

CHIEF JAMES PERSON
Chair

BRIAN MAYDWELL
Executive Director



Mailing Address: P.O. Box 2126
Jefferson City, MO 65102
Telephone: 573-200-6018
Email: admin@missouri911.org

April 11, 2021

Missouri 911 Service Board Report to Governor Parson and General Assembly

Governor Parson and Members of the General Assembly,

It is with great pride and gratitude that I share the attached report from the Missouri 911 Service Board on the status of 911 in the state of Missouri. Thanks to your ongoing support and prioritization of public safety for the citizens of Missouri, the state has seen significant improvements in the 911 services across the state since the release of the Missouri 911 Modernization and Improvement Report released in 2017.

- 15 additional counties are now able to locate callers calling from their cellphones or will have this capability by 2022 – resulting in 101 total counties.
- 41 additional counties are capable of receiving text-to-911 or will have this capability by 2022 – resulting in 56 total counties.
- 45 counties share 911 services and equipment with another county or will by 2022, resulting in reduced costs and improved services such as transferring of 911 calls, call-rollover and information sharing and dispatching across county lines.
- 26 counties have received funding support from the 911 Service Board Trust Fund since the Board's Grant and Loan program held its first cycle in 2020. To-date, the Board has held three grant cycles resulting in \$2.8 million in additional 911 funding.
- Statewide, counties are benefitting from a three percent prepaid wireless surcharge, as well as the option to collect 911 dedicated fees from cellphones for the first time.

The Board looks forward to building upon these successes as it looks towards statewide NG911. The highest level of 911 service available nationwide and currently not available anywhere in Missouri, NG911 is a cloud-based digital or Internet Protocol (IP)-based 911 system that allows for the seamless transition of 911 calls and information sharing among existing 911 systems.

The Board is optimistic about future Federal funding opportunities to support the deployment of NG911 throughout states and across the country. In order to ensure our NG911 preparedness, the

Board will continue working with our state partners in the Missouri 911 Directors Association, the state chapters of the National Emergency Number Association (NENA) and the Association of Public-Safety Communications Officials (APCO), as well as the Department of Public Safety, the Department of Economic Development Office of Broadband Development, the Office of Administration Office of Geospatial Information and Missouri GIS Advisory Council, among others. Additionally, we look forward to continuing working closely with our national partners in the National Association of State 911 Administrators as we monitor and advocate for funding to support state NG911 efforts.

As we work to be a strong partner to those in every level of government and public safety services, we would look forward to discussing this report with you further.

Sincerely,

A handwritten signature in cursive script that reads "Brian Maydell". The signature is written in black ink and is positioned above a thin horizontal line.

Brian Maydell
Executive Director, Missouri 911 Service Board
Brian.maydwell@missouri911.org

About the Missouri 911 Service Board

The Missouri 911 Service Board is a Governor-appointed board established in statute to assist and advise the state in ensuring the availability, implementation and enhancement of a statewide emergency telephone number. The Board is responsible for assisting the state in all jurisdictions through research, planning, training, and education.

Formerly the Advisory Committee for 911 Service Oversight, the Board's makeup and responsibilities were updated in 2017 through legislation (SB 503), modifying the representative organizations or Board members and expanding Board responsibilities. 2018 legislation (HB 1456) further expanded the responsibilities of the Board in improving Missouri's 911 system in the most efficient and cost-effective manner possible.

Board responsibilities include, but are not limited to the following:

- Provide assistance to the governor and the general assembly regarding 911 services;
- Review existing and proposed legislation and make recommendations as to changes that would improve such legislation;
- Perform other duties as necessary to promote successful development, implementation and operation of 911 systems across the state, including monitoring federal and industry standards being developed for next-generation 911 systems;
- Apply for and receive grants from federal, private, and other sources, and provide oversight for statewide and federal 911 grant funding compliance;
- Conduct and review an annual survey of public safety answering points in Missouri to evaluate potential for improved services, coordination, and feasibility of consolidation;
- Develop a plan and timeline of target dates for the testing, implementation, and operation of a next-generation 911 system throughout Missouri. The next-generation 911 system shall allow for the processing of electronic messages including, but not limited to, electronic messages containing text, images, video, or data.

Introduction

The purpose of this report is to provide an update on the status of 911 services statewide, as well as describe specific efforts to improve efficiency, cost-effectiveness, and levels of service. The last report on the status of Missouri's 911 system, the *Missouri 911 Modernization and Improvement Report*, was released in 2017. This report provided a comprehensive overview of the Missouri 911 system, as well as recommendations on how to provide the best possible 911 technology and service to all areas of the state in the most efficient and economical manner possible.

