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Funding the Transition to Next Generation 911 (NG911): Considerations for Congress

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In times of crisis, people call 911 to receive emergency assistance. For decades, the 911 system has operated using legacy infrastructure (i.e., telephone calls through the public switched telephone network). In the 2000s, local governments and public safety officials identified the need to keep pace with emerging communications technologies and communication formats that consumers use in daily life (e.g., texts, videos, photos). As such, some public safety answering points (PSAPs, also known as 911 centers) are upgrading their infrastructure to Internet Protocol (IP)-based systems—referred to as Next Generation 911 (NG911). When fully transitioned, NG911 is anticipated to enhance emergency response service, making it easier for the public to report emergency needs and for first responders to receive rich information. This includes multimedia transmissions—such as text messages, streaming video, and photos—directly from the public to PSAPs, which can enhance situational awareness for 911 telecommunicators in dispatching emergency response. Additionally, NG911 allows for interoperability with other PSAPs so that calls can be transferred to other centers for response—for example, in the event of call overload during a disaster—and also for interconnection with the First Responder Network Authority (FirstNet) to seamlessly transfer data directly from PSAPs to first responders in the field.

State and local governments exercise authority over 911 system funding and operations, leading to varying levels of progress across the United States toward NG911 upgrades. Some states have fully transitioned 911 networks to IP-based systems, others are in the midst of doing so, and a few have not yet begun the transition. Although most of the funding for upgrades comes from state and local sources (i.e., surcharge fees and general funds), the federal government has occasionally provided grant funding to support local 911 upgrades. In 2004, the Ensuring Needed Help Arrives Near Callers Employing 911 Act of 2004 (ENHANCE 911 Act; P.L. 108-494) provided \$43.5 million to states to improve 911 services. In 2012, in the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96, Title VI), Congress authorized the use of \$115 million in future spectrum auctions for a grant program to improve 911 services.

It is uncertain how much a full, nationwide transition from legacy 911 infrastructure to NG911 will ultimately cost. A 2018 report to Congress by two federal agencies estimated costs of between \$9.5 billion and \$12.7 billion over 10 years to expand NG911 capabilities to all 911 call centers in the United States, which is currently estimated to be \$12.8 billion to \$16.9 billion when adjusted for inflation. A full nationwide transition may require financial resources beyond amounts collected by states through surcharge fees and general funds.

Members have introduced legislation to provide federal funding for NG911 in the 118th Congress. These legislative proposals include the Next Generation 911 Act of 2023 (H.R. 1784), which would appropriate \$15 billion for NG911 grants; S. 2712 (“A bill to provide funding for the deployment of Next Generation 911, and for other purposes”), which would appropriate \$10 billion for NG911 grants; and the Spectrum Auction Reauthorization Act of 2023 (H.R. 3565), which would set aside \$14.8 billion in spectrum auction proceeds in a trust fund for NG911 grants. There are potential considerations for Congress if it were to provide transition funding through appropriations or spectrum auction proceeds. If Congress chooses to provide funding, options include providing a large, one-time appropriation that concludes once the funding is expended and supporting NG911 through annual appropriations. If Congress chooses to use spectrum auction proceeds to support the transition to NG911, it would need to reinstate the Federal Communications Commission’s spectrum auction authority, which expired in March 2023.

Other policy issues for Congress may include appropriate federal agency roles in a NG911 grant program; 911 fee diversion by states for non-public-safety uses—which could negatively affect public safety operations and make states ineligible for federal NG911 grants; and interconnection with FirstNet, an IP-based nationwide broadband network dedicated to public safety use, to enhance public safety by providing a seamless communications environment connecting the public, PSAPs, and first responders.

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Introduction to Next Generation 911 (NG911)

In 1968, the first call was placed to 911—the emergency telephone number to request rapid police, fire, or ambulance response. For decades, 911 centers, also called public safety answering points (PSAPs), have used legacy infrastructure (i.e., the public switched telephone network built and operated by private sector national, regional, or local service providers) to receive and respond to 911 calls. PSAPs are responsible for managing calls and dispatching local emergency services (e.g., fire, police, and ambulance) to callers. Most PSAPs are owned and operated by local governments (e.g., counties, cities). Any improvements in service (e.g., text-to-911) often require upgrades to both private provider networks and local PSAP systems, and coordination between private providers and local PSAP operators to ensure seamless delivery of calls.

Many PSAPs are in various stages of upgrade. Some are upgrading legacy 911 infrastructure with Internet Protocol (IP)-based systems to improve their 911 services—referred to as Next Generation 911 (NG911). According to NG911 solutions provider Next Generation Advanced, “the origins of NG911 began in 2007 when local governments and public safety officials identified the need for a 911 system that could support and withstand the rapid growth of evolving communication technologies across the nation.”¹ NG911 systems provide more advanced capabilities than legacy systems; for example, they allow for the processing of text-to-911 and other multimedia communications (e.g., videos) from the public, improved routing, enhanced location-finding of individuals in need of assistance, and improved security and resiliency to ensure all calls are answered during situations where there may be call overload or network failure (e.g., during an outage or natural disaster).² Additionally, NG911 is expected to enhance public safety by enabling interconnection with the First Responder Network Authority (FirstNet)—an IP-based nationwide broadband network dedicated to public safety use.³ When integrated and coordinated, NG911 and FirstNet can enable the seamless exchange of data and applications between the public, 911, and first responders.⁴ See “Interconnection with FirstNet.”

911 upgrades are typically planned and managed by the local government entity that owns and operates the PSAP. Although most upgrade funding comes from state and local sources, the federal government has, occasionally, provided states with grant funding to support local 911 upgrades.⁵ The implementation of NG911 is often a product of a comprehensive state strategy, detailed in a statewide NG911 plan, with the intent of connecting 911 centers in the state to improve service and resiliency.⁶ Transitioning to NG911 is complex, as it “requires significant investment, planning, and coordination between different stakeholders, including emergency

¹ Next Generation Advanced, “How 911 Started: Understanding The Origins of 911 and Making the Switch to NG911,” June 3, 2022, <https://nga911.com/blogs/post/how-911-started-understanding-origins-911-and-making-switch-ng911>.

² For more information on 911, see CRS Report R45253, *Next Generation 911 Technologies: Select Issues for Congress*, by Jill C. Gallagher. For more information on NG911 and its capabilities, see 911.gov, “Video: Benefits of Next Generation 911,” February 15, 2022, <https://www.911.gov/issues/ng911/video-benefits-of-next-generation-911/>.

³ See CRS Report R45179, *The First Responder Network (FirstNet) and Next-Generation Communications for Public Safety: Issues for Congress*, by Jill C. Gallagher.

⁴ For more information, see 911.gov, “NG911/ERBN Interconnection,” October 19, 2023, <https://www.911.gov/projects/ng911-erbn-interconnection/>.

⁵ Funding for 911 operations (e.g., salaries, overhead) may come from state and local general funds, and fees assessed on landline and cell phone users. Funding for 911 infrastructure and periodic improvements to systems may come from state and local sources, such as revenue bonds, general funds, funds supported by fees assessed on landline and cell phone users, and federal grant funds.

