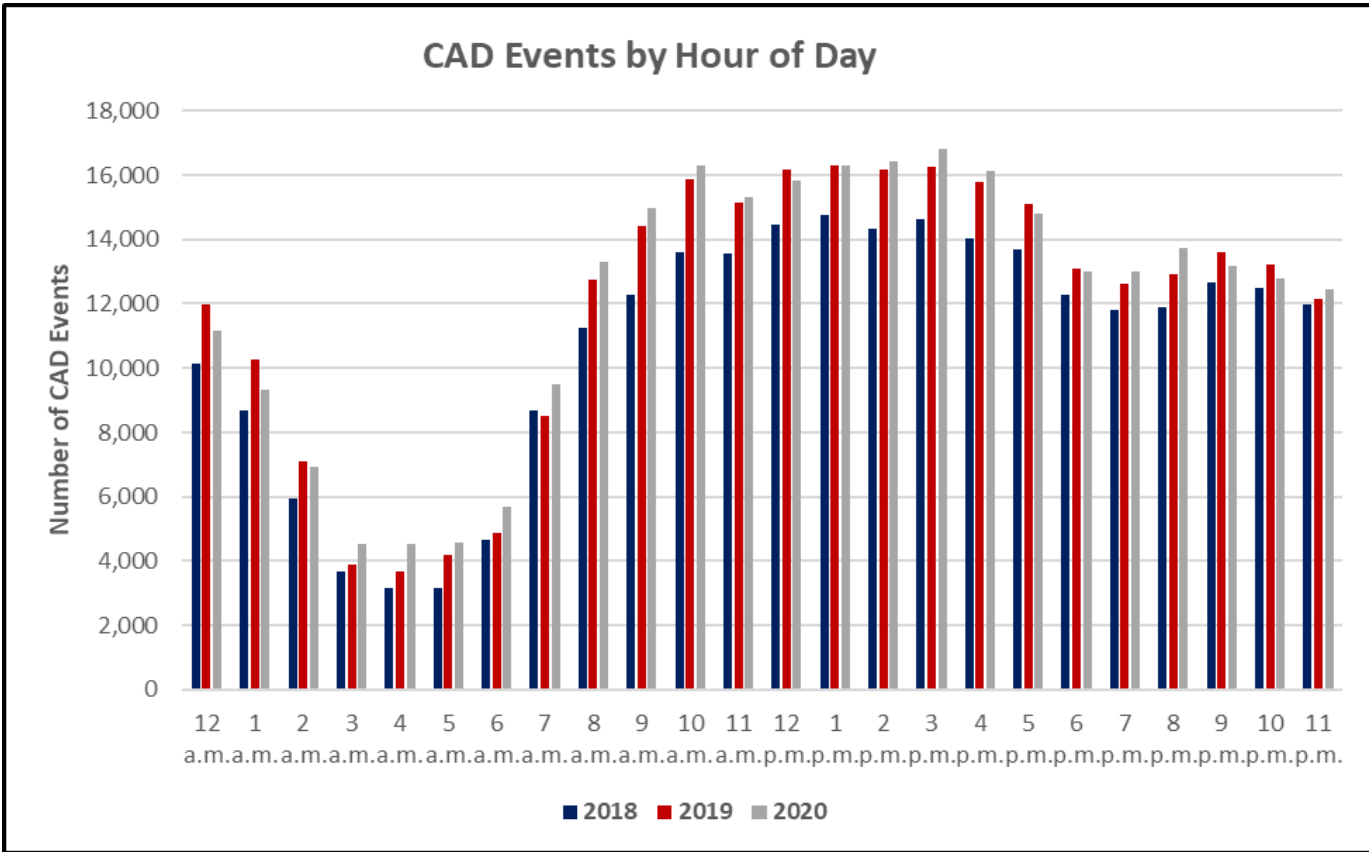