Since 2017, a number of the report’s recommendations have been enacted through either statutory or programmatic efforts. Missouri 911 now benefits from statewide and regional 911 coordination, new funding sources and resources, as well as enhanced education on new 911 technologies and efficiencies. Annual data collection and evaluation which will be discussed in this report demonstrates these improvements.

Missouri 911 has seen significant improvements in the last several years, but the challenges to improving Missouri’s 911 system remain the same. First and foremost, Missouri has been built upon a fragmented county-by-county 911 system marked with limited interconnections between 911 systems around the state. While funding for 911 has improved, smaller, more rural counties still struggle with antiquated and incompatible 911 infrastructure.

Despite the inherent challenges associated with the state’s 911 system, the Board has managed improved efficiencies, cost-effectiveness, and levels of 911 services statewide.

Overview of Service Level Improvements – 2017 to 2021

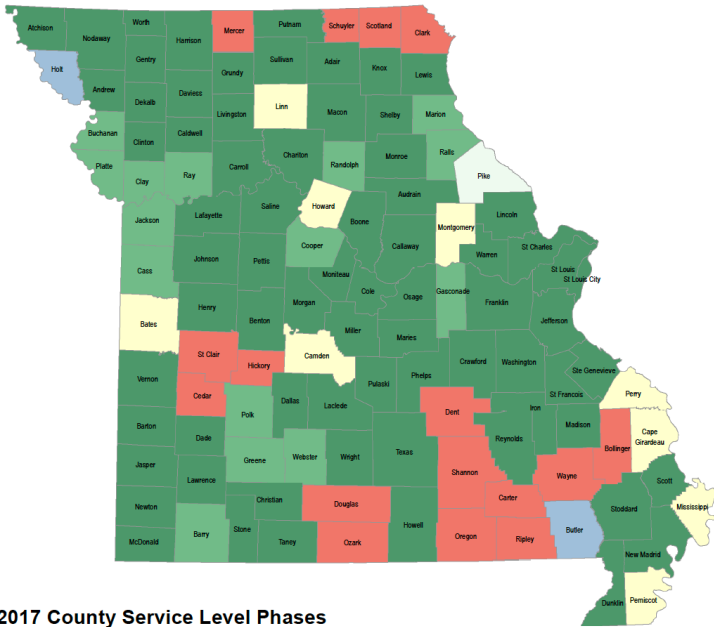
Improved Ability to Locate 911 Callers

99.2 percent of the nationwide population benefit from at least Phase II level service marked by the ability to locate a caller calling from a cell phone, while 18 Missouri counties currently contribute to the remaining portion of the population who do not. Service levels by county can be seen in the maps below.

- **Basic 911 (Red):** Counties with Basic 911 services do not have 911 answering equipment and may not have Public Safety Answering Points (PSAPs) or telecommunicators. Calls are delivered on seven-digit lines. The call-taker does not receive the caller’s name or location.
- **Wireline E-911 (Yellow):** In counties with Wireline E-911 level service, a PSAP receives the subscriber name and location of caller on a landline phone. These PSAPs are not able to locate callers on wireless devices.
- **Phase II (Green):** In counties with Phase II level service, a PSAP receives the caller’s phone number, cell tower address and sector the call came from and latitude/longitude information of a caller on a wireless device.

Since 2017, 15 counties have moved to Phase II level services. **In the next year, as a result of the Board’s Grant and Loan program detailed later in this report, eight counties with only a basic level of 911 services will be moving to Phase II level services in 2022**, resulting in 101 counties in Missouri having the ability to locate callers calling from cellphones.