⁶ 911.gov, *National 911 Annual Report: 2021 Data*, February 21, 2023, p. 8, https://www.911.gov/assets/2021-911-Profile-Database-Report_FINAL.pdf.

services organizations, technology providers, and government agencies.”⁷ Congress has shown interest in supporting NG911 upgrades, and three bills (H.R. 3565, H.R. 1784, and S. 2712) have been introduced in the 118th Congress to provide funding to states for local NG911 improvements.

This report provides an introduction to NG911 technologies, surveys the current status of implementation, presents an overview of how 911 services are funded, and discusses issues for Congress as it considers legislation to provide federal funding for local 911 centers to transition to NG911.

Overview of NG911 Systems

NG911 systems use several newer technologies that differentiate them from legacy 911 systems, including

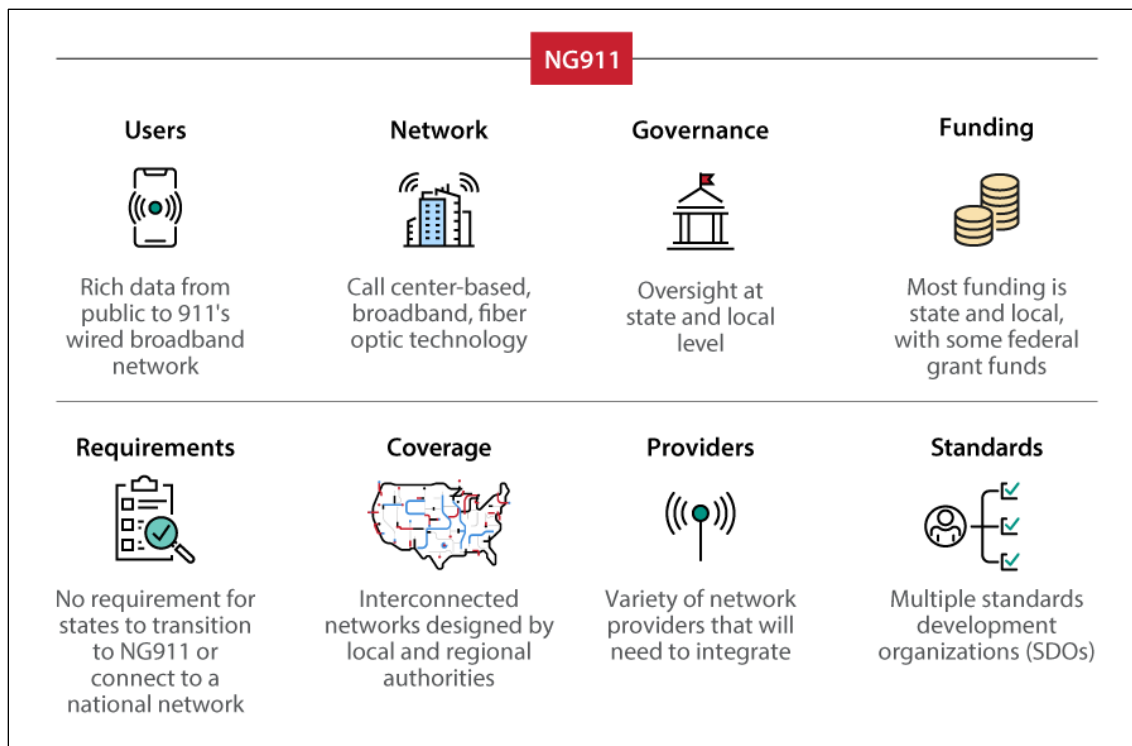
- the emergency services IP network (ESInet), which delivers emergency calls to the correct PSAP (i.e., the PSAP nearest the emergency) and provides a connection to other PSAPs to promote the seamless transfer of calls and data;
- next-generation core services, which are the software and databases needed to route an emergency call on the ESInet;
- NG911 call-taking equipment, which provides the tools for 911 telecommunicators to receive, process, and dispatch NG911 calls; and
- a geographic information system, which uses location data to route 911 calls and help first responders (e.g., fire, police, emergency medical services) find callers.⁸

Figure 1 provides a general overview of the stakeholders, technologies, funding, and policies associated with NG911 systems.

⁷ Exacom, “Quick Guide to NG 9-1-1,” February 13, 2023, <https://exacom.com/learning-center/new-technologies/ng-9-1-1-i3-standard/a-quick-guide-to-ng-9-1-1/>.

⁸ 911.gov, *Next Generation 911 for Telecommunicators*, pp. 2-3, https://www.911.gov/assets/Next_Generation_911_for_Telecommunicators_2.pdf.

Figure I. Overview of NG911 Systems



Source: CRS, adapted from 911.gov, *NG911 & FirstNet Guide for State & Local Authorities*, April 4, 2023, pp. 6-7, <https://www.911.gov/projects/ng911-for-public-safety-leaders/ng911-and-firstnet-guide-for-state-and-local-authorities/>.

Status of NG911 Implementation

Annually, the National 911 Program, housed in the National Highway Traffic Safety Administration’s Office of Emergency Medical Services in the U.S. Department of Transportation, collects and reports out on states’ progress in establishing and implementing an NG911 plan. According to the National 911 Program, states are at varying levels of progress in leading and implementing NG911 improvements. Some have fully transformed their networks from legacy to IP-based systems, others are in the midst of the process, and a few have not yet begun the transition. Data from 46 states and territories collected during 2021, as reported in the most recent *National 911 Annual Report*, published on February 21, 2023, reflect the following:⁹

