

CRS Report for Congress

Emergency Communications Legislation, 2002-2006: Implications for the 110th Congress

Updated December 14, 2006

Linda K. Moore
Analyst in Telecommunications and Technology Policy
Resources, Science, and Industry Division



Prepared for Members and
Committees of Congress

Emergency Communications Legislation, 2002-2006: Implications for the 110th Congress

Summary

Since September 11, 2001, several bills introduced in the U.S. Congress have included provisions to assist emergency communications. Key provisions from a number of these bills have become law. This report summarizes progress in developing legislation, especially in the 109th Congress, in three areas of emergency communications: communications among first responders and other emergency personnel; emergency warnings and alerts; and 911 call centers and systems. Each area could be the subject of further consideration in the 110th Congress, through oversight, additional legislation, or funding.

Legislation addressing communications among first responders focused first on interoperability — the capability of different systems to connect — with provisions in the Homeland Security Act (P.L. 107-296). The Intelligence Reform and Terrorism Prevention Act (P.L. 108-458) provided more comprehensive language that included requirements for developing a national approach to achieving interoperability. Some of the legislative requirements were based on recommendations made by the National Commission on Terrorist Attacks Upon the United States (9/11 Commission). Also in response to a Commission recommendation regarding the availability of spectrum for radio operations, Congress set a date to release needed radio frequency spectrum by early 2009, as part of the Deficit Reduction Act (P.L. 109-171). In a section of the Homeland Security Appropriations Act, 2007 (P.L. 109-295, Title VI, Subtitle D) Congress revisited the needs of an effective communications capacity for first responders and other emergency personnel and expanded the provisions of P.L. 108-458.

The existing Emergency Alert System (EAS) is being upgraded by the Department of Homeland Security in collaboration with other federal agencies and the Association of Public Television Stations. Several bills to further the development of a more technologically advanced warning system were introduced during the 109th Congress; some of these provisions were incorporated in the Port Security Improvement Act, also known as the SAFE Port Act (P.L. 109-347).

The Deficit Reduction Act would also provide funding for the improvement of 911 systems. The Homeland Security Appropriations Act requires the Federal Communications Commission to study the capacity of 911 systems to reroute calls when their networks fail.

Among the implications for the 110th Congress, in addition to fundamental policy issues such as standards development and funding, is the possible need to explore DHS's response to enacted legislation. Also, requirements for studies on spectrum needs, as stated in the Intelligence Reform and Terrorism Prevention Act, have apparently not met the expectations of the public safety community, which continues to urge Congress to take more substantive steps.

This report will be updated.

Contents

Introduction: Policy and Technological Convergence	1
First Responders and Other Emergency Personnel	2
The Homeland Security Act of 2002 and Actions by the Department ..	3
Intelligence Reform and Terrorism Prevention Act	3
Radio-Frequency Spectrum and the Deficit Reduction Act	6
The Homeland Security Appropriations Act, 2007	8
Implications for the 110 th Congress: First Responders and Other Emergency Personnel	10
Emergency Alerts and Warnings	12
The SAFE Port Act	13
Implications for the 110 th Congress: Emergency Alerts	14
911 Calls and Systems	14
Implications for the 110 th Congress: 911	15

Emergency Communications Legislation, 2002 - 2006: Implications for the 110th Congress

Introduction: Policy and Technological Convergence

Members of the 110th Congress who support sustaining and improving emergency communications have a body of recent legislation on which to build. Since September 11, 2001, successive Congresses have passed legislation regarding technology, funding, spectrum access and other areas critical to emergency communications. These new laws have tended to address specific issues, dealing separately, for example, with interoperability for first responders, improvements in emergency alerts, and 911 call centers. When reviewing emergency communications legislation, whether for oversight or new initiatives, Congress may review the pace of technological convergence and its impact on policies for emergency communications. What once were discrete areas of emergency response are increasingly sharing common technologies. First responders and other emergency workers not only have access to better tools, but also — by adopting new technologies — find themselves confronted with the need to rethink their internal organizational structure and the ways that they communicate with external groups.

Most emergency communications in use today have been built on core technologies such as two-way radio for emergency responders, telephone line switches for 911 calls, and broadcasting for emergency alerts. Operated independently of each other, these three pillars of emergency response have developed along separate technology tracks. Advances in information technology — and particularly the ubiquity of the Internet — have laid the groundwork for connecting the functions of communications for emergency responders, 911 call centers, and public alerts. For example: digital broadcasting used for emergency alerts can also be used to deliver information to emergency responders; the use of Internet Protocols (IP) provides a standard for network inter-connectivity; interoperable radio networks used by first responders can open a channel for real-time participation by operators in 911 call centers; these same call centers can be used to generate local alerts, over all types of communications media, to virtually any enabled device. Developing communications technologies with common elements provide synergies that benefit both provider and user.

Federal policy and congressional action tend to treat these three important areas of emergency communications through different agencies and different committees. Some observers cite cross-agency coordination at the federal level and cross-jurisdiction cooperation at the congressional level as areas where rapprochement could facilitate homeland security. Because the preponderance of incidents involving emergency workers occurs at the local level, local, state and regional participation

and coordination are included in federal solutions. Encouraging the right balance of cooperative policy and federal leadership — to support both daily operations and national response in catastrophic situations — is one of the goals of Congress. Through legislation, Congress has proposed methods for blending the use of advanced technology with the changes in organization that shifts in technology tend to foster.