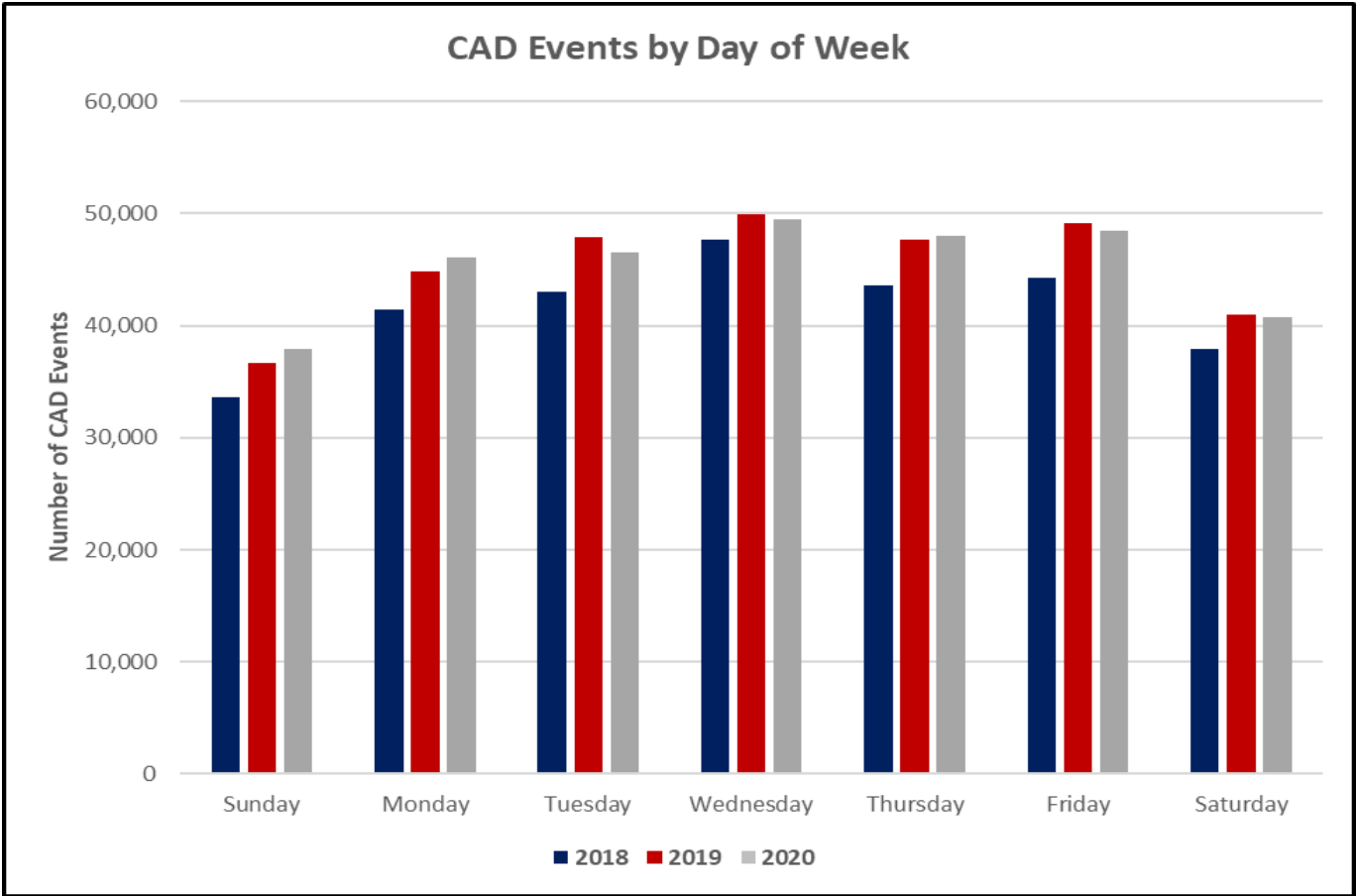
Calls by Language