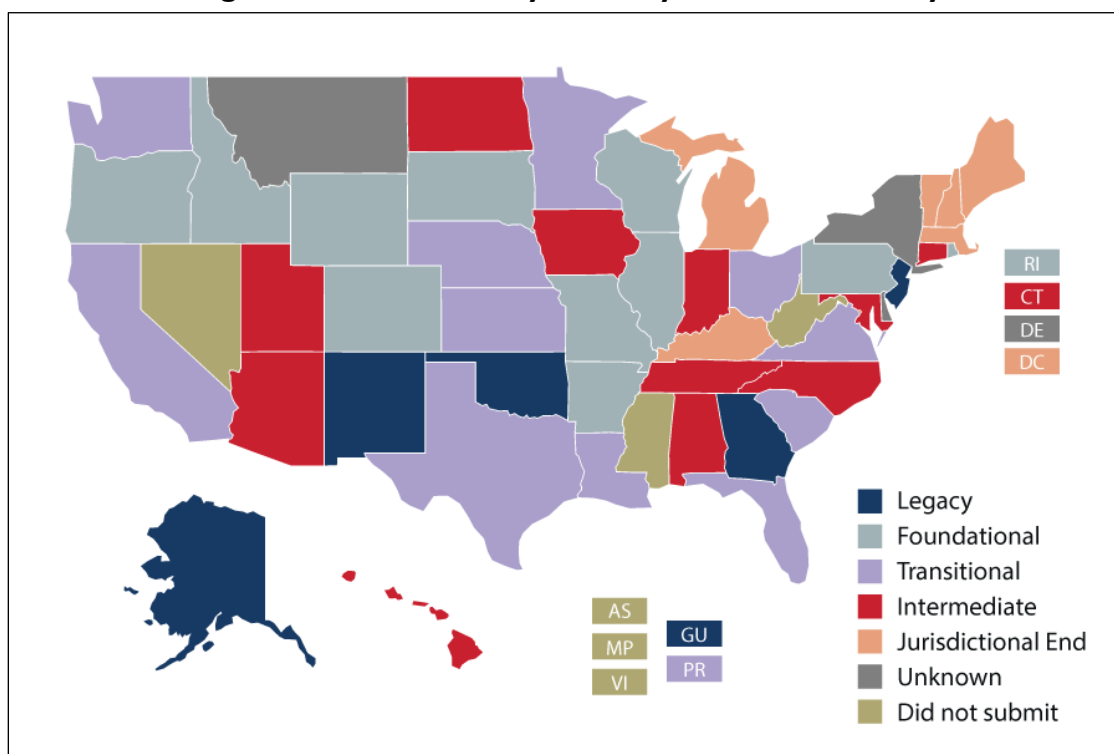
- Four states or territories remain in the legacy stage, which means there is “no change or progress to NG911 at the present time. No change to the call ingress [where the call originates] or egress [where the call is routed].”¹⁰

⁹ Data submission is voluntary; thus, not all states report.

¹⁰ Hexagon, “Implementing NG911: What You Need & What You Need to Know,” October 13, 2020, <https://sigblog.hexagon.com/implementing-ng9-1-1-what-you-need-what-you-need-to-know/>.

- Eleven are in the foundational stage, which means, “NG911 progress has begun through procurement of NG911 components, but call ingress and egress remain unchanged.”¹¹
- Twelve are in the transitional stage, which means, “An ESInet has been implemented and call ingress modification has begun to interface the traffic via IP; the call egress to the PSAP has been transformed to all IP.”¹²
- Eleven are in the intermediate stage, which means, “Call ingress is in the late stages of being transformed to IP. Call egress to the PSAPs is all IP and traffic is being delivered across the ESInet to all jurisdictions connected to the ESInet.”¹³
- Seven are in the jurisdictional end, which means, “All PSAPs are using the ESInet and all traffic has been transformed to IP.”¹⁴ See **Figure 2**.

Figure 2. NG911 Maturity Levels by State and Territory



Source: CRS, adapted from 911.gov, *National 911 Annual Report: 2021 Data*, February 21, 2023, p. 76, https://www.911.gov/assets/2021-911-Profile-Database-Report_FINAL.pdf.

Notes: Data are submitted voluntarily; nine states or territories did not submit data or their status is unknown. Data reflect the period from January 1 to December 31, 2021, and are the most recent data collected from the National 911 Program. The territories (American Samoa [AS], Northern Mariana Islands [MP], U.S. Virgin Islands [VI], Guam [GU], Puerto Rico [PR]), Washington, DC [DC], and some smaller states (i.e., Connecticut [CT], Rhode Island [RI], and Delaware [DE]) have been depicted as squares due to space constraints or for additional clarity.

¹¹ 911.gov, *National 911 Annual Report: 2021 Data*, February 21, 2023, p. 75, https://www.911.gov/assets/2021-911-Profile-Database-Report_FINAL.pdf.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

According to the *National 911 Annual Report*, “[T]he data points capture details that help characterize a state’s 911 operations, protocols, and progress toward NG911 implementation.”¹⁵ State governance, investment, and adoption of NG911 does not mean local 911 centers have transitioned to NG911. Local investment may be needed to upgrade local PSAPs and to interconnect with regional or statewide ESInets, which could pose challenges if localities lack the funding to do so. For example, in the Federal Communications Commission’s (FCC) *Fifteenth Annual Report to Congress on State Collection and Distribution of 911 and Enhanced 911 Fees and Charges*, Texas affirmed that “[the city of] Longview cannot currently afford to transition to NG911 or implement an ESInet.... New technology in 911 is putting more of a strain on the PSAP, if the city is unable to supplement or expend the money for new or upgraded technology that the center needs then we are unable to provide a better public safety service to the community.”¹⁶

How 911 Systems Are Funded

Funding and implementation decisions for 911 systems are made at the state and local levels. Funding for 911 systems occurs primarily through a combination of surcharge fees and general funds.¹⁷ States and localities may impose, through legislation, a surcharge on landline or cell phones to support 911 services; some localities impose additional surcharge fees. Surcharge fees vary considerably; for example, “some states do not assess the 911 fee on all devices capable of giving access to 911, and other states do not apply the 911 fee rate uniformly across technologies, or even uniformly across the same technology.”¹⁸ These differences contribute to variance in the amounts states collect and spend on 911 services, system maintenance, and upgrades.

According to an FCC report to Congress on state collection and distribution of 911 fees, “most states and jurisdictions indicate that 911/E911 [Enhanced 911] fee revenues¹⁹ alone do not fully cover the cost of 911 service, and that the state and/or local governments must provide additional funding (e.g., from the General Fund)²⁰ to attempt to make up the shortfalls.”²¹ Some states and localities have sought federal funding to assist with these shortfalls. In the past, Congress has provided federal funding for two 911 grant programs.

The Ensuring Needed Help Arrives Near Callers Employing 911 Act of 2004 (ENHANCE 911 Act; P.L. 108-494) authorized funding for a grant program, to be jointly administered by the

¹⁵ 911.gov, *National 911 Annual Report: 2021 Data*, p. 3.

¹⁶ Federal Communications Commission (FCC), *Fifteenth Annual Report to Congress on State Collection and Distribution of 911 and Enhanced 911 Fees and Charges*, December 29, 2023, p. 127, <https://www.fcc.gov/sites/default/files/15th-annual-911-fee-report-2023.pdf>.

¹⁷ 911.gov, “Costs & Funding,” <https://www.911.gov/issues/costs-and-funding/>.

¹⁸ National Association of State 911 Administrators, *Four Potential Sustainable Funding Models for NG911*, August 5, 2015, p. 3, <https://www.911.gov/assets/NASNA-White-Paper—Four-Potential-Sustainable-Funding-Models-for-NG911-08-05-2015-1638566531.pdf>.

¹⁹ Enhanced 911 (E911) systems report the telephone number and location of 911 calls made from wireline and wireless phones. See FCC, “911 and E911 Services,” December 4, 2023, <https://www.fcc.gov/general/9-1-1-and-e9-1-1-services>. Section 101 of the New and Emerging Technologies 911 Improvement Act of 2008 (P.L. 110-83) required the FCC to report annually on the collection and distribution of fees in each state for the support or implementation of 911 or E911 services.