Missouri 911
2017 Service Level Phase Map

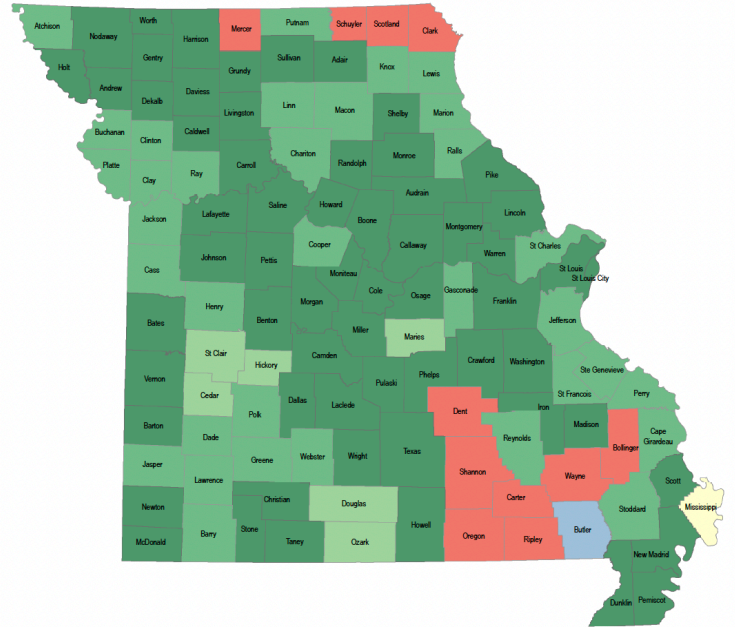


2017 County Service Level Phases

- Basic
- Enhanced Wireline
- Phase I (Wireless # Only)
- Start Phase II
- Phase II (Lat/Long)
- Phase II & Text to 911

3/30/2021

Missouri 911
2021 Service Level Phase Map



2021 County Service Level Phases

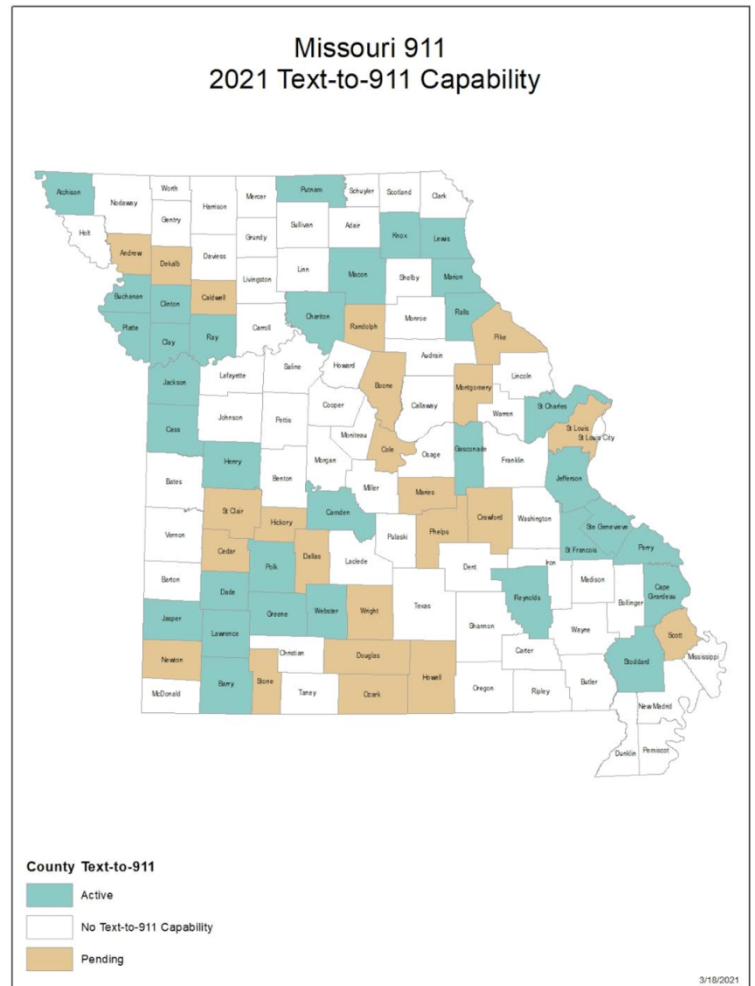
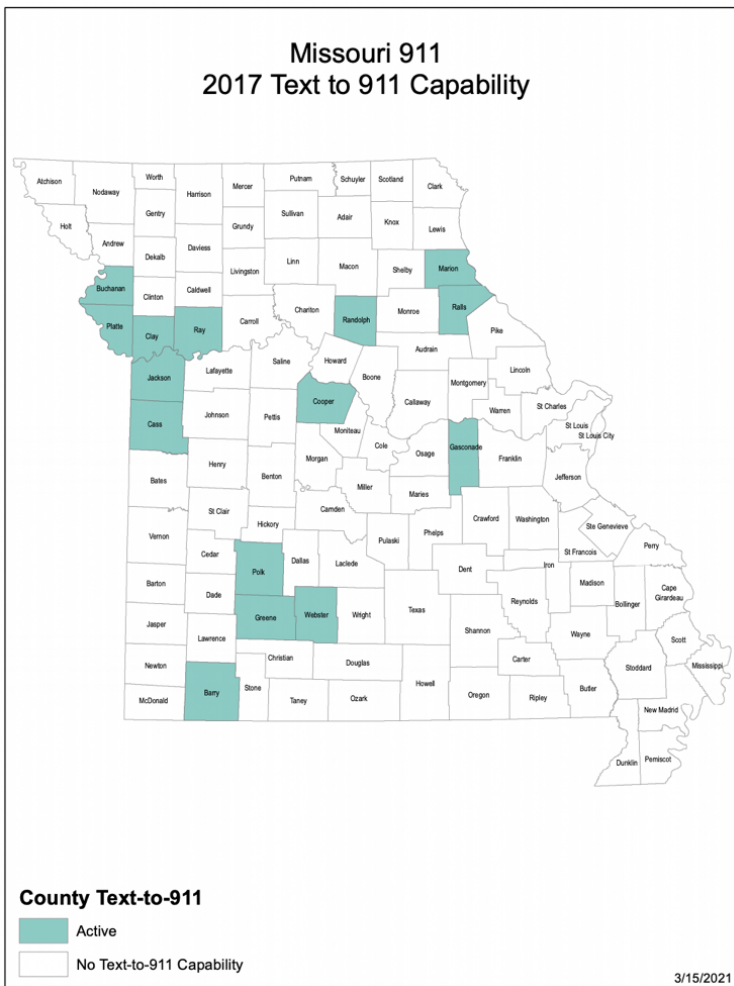
- Basic (No 911 Equipment)
- Enhanced Wireline
- Phase I
- Phase II (Lat/Long)
- Phase II & Text to 911
- Phase II & Text-to-911 by 2022