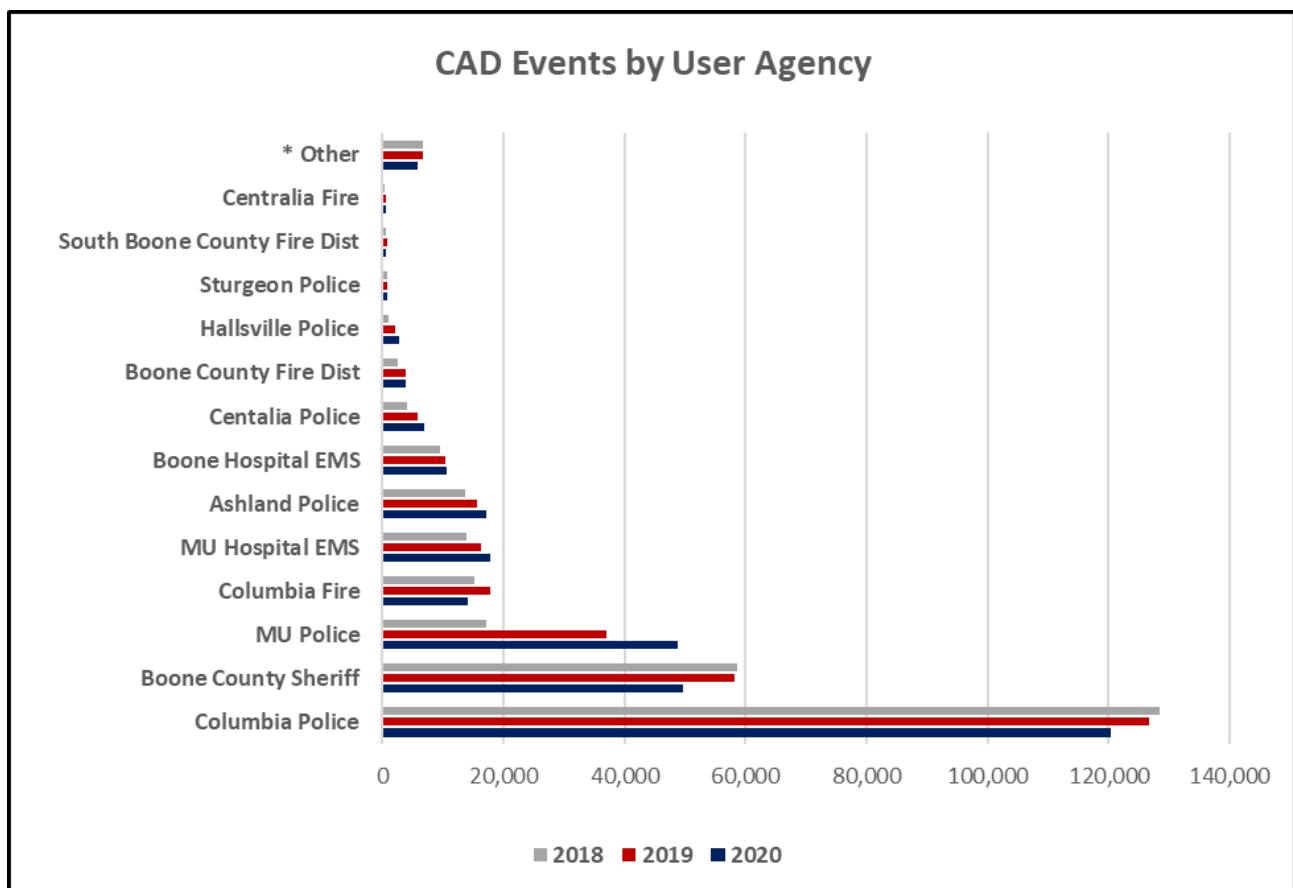