²⁰ According to the State of New Hampshire, the “general fund refers to revenues accruing to the state from taxes, fees, interest earnings, and other sources which can be used for the general operation of state government.” See Transparent NH, “General Fund,” <https://www.nh.gov/transparentnh/glossary/general-fund.htm>.

²¹ FCC, *Fourteenth Annual Report to Congress On State Collection and Distribution of 911 and Enhanced 911 Fees and Charges*, December 30, 2022, pp. 112-113, <https://www.fcc.gov/file/24628/download>.

National Highway Traffic Safety Administration (NHTSA) within the U.S. Department of Transportation (DOT) and the National Telecommunications and Information Administration (NTIA) within the Department of Commerce (DOC). The Deficit Reduction Act of 2005 (P.L. 109-171) authorized up to \$43.5 million from the proceeds of spectrum auctions conducted by the FCC to carry out the grant program. NHTSA and NTIA established the Enhanced 911 Grant Program, and in June 2009 announced that \$41.325 million²² was available for the purposes of “hardware, software, training, and/or consulting services directly relating to the upgrade of their 911 equipment and operations.”²³ In September 2009, grants totaling more than \$40 million were awarded to 30 states and territories.²⁴

The NG911 Advancement Act of 2012—Title VI, Subtitle E of the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96)—authorized the use of spectrum auction proceeds for a 911 grant program, jointly administered by NHTSA and NTIA. In the act, Congress expanded the E911 Grant Program and broadened the use of funds to add NG911 equipment and services. The act also established the Public Safety Trust Fund, through which Congress directed funding from voluntary incentive spectrum auctions to certain priorities. Of the priorities, Congress directed \$115 million from the proceeds of certain spectrum auctions to carry out the 911 Grant Program. In August 2019, NHTSA and NTIA announced that grants totaling more than \$109 million were awarded to 34 states and two tribal nations.²⁵

Future Funding of 911: Considerations for Congress

A 2018 report to Congress from NHTSA and NTIA “determined that it will cost between \$9.5 and \$12.7 billion over the next ten years to expand NG911 capabilities to all 911 call centers in the U.S.”²⁶ The transition may require financial resources beyond amounts collected by states through surcharge fees. According to a 911.gov report, “[A]t the state level, 911 taxes and surcharges may not provide adequate funding for this [NG911] transition, and many states are looking to federal grant programs to help fund an update in technology and operations.”²⁷ There is not a current or consistent source of federal funding for 911 operations or upgrades.

Congress may consider whether the federal government should fund NG911, and if so, how (i.e., through appropriations or proceeds from spectrum auctions), as well as how much to provide. Other considerations for Congress if it chooses to provide federal funding for NG911 may include which agency to designate as the lead for funding administration, the issue of 911 fee diversion by states, and interconnection with FirstNet.

²² The amount available for grants is less than the appropriated amount, as the agencies are allowed to use some of the funds for administrative costs.

²³ 911.gov, *Enhanced 911 (E911) Grant Program Final Report*, March 2013, p. 1, https://www.911.gov/assets/National_911_Program_E911_Grant_Program_Report_2013.pdf.

²⁴ 911.gov, “Enhanced 911 Grant Program,” <https://www.911.gov/projects/enhanced-911-grant-program/>.

²⁵ 911.gov, “Federal 911 Funding,” <https://www.911.gov/projects/federal-funding/>. According to a press release from 911.gov, not all states and territories applied for funding. See 911.gov, “Departments of Commerce and Transportation Announce \$109 Million in Grants to Modernize 911 Services for States and Tribal Nations,” press release, August 9, 2019, p. 2, <https://www.911.gov/assets/911-Grant-Program-Awards-Press-Release-Aug-2019.pdf>.

²⁶ National Highway Traffic Safety Administration (NHTSA) and National Telecommunications and Information Administration (NTIA), *Next Generation 911 Cost Estimate: A Report to Congress*, October 2018, p. i, https://www.911.gov/assets/Next_Generation_911_Cost_Estimate_Report_to_Congress_2018-1638220685.pdf.

²⁷ 911.gov, *Enhanced 911 (E911) Grant Program Final Report*, March 2013, p. 1, https://www.911.gov/assets/National_911_Program_E911_Grant_Program_Report_2013.pdf.

Funding Amounts

In the 118th Congress, Members have introduced legislation with funding levels for NG911 ranging from \$10 billion to \$15 billion. As noted previously, the 2018 NHTSA and NTIA cost study provided to Congress “determined it will cost between \$9.5 and \$12.7 billion over the next ten years to expand NG911 capabilities to all 911 call centers in the U.S.”²⁸ The \$9.5 billion to \$12.7 billion range includes only deployment and transition costs. The cost estimate to deploy *and operate* NG911 nationwide is between \$13.5 billion and \$16.1 billion, which “represents the total ten-year lifecycle cost of the various implementation scenarios [detailed within the cost study] including the needed maintenance and equipment refresh costs during the period.”²⁹ If Congress considers funding for 911 centers and services, it may consider whether to cover only system improvements, or system improvements plus operational expenses to assist 911 centers in the transition (e.g., governance, protocols, training) and to defray recurring operational costs.

As the cost study was published in 2018, the actual transition cost may be higher due to inflation. For example, the \$9.5 billion to \$12.5 billion range quoted in 2018 would be \$12.8 billion to \$16.9 billion in estimated FY2024 dollars when adjusted using the Gross Domestic Product (chained) price index.³⁰ Congress could require NHTSA and NTIA to update the cost study from 2018 if it desires a potentially more accurate cost estimation.

Sources of Potential Federal Support: Appropriations

Legislation was introduced in the 116th, 117th, and 118th Congresses that would appropriate or would have appropriated funding for NG911 grants.

- In the 116th Congress, the Next Generation 911 Act of 2019 (H.R. 2760/S. 1479) and the Leading Infrastructure for Tomorrow’s America Act (LIFT Act; H.R. 2741) would have appropriated \$12 billion.
- In the 117th Congress, the Leading Infrastructure For Tomorrow’s America Act (LIFT America Act; H.R. 1848) would have appropriated \$15 billion.
- In the 118th Congress, the Next Generation 911 Act of 2023 (H.R. 1784) would appropriate \$15 billion, and S. 2712 (“A bill to provide funding for the deployment of Next Generation 911, and for other purposes”) would appropriate \$10 billion.

Options for Congress include providing a one-time appropriation for an NG911 grant program that would conclude once funding is expended, and providing annual appropriations for an ongoing grant program for local 911 system improvements or operations expenses, as is the case with other public safety programs (e.g., fire grants).³¹ A potential advantage of providing annual appropriations is that Congress could consider year-over-year funding levels for 911

²⁸ 911.gov, “So How Much Will NG911 Really Cost?” October 2018, <https://www.911.gov/newsletters/issue-6/so-how-much-will-ng911-really-cost/>.

²⁹ NHTSA and NTIA, *Next Generation 911 Cost Estimate: A Report to Congress*, October 2018, pp. i, 301, https://www.911.gov/assets/Next_Generation_911_Cost_Estimate_Report_to_Congress_2018-1638220685.pdf.