3/30/2021

Increased Text-to-911 Capabilities

The addition of text-to-911 services is vitally important to 911 access. It is particularly important for individuals who are deaf and hard of hearing, and for individuals who need to communicate with a 911 call-taker but is not in a position where they can speak verbally. The Board has prioritized text-to-911 and has implemented a number of strategies to promote it. This includes text-to-911 as an award priority area in its grants program, as well as the development of a comprehensive resource guide for text-to-911 available to all PSAPs and consumers on the Board’s website.

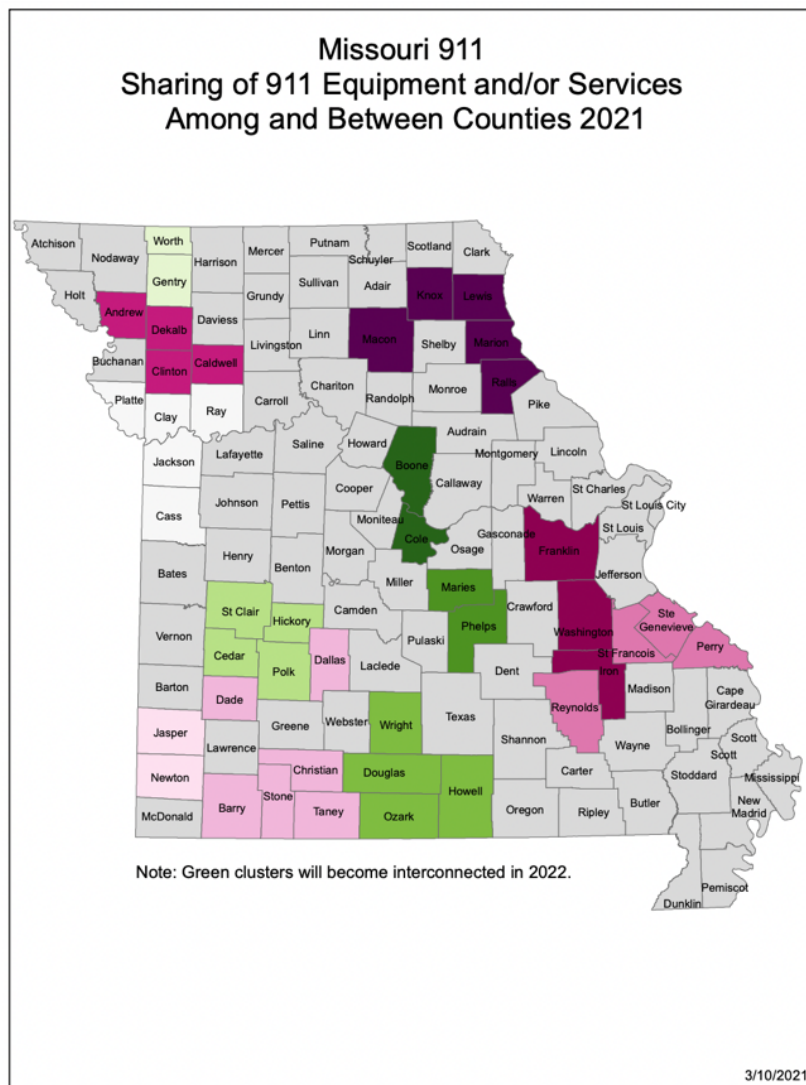
As of 2017, 16 Missouri counties had text-to-911 services. At the time this report was released, 32 Missouri counties had active text-to-911, 24 additional counties had text-to-911 services pending. **By 2022, the pending counties will be activated, resulting in at least 56 counties with text-to-911 services available.**