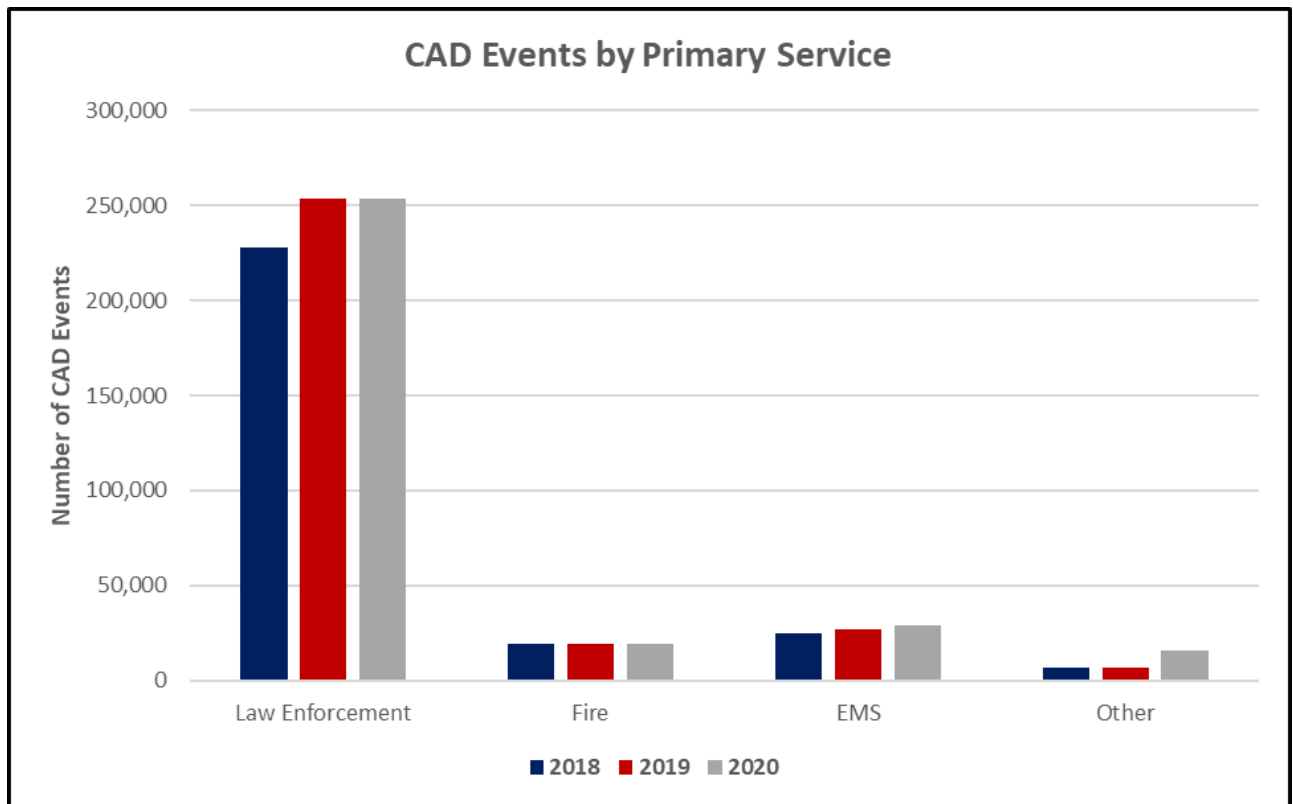