³⁰ The White House, Budget of the U.S. Government, Fiscal Year 2024, Historical Tables, Table 10.1, “Gross Domestic Product and Deflators Used in the Historical Tables: 1940–2028,” https://www.whitehouse.gov/wp-content/uploads/2023/03/hist10z1_fy2024.xlsx.

³¹ See CRS Report RL32341, *Assistance to Firefighters Program: Distribution of Fire Grant Funding*, by Lennard G. Kruger and Jill C. Gallagher; and CRS Report RL33375, *Staffing for Adequate Fire and Emergency Response: The SAFER Grant Program*, by Lennard G. Kruger and Jill C. Gallagher.

improvements rather than estimating the appropriate size of a single round of funding to support a nationwide transition.

As the transition to NG911 will be a multiyear effort, annual appropriations could provide a mechanism for sustainable, long-term funding that states or localities could apply to various expenses—including governance, planning, equipment, protocols, and training, especially given that states are already in various stages of the transition. Another potential advantage is that a consistent source of grant funding being available each year may allow states and localities to plan improvements. Moreover, an ongoing funding source may enable Congress, through grant reporting, to continually assess the progress of the NG911 transition in each state. A possible disadvantage of annual appropriations is the potential for NG911 funding amounts to fluctuate from year to year or for Congress to decide not to fund the transition, making long-range planning more difficult.³²

There are some potential advantages to providing a single large appropriation. For example, it might provide long-term planning assurance to state and local partners and help ensure nationwide progress toward NG911 transition. Once enacted, multi-year funding for the NG911 transition would be available for the duration of the time specified by Congress and not reliant on continued funding through the annual appropriations process.

Sources of Potential Federal Support: Spectrum Auction Proceeds

Proceeds from FCC spectrum auctions, which cannot occur without a reinstatement of the FCC's spectrum auction authority,³³ may be another avenue for funding the NG911 transition.

Legislation was introduced in the 116th, 117th, and 118th Congresses that would fund or would have funded a new NG911 grant program with spectrum auction proceeds.

- In the 116th Congress, the Spectrum Management And Reallocation for Taxpayers Act (SMART Act; S. 3246) would have created an NG911 Trust Fund. Up to \$12.5 billion of spectrum auction proceeds would have been deposited into this fund to be used by NHTSA and NTIA for the deployment of NG911 services.³⁴
- In the 117th Congress, the Spectrum Innovation Act of 2022 (H.R. 7624/S. 4117) would have directed a portion of spectrum proceeds (up to \$10 billion) from a Public Safety and Secure Networks Fund for NG911, and S.Amdt. 6585 (to H.R. 2617) would have made up to \$14.8 billion available from a Spectrum Auction Trust Fund for NG911.
- In the 118th Congress, the Spectrum Auction Reauthorization Act of 2023 (H.R. 3565) would set aside \$14.8 billion in spectrum auction proceeds in a trust fund for NG911.

On March 9, 2023, the FCC's spectrum auction authority expired.³⁵ Though several legislative proposals in the 118th Congress would reinstate the FCC's auction authority, none has become law.³⁶ If the FCC's authority is not reinstated, and one of the legislative proposals to use spectrum

³² For example, see appropriated funding for the ReConnect Program—a broadband program administered by the U.S. Department of Agriculture—each year from FY2018 to FY2022 in CRS Report R47017, *USDA's ReConnect Program: Expanding Rural Broadband*, by Lisa S. Benson.

³³ FCC, "FCC Leadership Renews Call to Restore Spectrum Auction Authority," April 18, 2023, <https://docs.fcc.gov/public/attachments/DOC-392666A1.pdf>.

³⁴ This bill did not provide detailed provisions about the administration of the funds.

³⁵ FCC, "FCC Leadership Renews Call to Restore Spectrum Auction Authority," April 18, 2023, <https://docs.fcc.gov/public/attachments/DOC-392666A1.pdf>.

³⁶ For more information, see CRS Report R47578, *The Federal Communications Commission's Spectrum Auction Authority: History and Options for Reinstatement*, by Patricia Moloney Figliola and Jill C. Gallagher.

auction proceeds for the transition to NG911 becomes law, the FCC would not have the authority to conduct new auctions, thus inhibiting the use of auction proceeds for NG911. Therefore, if Congress wishes to use spectrum auction proceeds, it would first have to reinstate the FCC's auction authority.

Using FCC spectrum auction proceeds to fund the NG911 transition would not require appropriations. As stated by a number of public safety stakeholder groups in a July 25, 2023, letter to congressional leadership about H.R. 3565, “[T]hese benefits would be achieved without any impact to the federal budget, as NG911 upgrades would be paid for by future spectrum auctions.”³⁷ If dedicated to NG911, however, these spectrum auction proceeds would not be available for other purposes. Spectrum auctions are complex and take time. Funding for NG911 from auction proceeds would not become available until after the auctions are conducted.³⁸ In light of this, the Public Safety Next Generation 911 Coalition has advocated for borrowing power to access the funds.³⁹ Precedent exists for borrowing to support federal public safety programs. For example, “the FirstNet Authority was allowed to borrow up to \$2 billion of its authorized \$7 billion while awaiting full funding from FCC auction proceeds.”⁴⁰ If Congress decides to fund NG911 through spectrum auction proceeds, it could provide borrowing authority to expedite grant program activities.

Auction revenues are variable, which might affect the amount of funding available for NG911. Although legislative proposals may specify an amount to be made available for NG911 purposes (e.g., up to \$12.5 billion), revenues may be higher or lower than the target amount. For example, a 2017 FCC broadcast incentive auction resulted in proceeds of \$19.6 billion, “significantly less than many analysts had initially forecast (e.g., some had forecasted \$30 billion).”⁴¹ Alternatively, a 2021 auction for C-band spectrum “exceeded all expectations, reaching \$80.9 billion, which was about 170% higher than prevailing ... industry projections.”⁴²

Another factor that may affect auction proceeds is the structure of the auction itself. Spectrum bands with shared usage tend to generate less revenue than bands offered for exclusive use, but it is still challenging to anticipate how much funding an auction may generate. According to the Congressional Budget Office, “Estimates of net receipts from spectrum auctions are very

³⁷ Letter from National Association of State 911 Administrators et al., to Speaker Kevin McCarthy, Rep. Steve Scalise, Rep. Hakeem Jeffries, Rep. Cathy McMorris Rodgers, and Rep. Frank Pallone, July 25, 2023, https://96c94cdd-426b-4458-bc71-683df53b199e.usrfiles.com/ugd/96c94c_02a3a5e4c46a4650aa2f2a72f5fbab23.pdf.