Sharing of 911 Services and Equipment Across Jurisdictions

The Board actively promotes the sharing of 911 services and equipment across jurisdictions as a key strategy for improving 911 services and cost-savings. Often referred to as “consolidation,” shared services allow PSAPs to share technology and systems, without or without sharing physical space. By entering into agreements to jointly procure or share 911 answering equipment, software, CAD systems, and radio consoles, participating agencies simultaneously reduce cost in improve services. Examples of improved services like, transferring of 911 calls, information sharing, call-rollover in a situation where a citizen may otherwise be required to wait on hold until a call-taker is available, and increased ability to dispatch emergency services across county lines.

Since 2017, at least 11 PSAPs have physically consolidated resulting in a reduction of PSAPs. Additionally, 45 counties share 911 services and equipment with another county.

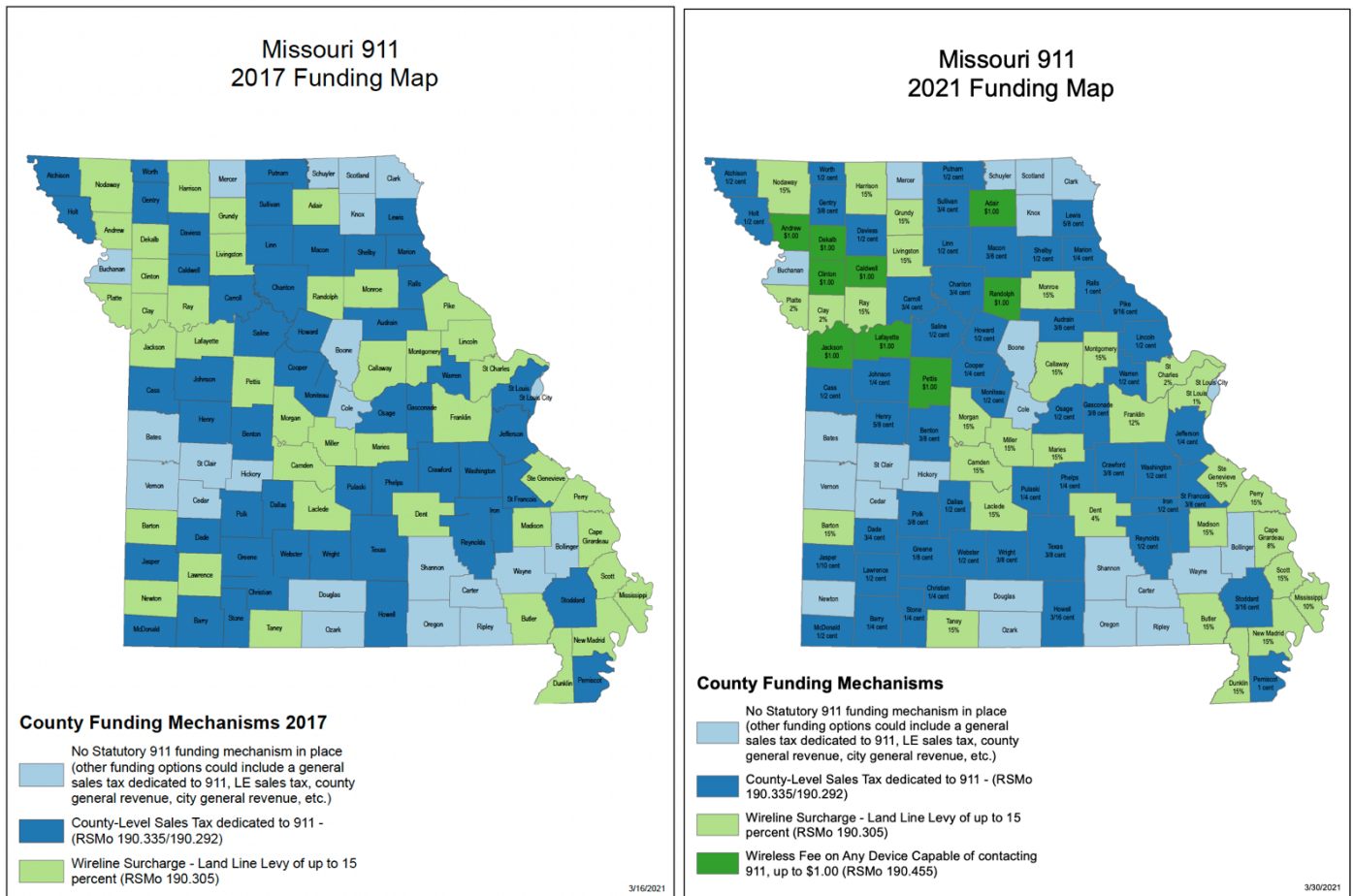


Statewide 911 Funding & Additional County-Level Funding Option

Missouri 911 Service Trust Fund: In 2019, Missouri implemented a statewide prepaid wireless emergency telephone surcharge of three percent on prepaid devices and services to improve 911 services across the state (RSMo 190.460). These funds, housed within the Missouri 911 Service Trust Fund, are used to improve statewide 911 services and to fund the Board’s grant and loan program.