Dispatch Data

A computer-aided dispatch (CAD) system is utilized to process calls for service, dispatch and support first responders in the field. Events recorded by the CAD system are another key indicator of the workload of emergency telecommunicators working in the Emergency Communications Center.



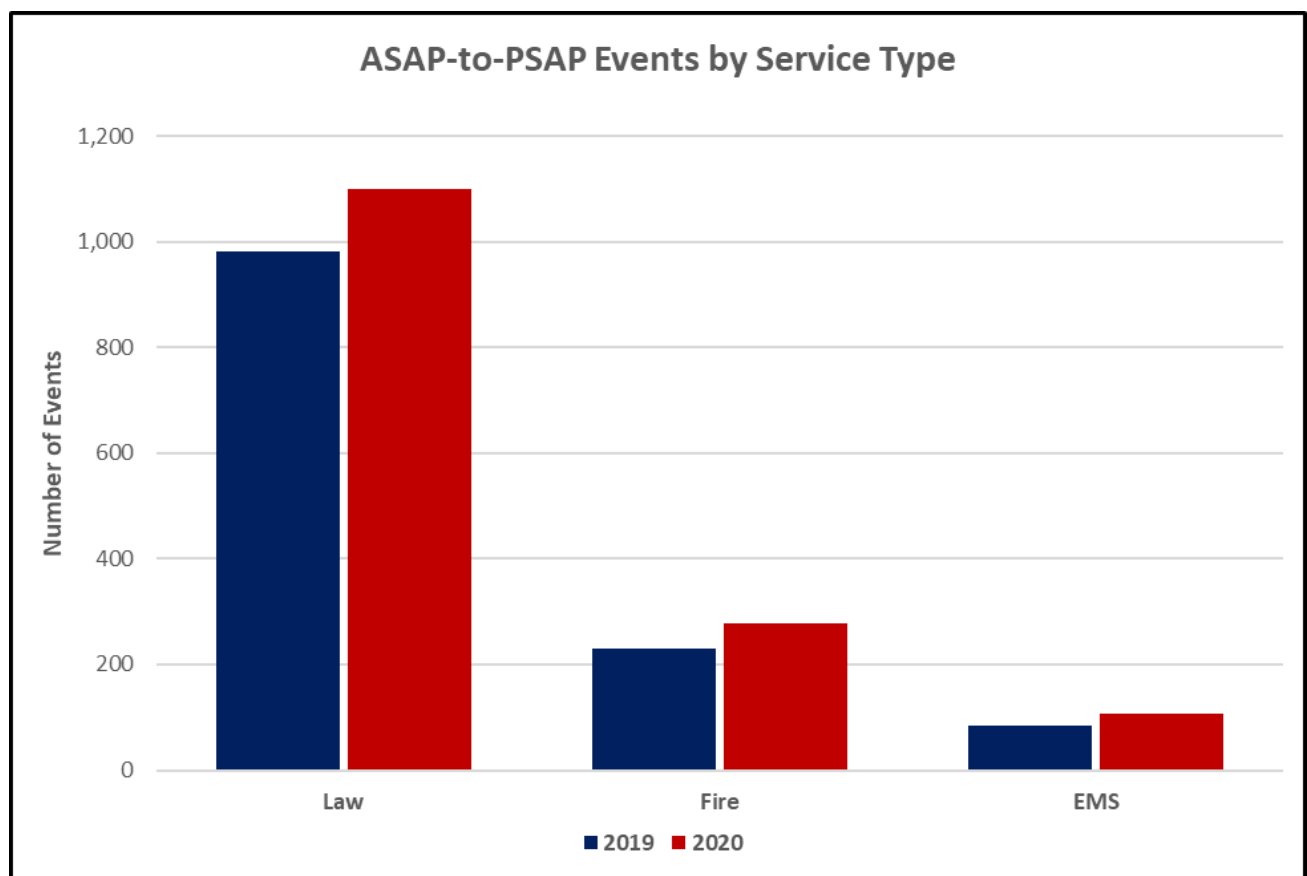




*Affiliated user agencies such as the Missouri State Highway Patrol, VA Police, Court Marshals, Missouri Department of Conservation, etc.