³⁸ For example, in the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96), Congress authorized spectrum auction proceeds to be transferred into a Public Safety Trust Fund; \$115 million of which were to be used for 911 grants. The Advanced Wireless Services (AWS)-3 spectrum auction provided this funding for the 911 grants. The FCC conducted the AWS-3 auction from November 2014 through February 2015. In May 2016, auction proceeds were transferred to the Public Safety Trust Fund. In September 2016, the Public Safety Trust Fund transferred funds to the 911 Grant Program. See 911.gov, “911 Grant Program Regulations Nearing Release, Applications Accepted Soon,” March 2018, <https://www.911.gov/newsletters/issue-5/911-grant-program-regulations-nearing-release-applications-accepted-soon/>.

³⁹ Donny Jackson, “Public-Safety Coalition Renews Efforts to Secure Federal NG911 Funding,” Urgent Communications, February 4, 2023, <https://urgentcomm.com/2023/02/04/public-safety-coalition-renews-efforts-to-secure-federal-ng911-funding/>.

⁴⁰ FirstNet, *Financial Report: First Responder Network Authority*, Fiscal Year 2013, pp. 3-4, https://www.firstnet.gov/sites/default/files/FirstNet_Financial_Report-FY_2013.pdf.

⁴¹ David Shepardson, “FCC Spectrum Auction Bidding Ends at \$19.6 Billion,” Reuters, February 10, 2017, <https://www.reuters.com/article/us-usa-wireless-auction/fcc-spectrum-auction-bidding-ends-at-19-6-billion-idUSKBN15P2QF>.

⁴² Carolyn Kahn et al., *The C-Band Spectrum Auction: Retrospective And Prospective Observations*, MITRE, May 2021, p. 1, <https://www.mitre.org/sites/default/files/2021-11/pr-20-01559-4-the-c-band-spectrum-auction-retrospective-and-prospective-observations.pdf>.

uncertain, largely because they depend on many factors that can vary over time and, further, depend on the frequencies to be auctioned.”⁴³ As an alternative to specifying a maximum amount, Congress could direct a percentage of spectrum auction proceeds to be used for 911 purposes, from one auction, some auctions, or all auctions.

Providing No Federal Funding for NG911

Congress could choose to provide no federal funding for NG911, letting states and localities continue to handle the transition.⁴⁴ If no federal funding is provided, some state policymakers may raise the monthly phone surcharge for consumers and businesses to help fund the transition to NG911. The absence of federal funding may contribute to NG911 transition delays if state and local revenues cannot fully fund upgrades. This could also create variability in the provision of 911 services across the United States, leading to some PSAPs not being able to interoperate with other PSAPs or interconnect with FirstNet.

Other Considerations for Congress

There may be other issues related to funding for NG911 that Congress could consider. These may involve federal agency roles in an NG911 grant program, including which agency or agencies would administer the program; the issue of 911 fee diversion by states for non-public-safety uses—which could negatively affect public safety operations and make states ineligible for federal NG911 grants; and interconnection with FirstNet, which could further enhance public safety by providing a seamless communications environment from the public to PSAPs to first responders.

Federal Agency Considerations

If Congress chooses to provide funding for a grant program to assist state and local governments transition to NG911, Congress may consider federal agency roles in the program, including which agency or agencies would administer the program.

The federal agencies involved in NG911 include:

- **NHTSA.** NHTSA houses the National 911 Program. The National 911 Program Office maintains a clearinghouse of resources, grant information, and best practices, and hosts webinars for 911 stakeholders, available through its website (911.gov).⁴⁵
- **NTIA.** Among its many roles, NTIA co-coordinates NG911 with the National 911 Program Office in NHTSA, providing technical expertise, stakeholder coordination, and grant management support.⁴⁶

⁴³ Congressional Budget Office, H.R. 3565, *Spectrum Auction Reauthorization Act of 2023*, Cost Estimate, July 25, 2023, p. 9, <https://www.cbo.gov/system/files/2023-07/hr3565.pdf>.

⁴⁴ It varies by state whether NG911 implementation is handled as a statewide or local effort. For example, see Nate Benson, “State Denies Request to Release Next Gen 911 Rollout Plan, Coordinators Concerned Counties Will Be on Their Own,” WGRZ, March 20, 2023, <https://www.wgrz.com/article/news/local/state-denies-request-to-release-next-gen-911-rollout-plan/71-b84cc968-dda1-45f1-aea3-5b6a3c5f7560>.

⁴⁵ For more information, see National 911 Program Office website, available at <https://www.911.gov/>.

⁴⁶ For information on NTIA roles and programs, see CRS Report R47075, *The National Telecommunications and Information Administration (NTIA): Current Roles and Programs*, by Ling Zhu. Of note, the National 911 Program (continued...)

- **FCC.** The FCC has worked with telecommunication providers, the NHTSA National 911 Program Office, and NTIA to improve 911 services.⁴⁷
- **Department of Homeland Security, Cybersecurity and Infrastructure Security Agency (CISA).** CISA has issued tools and resources to support 911 system operations and security, and NG911 transition.⁴⁸

In 2004, Congress established a 911 Implementation Coordination Office (ICO), as a joint program of NHTSA and NTIA.⁴⁹ The ICO has served as the lead federal body for implementing 911 grants and facilitating coordination and information-sharing among federal, state, and local entities. The ICO was charged with preparing an IP migration plan and report to Congress,⁵⁰ implementing federal grants,⁵¹ and conducting a cost study of NG911 implementation.⁵² The ICO's authority expired on October 1, 2022.⁵³

Legislation introduced in the 118th Congress that would provide funding for a NG911 grant program designates NTIA as the sole granting agency, with NHTSA in a consultative role.⁵⁴ In general, the appointment of a single agency to lead on a federal effort could have some advantages, which may “include increased efficiency in coordinating and communicating with consulting parties, less duplicative analyses and paperwork, and more clarity and consistency in reaching findings and determinations.”⁵⁵ In the context of NG911, a single lead agency could help to accelerate the administration of 911 grants. On the other hand, Congress may risk losing the input of other agencies with specialized expertise. For example, NHTSA has extensive 911 expertise and strong connections to the 911 stakeholder community.

Congress could place responsibility with the ICO, as it has done in the past. NHTSA and NTIA (as the ICO) have jointly administered the previous 911 grant programs. If Congress were to place responsibility of grant administration with NHTSA and NTIA, it would need to address the ICO's authority. Congress could choose to reauthorize the ICO in its current form or expand the ICO to include other agencies, such as DHS, which has cybersecurity expertise, and the FCC, which has been actively involved in 911 issues.⁵⁶ Alternately, Congress could assign responsibilities to a single agency and mandate consultation with other agencies, as is proposed in H.R. 3565.

Office (in NHTSA) and the NTIA form the Implementation Coordination Office (ICO), which serves as the federal lead on 911. The ICO was established by P.L. 108-494.

⁴⁷ For more information, see FCC, “911 and E911 Services,” <https://www.fcc.gov/general/9-1-1-and-e9-1-1-services>.

⁴⁸ For example, see Cybersecurity and Infrastructure Security Agency, “Transition to Next Generation 911,” <https://www.cisa.gov/safecom/next-generation-911>.