All Device Tax: Despite the fact that 80 percent of 911 calls come from wireless devices, it was not until 2018 that Missouri counties were able to begin collecting fees for 911 services from cellphones. Prior to this time, counties had two statutory options for funding 911 at the local level: a landline surcharge or a county level sales tax. In other cases, counties were left to rely on General Revenue or other law enforcement or public safety sales tax. RSMo 190.455 provides counties with the option of replacing antiquated landline funding with an “all device tax,” or surcharge of up to \$1.00 for any device capable of contacting 911.

Since the “all device tax” option has been made available, voters in ten counties have approved on the ballot.



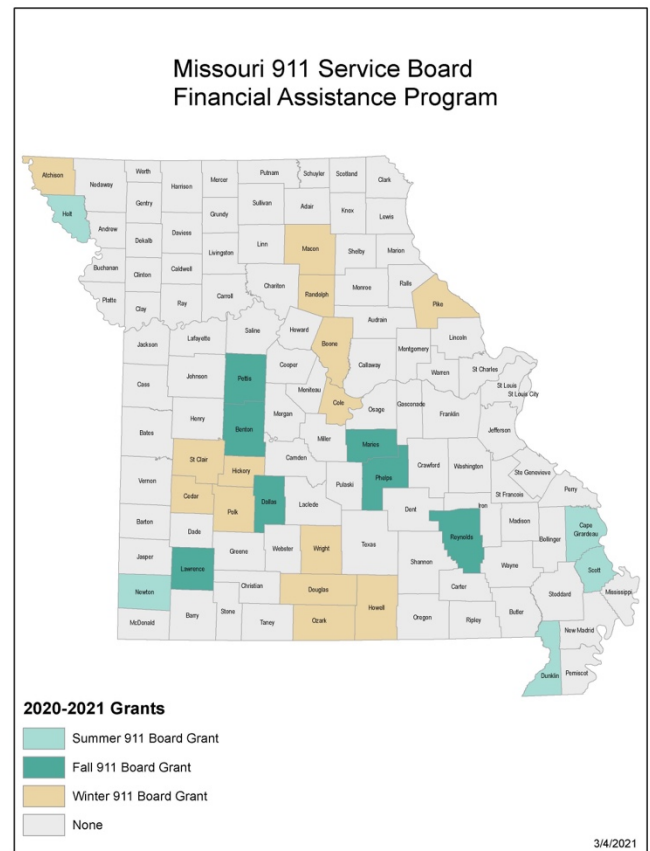
Board Activities

The below activities describe the Board’s programmatic efforts to improve efficiency, cost-effectiveness, and levels of service, statewide.

Missouri 911 Service Board Grant and Loan Program

2018 legislation established the Missouri 911 Service Trust Fund to improve 911 services, especially in the state’s most underserved areas (RSMO 650.330.16). The pool of funds in the 911 Service Trust Fund is created through the prepaid wireless surcharge, a portion of which is returned to the county of origin, and a portion of which is dedicated to the 911 Service Trust Fund. The Board is charged with establishing and administering a financial assistance program that provides grants and loans from the Fund to help finance 911 communication service projects.