Automated Secure Alarm Protocol

The ASAP-to-PSAP (Public Safety Answering Point) program, implemented in 2019, allows participating alarm companies to deliver law, fire and medical alarms directly into the BCJC CAD system for dispatch. This automation reduces telephone calls to BCJC, helping to keep call-takers available and reducing response times to alarm activations. 20% of the alarm activations reported to BCJC in 2020 were received via the ASAP-to-PSAP service.



Radio Network & Support

Boone County Joint Communications has a Radio Network Support Unit that is tasked with the planning, installation and maintenance of the radio communications system. The unit is comprised of a radio site facility maintenance tech and two full-time radio technicians who report to the deputy director.

Working with the county's radio consultant, the support unit staff are responsible for all facets of the radio communications system that serves the public safety providers in Boone County.

Collectively, the system consists of the main dispatch facility at the Emergency Communications Center, a backup facility in downtown Columbia, plus the radio network comprised of 27 tower sites located in and around Boone County. At present, the BCJC radio network serves in excess of 2,000 user radios and has total technical presence at 39 sites and facilities.



Emerging Technology

As emerging technology is introduced to public safety providers it is carefully evaluated before being adopted for Boone County Joint Communications operations. As part of a service expansion effort, the recorded voice Locution system was recently added to CAD operations serving Centralia Fire Department.

Through the committed efforts of the members of the Radio Network Services Unit, the Boone County Emergency Communications Center saw continued reliable performance from its radio system. Combined use of the system radio channels and network infrastructure by first responders surpassed 2.5 million radio transmissions in 2020.

Ongoing Maintenance

Ongoing maintenance is performed to keep the radio network robust and reliable. Technicians visit all the tower sites on a regular schedule to verify the proper functioning of equipment, to inspect and test on-site standby generators, and to ensure safe and stable site conditions. Several site maintenance projects were completed in 2020 that have helped ensure system performance even under extended adverse environmental conditions.

Individual battery banks serving UPS units at remote sites continue to be upgraded to provide extended runtime for radio equipment.

Generators were checked and serviced regularly to ensure reliable operation.



System Planning

System planning is an ongoing process to improve system technical performance and upgrade system components. In 2020, the plan for ongoing system improvement included the development of a south Columbia tower site near Rock Bridge High School and a tower site in Cole County to provide coverage to Hartsburg and the south county area. A spectrum expansion was planned to enable existing operations on the VHF and 800 MHz radio spectrums to better serve unique segments of the public safety provider community.