⁴⁹ P.L. 108-494 established the ICO to serve as the federal lead on 911. See also National Highway Traffic Safety Administration and National Association of State 911 Administrators, *Model State 911 Plan*, Version 1.0, February 2013, p. 1, https://www.911.gov/assets/NASNA_and_National_911_Program_Model_State_911_Plan_2013.pdf.

⁵⁰ P.L. 110-283 required the ICO to develop an IP migration plan.

⁵¹ P.L. 108-494 established a \$43.5 million grant program. P.L. 112-96 established a \$115 million grant program.

⁵² P.L. 112-96 directs the ICO to develop a cost study on NG911 implementation.

⁵³ See §6503(d)(2) of Title VI in P.L. 112-96.

⁵⁴ See H.R. 1784 and H.R. 3565.

⁵⁵ Advisory Council on Historic Preservation, “Frequently Asked Questions About Lead Federal Agencies in Section 106 Review,” <https://www.achp.gov/digital-library-section-106-landing/frequently-asked-questions-about-lead-federal-agencies>.

⁵⁶ See FCC, 911 and E911 Services, <https://www.fcc.gov/general/9-1-1-and-e9-1-1-services>.

911 Fee Diversion

Another issue is the diversion of 911 fees collected by states and localities to cover other costs (e.g., other public safety expenses, general fund shortfalls). The FCC is required to submit an annual report to Congress on states' collection and distribution of 911 fees.⁵⁷ It is required to report on the amount of revenue obligated or expended by each state or locality for any purpose other than that for which such fees or charges are specified. The diversion of 911 fees can negatively affect the fiscal sustainability of 911 services. According to a September 2021 FCC report to Congress on 911 fee diversion,

One of the most recognizable impacts of fee diversion and/or underfunding 911 we see today is the insufficient resources to support day-to-day operations. 911 fee diversion and/or underfunding prevent PSAPs from achieving and maintaining proper performance and operational services.... 911 fee diversion and/or underfunding can result in inadequate funding to plan, implement, and transition to NG911 while also funding the legacy system until it can be decommissioned.⁵⁸

The ENHANCE 911 Act of 2004 (P.L. 108-494), required states and local jurisdictions receiving federal 911 grants to certify that they were not diverting 911 funds to be eligible for the E911 Grant Program.⁵⁹ Congress created similar requirements in the NG911 Advancement Act of 2012.⁶⁰ States that continue or begin diverting these funds may be ineligible for future 911 grants.

Congress could direct the FCC through legislation to establish a national standard for a set-aside in state 911 fee collections to be used specifically for public-safety-related purposes, as suggested in a September 23, 2023, letter written to FCC Chairwoman Jessica Rosenworcel by several Members of Congress.⁶¹

Alternatively, Congress could weigh establishing a universal federal fee for 911 that is applied to all phone services (e.g., wireline, wireless) and distributed to support 911 operations and upgrades, potentially replacing state 911 fees. A universal federal fee could help address variances among state and local funding for 911 services. If Congress were to mandate a federal 911 fee, it would need to establish its rate. Congress could identify which state fees have been a sustainable funding source for 911 services to help determine what rate might work nationally. The National Association of State 911 Administrators (NASNA), however, has stated that “[S]tate and local government and individual PSAPs may be resistant to the federal government being the entity to collect and distribute the funds [from a universal federal communications fee].” NASNA further stated that “[S]afeguards to ensure current [state or local] funding levels, at a minimum, would need to be guaranteed.”⁶²

⁵⁷ FCC, *911 Fee Reports and Reporting*, <https://www.fcc.gov/general/911-fee-reports>. Submitted pursuant to P.L. 110-283.

⁵⁸ FCC, *Ending 911 Fee Diversion Now Strike Force: Report and Recommendations*, September 23, 2021, pp. 24-25, <https://www.fcc.gov/file/21893/download>.

⁵⁹ FCC, *In the Matter of 911 Fee Diversion—Notice of Proposed Rulemaking*, January 27, 2021, p. 2, <https://docs.fcc.gov/public/attachments/DOC-369561A1.pdf>.

⁶⁰ *Ibid.*

⁶¹ Letter from Reps. Marc Molinaro, Chris Smith, Mike Lawler, Nick Langworthy, Brandon Williams, and Anthony D’Esposito to FCC Chairwoman Jessica Rosenworcel, September 13, 2023, <https://molinaro.house.gov/news/documentsingle.aspx?DocumentID=1548>.

⁶² National Associations of State 911 Administrators, *Four Potential Sustainable Funding Models for NG911*, August 5, 2015, p. 11, <https://www.911.gov/assets/NASNA-White-Paper—Four-Potential-Sustainable-Funding-Models-for-NG911-08-05-2015-1638566531.pdf>.

Interconnection with FirstNet

Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96) established the First Responder Network Authority (FirstNet). The purpose of FirstNet—an independent agency under the National Telecommunications and Information Administration (NTIA)—is to deploy and operate a nationwide broadband network built to public-safety-grade standards using Long-Term Evolution (LTE) wireless technology.⁶³ FirstNet allows public safety agencies (e.g., police, fire, emergency medical services) to communicate with each other through transmission of voice calls, text messages, and secure data.⁶⁴ In 2017, AT&T was awarded a 25-year contract to build and maintain the nationwide public safety broadband network.⁶⁵ In January 2024, FirstNet reported the completion of the initial five-year buildout of the network.⁶⁶

FirstNet and NG911 are being deployed as separate systems, but interconnection between the two is anticipated to enhance public safety. According to a 911.gov guide for state and local authorities on NG911 and FirstNet, “NG911 is a critical component of a two-part emergency communications system [NG911 and FirstNet] which will allow for the sharing of more data with 911 dispatch centers and in turn with first responders.”⁶⁷ See **Figure 3**.

⁶³ National Telecommunications and Information Administration, “About FirstNet,” <https://www.ntia.gov/page/about-firstnet>.