Since developing the program, the Missouri 911 Service Board has had three funding cycles – Spring 2020, Fall 2020, and Winter 2020/2021. The Board has received 40 applications requesting \$7.5 million in funding for 911 projects across the state. The Board has since funded improvements for 26 counties totaling \$2.8 million dollars in grant funding. The awarded projects addressed critical areas of need for 911 by improving service levels, adding text-to-911, promoting the consolidation of PSAPs, bringing counties to Next Generation 911 compatibility, improving citizen locating through mapping and addressing, and implementing of Emergency Medical Dispatch pre-arrival instructions.



Special consideration was given to projects that addressed award priority areas in the most cost-efficient way possible, projects that addressed the highest-need areas of the state, and projects that helped to move the state forward as a whole.

Summary of Awarded Projects:

- **Move to Phase II – 8 Counties.** Eight counties will provide Phase II level services upon project completion. In counties with Phase II level service, a PSAP receives the caller’s phone number, cell tower address and sector the call came from and latitude/longitude information of a caller on a wireless device.

- **Five Counties (St. Clair, Cedar, Hickory, Ozark, and Douglas) will move from a Basic 911 service level to Phase II.** Currently, these counties do not have 911 answering equipment. Calls are delivered on seven-digit lines. The call-taker does not receive the caller's name or location.
- **Two counties (Dunklin and Reynolds) will be moving from Wireline E-911 to Phase II.** In counties with Wireline E-911 level service, a PSAP receives the subscriber name and location of caller on a landline phone. These PSAPs are not able to locate callers on wireless devices.
- **Add text-to-911 – 13 Counties (Cape Girardeau, Cedar, Dallas, Douglas, Hickory, Howell, Maries, Newton, Ozark, Phelps, Polk, Scott, St. Clair, Wright) will add text-to-911 services.** In counties with text-to-911, callers can text 911 instead of making a phone call. This is particularly important for callers who may be deaf or hard of hearing, or in a situation where they are not able to talk verbally.
- **Improved mapping/addressing – 6 Counties (Dunklin, Benton, Dallas, Pettis, Reynolds, Pike) will make improvements to mapping and addressing.** This will allow for improved citizen-location services, and in some cases, move counties to NG911 compatible GIS mapping.
- **Consolidation – 7 Consolidation Projects Resulting in 21 Interconnected Jurisdictions.** Consolidation projects will allow for improved 911 services and efficiencies by the sharing of 911 services.
 - **Two Jurisdictions (Lawrence County and the City of Aurora) will be physically consolidated.** Full consolidation assumes a single call-taking center for the entire state of Missouri, sharing both physical space and technology. Benefits of this model would include consistency in call-taking training and services statewide; and cost-savings from the elimination of redundant technology.
 - **19 Jurisdictions will be virtually consolidated.** Virtual consolidation through shared services allows PSAPs to share technology and systems, without having to share physical space. Participating agencies enter agreements to jointly procure or share 911 answering equipment, software, CAD systems, and radio consoles to connect them through analog remote configuration.
 - **Macon County** will virtually consolidate with Marion, Ralls, and Lewis Counties.
 - **Scott County** will virtually consolidate with the City of Sikeston.
 - **Phelps and Maries Counties**, including Rolla, will virtually consolidate.
 - **Boone and Cole Counties** will virtually consolidate through shared dispatch.
 - **Polk, Cedar, Hickory and St. Clair Counties** will virtually consolidate through the development of an Emergency Services IP Network (ESInet), or shared IP network.

- **Wright, Howell, Ozark, and Douglas Counties** will virtually consolidate to develop a regional network.
- **NG911 Compatible Systems – 13 Counties (Atchison, Cedar, Dallas, Douglas, Hickory, Howell, Macon, Ozark, Pettis, Polk, Scott, St. Clair, Wright)** will have **NG911 compatible phone systems**. Although they will not operate on an NG911 IP Network, these PSAPs will be equipped with the technology needed when an NG911 IP network becomes available. With NG911, PSAPs could receive digital information through data, including voice, text, photos and videos.

Regional Coordination

In order to help with coordination among PSAPs, the Board designated the eight regions based on existing 911 systems and relationships between counties. The Board hosts quarterly meetings with these regions which serves as an opportunity to learn more about the individual and regional-level efforts of PSAPs, provide state-level updates, and work on collaborative regional projects.

Additionally, the Board serves to actively work within regions to identify opportunities for collaboration and shared services. Most recently, these efforts resulted in the two four-county collaborative grant projects that will move five counties to Phase II level services. The Board plans to continue this targeted outreach in other areas of the state.