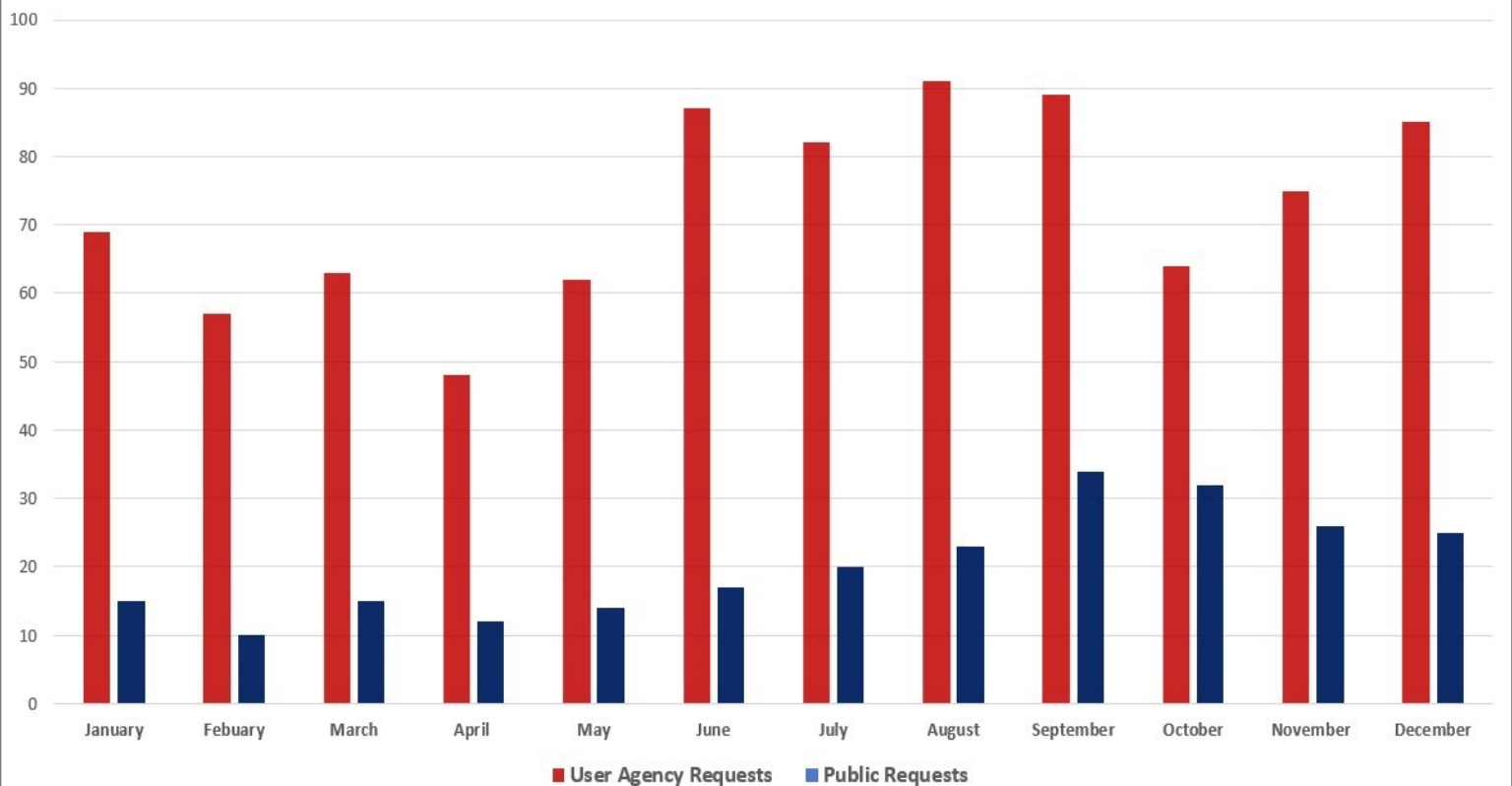
Site Construction

Site construction has allowed the county to meet the growing communication needs of its allied public safety agency users. Under County governance, the radio system has developed a focused coverage growth plan and a migration path for additional new system features. An exciting step for the Radio Network Support Unit occurred in 2020 when technical maintenance operations moved to a new support building adjacent to the Emergency Communications Center at the Public Safety campus on East County Drive. The new building also includes much needed space for the Office of Emergency Management, as well as new space for equipment servicing, system staging, and a separate office area for technicians.

Records

The Boone County Joint Communications Records Custodian is responsible for timely response to all departmental records requests. In 2020, the BCJC Records Custodian processed a total of 1,115 records requests. 22% (243) of the requests came from the public and 78% (872) came from BCJC user agencies or affiliated user agencies.

Records Requests by Month (2020)



Our User Agencies

Law Enforcement Services

Boone County Sheriff's Office
Columbia Police Department
University of Missouri Police Department
Columbia Regional Airport
Centralia Police Department
Hallsville Police Department
Ashland Police Department
13th Judicial Circuit Court Marshal



Medical Services

University of Missouri Health Care
Boone Hospital Center



Fire & Rescue Services

Boone County Fire Protection District
Southern Boone County Fire Protection District
Columbia Fire Department



Other Affiliated Services

Boone County Office of Emergency Management
Missouri State Highway Patrol
Missouri Department of Natural Resources
Missouri Department of Conservation
V.A. Police Department
Columbia Housing Authority