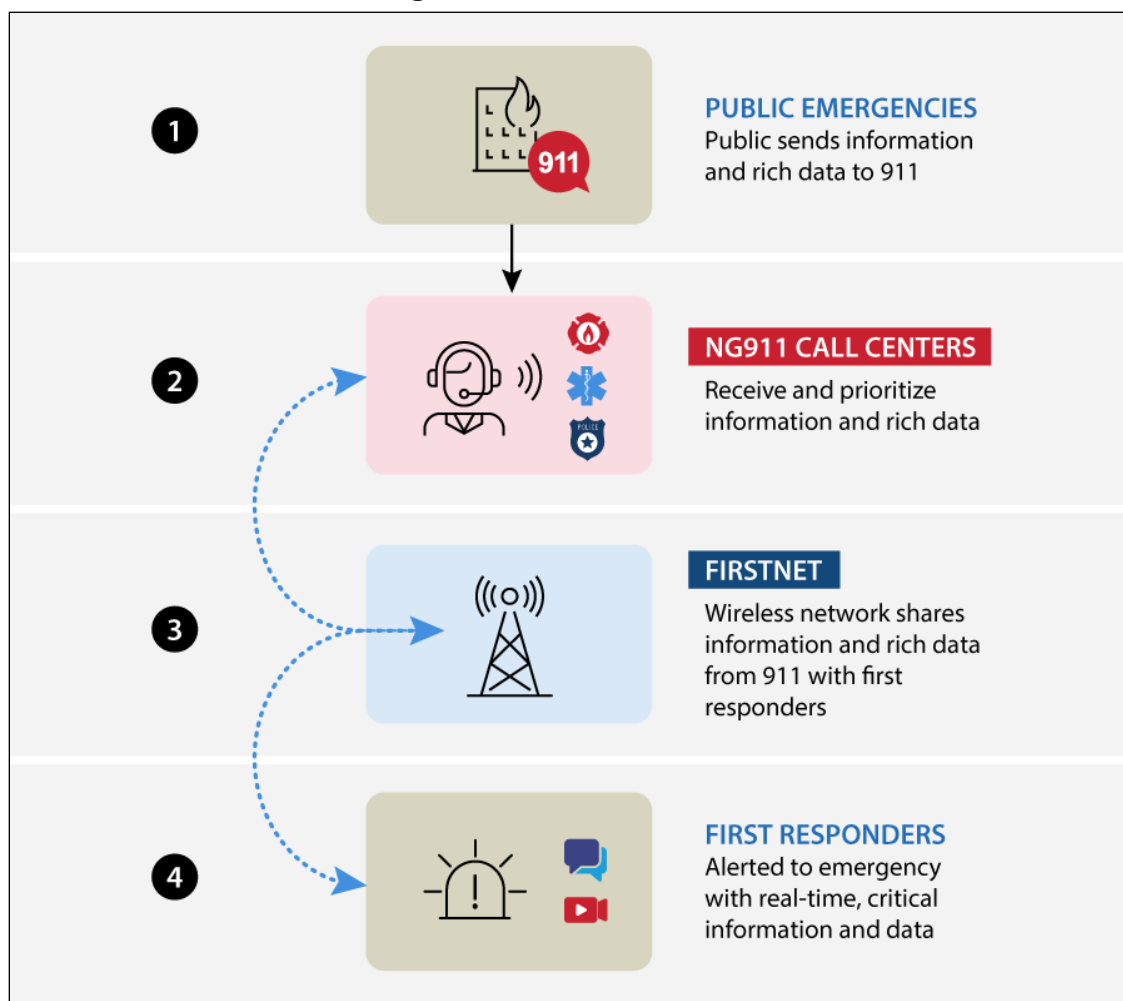
⁶⁴ FirstNet was established in light of first responder experiences following the terrorist attacks on September 11, 2001, when some radio systems were unable to interoperate across response agencies (e.g., fire, police, emergency medical services), leaving some first responders unable to communicate with one another. See FirstNet Authority, “About Us,” <https://www.firstnet.gov/about>.

⁶⁵ FirstNet Authority, “History,” <https://www.firstnet.gov/about/history>.

⁶⁶ Jim Bugel and Joe Wassel, “FirstNet: Initial Buildout of Public Safety’s Network Verified, Delivering for America’s First Responders,” FirstNet, January 17, 2024, <https://www.firstnet.com/community/news/firstnet-initial-buildout-of-public-safetys-network-verified.html>.

⁶⁷ 911.gov, *NG911 & FirstNet*, September 2018, p. 2, <https://www.911.gov/projects/ng911-for-public-safety-leaders/ng911-and-firstnet-guide-for-state-and-local-authorities/>.

Figure 3. NG911 & FirstNet



Source: CRS, adapted from 911.gov, *NG911 & FirstNet: Bringing People and Public Safety Together*, https://www.911.gov/assets/NASNA_National_911_Program_NG911_FirstNet_Guide_State_Local_Authorities_2nd_Edition_Single_InfoGraphic.pdf.

FirstNet also can serve as a backup for PSAPs—as is being done in Tennessee—and can automatically reroute 911 calls over the FirstNet network to make sure they are answered in the event of a network disruption or during periods of call overload (e.g., during a disaster).⁶⁸

Congress required FirstNet to promote integration of the network with PSAPs.⁶⁹ Ensuring interconnection between the two systems is an issue the 911 community is also working to address.⁷⁰ For example, the National 911 Program—housed within NHTSA—convened a group of public and private sector representatives to address interconnection of the two systems by developing specific contract language around technical requirements and establishing goals to

⁶⁸ FirstNet, “Tennessee Becomes First in Nation to Integrate FirstNet with AT&T ESInet for 9-1-1 Call Centers Statewide,” January 20, 2023, <https://www.firstnet.com/community/news/tennessee-becomes-first-in-nation-to-integrate-firstnet.html>.

⁶⁹ See Section 6206(b)(2)(C) of P.L. 112-96.

⁷⁰ 911.gov, *911 & FirstNet*, October 20, 2023, <https://www.911.gov/issues/911-and-firstnet/>.

facilitate progress.⁷¹ Once NG911 systems are deployed, states and localities may need additional funding to support integration with FirstNet. According to consulting firm Mission Critical Partners, “[T]o fully leverage this capability [integration of NG911 and FirstNet], PSAPs will need to address a variety of technical impacts, from interfacing with myriad data-generating systems to managing, storing and securing the data. Their ability to do so will depend largely on the level of financial support the 911 community receives from the federal government.”⁷²

If Congress chooses to provide funding for the transition to NG911, it could consider whether to require that a portion of the funds be used for integration with FirstNet. Congress could also consider requiring coordination between FirstNet and the federal agency (or agencies) supporting the administration of NG911 grants to provide technical guidance to the grantees for integration purposes. If Congress chooses not to provide additional funding, or does not require a portion of the NG911 funds to be used for integration purposes, it may affect if and how PSAPs nationwide integrate with FirstNet, potentially leading to additional variances in local 911 services.

Concluding Observations

The primary means for funding the transition to NG911 is through state and local surcharge fees. Policymakers and 911 stakeholders have expressed concern that these surcharge fees alone may not be enough to support the transition of all PSAPs across the United States to NG911. Congress may consider additional federal funding to support a nationwide transition, such as through a new 911 grant program. If Congress pursued additional funding it would need to consider how much funding to provide, whether to provide one-time or annual funding, which funding mechanism to use (e.g., appropriations, spectrum auction proceeds), and which federal agency to designate as the granting agency. Congress could also decide not to provide federal funding for the transition to NG911 and let states and localities continue to handle the transition.

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⁷¹ The group concluded its work in May 2023. See 911.gov, “NG911/ERBN Interconnection,” October 19, 2023, <https://www.911.gov/projects/ng911-erbn-interconnection/>.

⁷² Mission Critical Partners, *Whitepaper: Harnessing the NPSBN and NG911*, August 2017, p. 4, <https://cdn2.hubspot.net/hubfs/2385785/White%20papers/The%20Technical%20Evolution%20of%20the%20PSAP%20in%20a%20NG911%20and%20FirstNet%20Environment.pdf>.

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