Federal NG911 Grant

In 2019, Department of Public Safety and the Missouri 911 Service Board worked together to secure \$3.6 million in federal funding to help further efforts to employ NG911 services. As a sub awardee of these funds, the Missouri 911 Service Board identified a series of projects that would help prepare the state for future NG911 deployment. The projects described in subsequent sections of this report include: an assessment and gap analysis of NG911 GIS, or mapping, readiness in the state; a complimentary and comprehensive NG911 feasibility study; and NG911 training for 911 professionals around the state.

Next Generation 911 Geographic Information Systems (GIS) Consulting Services

To prepare Missouri for statewide NG911, the Missouri 911 Service Board secured consulting services to assist with NG911 GIS standards development, statewide GIS data gathering and assessment, stakeholder education, and final gap analysis reports. GIS helps 911 systems and PSAPs identify addresses for the dispatch of emergency services. The better the GIS data, the more quickly emergency responders are able to arrive at a scene.

NG911 will rely heavily on locally developed GIS data for routing 911 calls to the correct PSAP and dispatching emergency services in a NG911 environment. To guarantee the success of NG911, jurisdictions must have state-level support and resources available to ensure GIS data is current and accurate. As Missouri looks to implement NG911, the Board is working to provide support to local jurisdiction partners through education, standards development, data assessment, and future planning.

A final report will be provided to the local jurisdictions and the 911 Service Board at the end of this year on the status of GIS in Missouri as it relates to NG911 deployment and recommendations for paths forward.

Next Generation 911 Feasibility Study Consulting Services

To further prepare Missouri for statewide NG911 readiness, the Board secured NG911 Feasibility Study Consulting Services to assist with a statewide 911 assessment, stakeholder education, and recommendations for NG911 solutions based on Board. The selected consultants will also recommend an appropriate procurement approach for developing a pilot network to test their recommended NG911 system solutions.

An NG911 network must be an internet protocol-based platform that at a minimum provides improved 911 call delivery; increased ease of communication between 911 service providers, allows immediate transfer of 911 calls, caller information, text, and other data statewide. The network must meet, or be capable of meeting, and/or that will meet NENA NG911 i3 solution requirements and standards now available, or as they become available in the future.

A final report will be provided to the local jurisdictions and the 911 Service Board at the end of this year on the status of Missouri as it relates to NG911 readiness and recommendations for paths forward.

NG911 Training

NG911 training for 911 professionals around the state will be key in ensuring the success of NG911 GIS and feasibility study efforts. The 911 Training Act Rules, as well as the process for training provider submissions have been updated in order to streamline these efforts. Ongoing GIS training will provide education on NG911 GIS standards and data maintenance and best practices. Further, comprehensive training on NG911 will be provided as well, educating 911 professionals on the core tenants of NG911 infrastructure and NG911 operations.

COVID Response

In response to the COVID-19 pandemic, the Board took an active role in working with relevant state departments to ensure 911 telecommunicators were equipped with the necessary information to keep themselves and the citizens they serve safe. On March 25, 2020, in response to a letter from the Board, partners at the Department of Health and Senior Services (DHSS) waived to the extent necessary for DHSS and local public health authorities to release the address where an individual is located, who is known to be under a public health authority order of quarantine or isolation, or request for self-quarantine or self-isolation, to public safety agencies, including but not limited to 911 dispatch centers, emergency medical services agencies, law enforcement, and fire protection agencies. Allowing for this information to be shared with telecommunicators allowed first responders to arrive at the scene with necessary personal protection equipment.

Additionally, the Board advocated for priority testing and vaccinations for 911 telecommunicators and provided PSAPs and their employees with the relevant documentation to ensure they received these services.

Looking Ahead to Statewide NG911

As Missouri and the rest of the nation are looking towards the deployment of cloud-based digital or Internet Protocol (IP)-based 911 system (NG911), the Board will continue working to ensure the state is prepared to implement and deploy it successfully. Key to its success will be continued education to telecommunicators, supporting NG911 compatible GIS mapping, and identifying existing and needed NG911 infrastructure. The Board's grant and loan priorities will continue to focus efforts surrounding increased NG911 compatibility (mapping and infrastructure), interconnections between counties, emergency medical dispatch – all of which are critical to ensuring Missouri's NG911 preparedness.

The Board will continue to actively monitor and advocate for funding opportunities to support NG911 and will build upon existing systems and partnerships as it moves forward.