The organization of this report reflects the status quo in emergency communications policy, which tends to be separated by function. Within the time span of the 110th Congress, the convergence of communications technology may lead to new approaches in policy making and oversight based on a recognition that both function and technology are interconnected.

First Responders and Other Emergency Personnel

Congressional interest in the federal government's support of interoperable emergency communications capability has increased since September 11, 2001. Chaotic situations at the Pentagon and the World Trade Center were exacerbated by inadequate communications support for local, state, and federal responders at the sites. Radio communications systems, in particular, were not interoperable, hampering coordination of rescue efforts. The different types of technology, operating on different radio frequencies, could not interface with each other. The plight of firefighters trapped in a collapsing tower at the World Trade Center is generally attributed to the failure of out-dated wireless communications equipment used by firefighters.¹

Congress first addressed interoperability in the Homeland Security Act of 2002 (P.L. 107-296). Then, responding to recommendations of the National Commission on Terrorist Attacks Upon the United States (9/11 Commission), Congress included a section in the Intelligence Reform and Terrorism Prevention Act of 2004 (P.L. 108-458) that expanded its requirements for action in improving interoperability and public safety communications. Also in response to a recommendation by the 9/11 Commission, Congress set a firm deadline for the release of radio frequency spectrum needed for public safety radios as part of the Deficit Reduction Act of 2005 (P.L. 109-171). These laws provide the base from which the Department of Homeland Security (DHS) can develop a national public safety communications capability as required by the Homeland Security Appropriations Act, 2007 (P.L. 109-295). Title VI, Subtitle D of the act, cited as the 21st Century Emergency Communications Act of 2006, placed new requirements on DHS as well as reaffirming key passages in the Intelligence Reform and Terrorism Prevention Act. The act has created the position of Director of Emergency Communications within the Department of Homeland Security. Deadlines established in the act include giving DHS 120 days (by February 2007) to complete an assessment on the resources

¹ “Fatal Confusion: A Troubled Emergency Response . . .” New York Times, July 7, 2002; the chaos at both sites of the attacks is also described in several sections of *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States*, The National Commission on Terrorist Attacks Upon the United States, Washington: GPO, 2004.

and staff necessary to carry out the responsibilities of the Office of Emergency Communications established in the law.

The Homeland Security Act of 2002 and Actions by the Department.

Provisions of the Homeland Security Act instruct the Department of Homeland Security (DHS) to address some of the issues concerning public safety communications in emergency preparedness and response and in providing critical infrastructure. Telecommunications for first responders is mentioned in several sections, with specific emphasis on technology for interoperability.²

The newly created Department of Homeland Security (DHS) placed responsibility for interoperable communications within the Directorate for Science and Technology, reasoning that the focus of DHS efforts would be on standards and on encouraging research and development for communications technology. Responsibility to coordinate and rationalize federal networks, and to support interoperability, had previously been assigned to the Wireless Public SAFETY Interoperable COMMUNICATIONS Program — called Project SAFECOM — by the Office of Management and Budget (OMB) as an e-government initiative. With the support of the Administration, SAFECOM was placed in the Science and Technology directorate and became the lead agency for coordinating federal programs for interoperability.³ The Secretary of Homeland Security assigned the responsibility of preparing a national strategy for communications interoperability to the Office of Interoperability and Compatibility (OIC), which DHS created, an organizational move that was later ratified by Congress in the Intelligence Reform and Terrorism Prevention Act.⁴ SAFECOM continued to operate as an entity within the Office of Interoperability and Compatibility, which assumed the leadership role. The director of SAFECOM was promoted to head the OIC.

Intelligence Reform and Terrorism Prevention Act. Acting on recommendations made by the National Commission on Terrorist Attacks Upon the United States (9/11 Commission), Congress included several sections regarding improvements in communications capacity — including clarifications to the Homeland Security Act — in the Intelligence Reform and Terrorism Prevention Act.

The Commission's analysis of communications difficulties on September 11, 2001 was summarized in the following recommendation.

Congress should support pending legislation which provides for the expedited and increased assignment of radio spectrum for public safety purposes. Furthermore, high-risk urban areas such as New York City and Washington, D.C., should establish signal corps units to ensure communications connectivity

² Notably, P.L. 107-296, Sec. 201. and Sec. 502.

³ "Homeland Security Starting Over With SAFECOM," *Government Computer News*, June 9, 2003.

⁴ P.L. 108-458, Title VII, Subtitle C, Sec. 7303 (a) (2).

between and among civilian authorities, local first responders, and the National Guard. Federal funding of such units should be given high priority by Congress.⁵

Congress addressed both the context and the specifics of the recommendation for signal corps. The act amended the Homeland Security Act to specify that DHS give priority to the rapid establishment of interoperable capacity in urban and other areas determined to be at high risk from terrorist attack. The Secretary of Homeland Security was required to work with the Federal Communications Commission (FCC), the Secretary of Defense, and the appropriate state and local authorities to provide technical guidance, training, and other assistance as appropriate.⁶ Minimum capabilities were to be established for “all levels of government agencies,” first responders, and others, including the ability to communicate with each other and to have “appropriate and timely access” to the Information Sharing Environment, an initiative treated elsewhere in the act.⁷ The act further required the Secretary of Homeland Security to establish at least two pilot programs in high-threat areas.⁸ The process of development for these programs was to contribute to the creation and implementation of a national model strategic plan; its purpose was to foster interagency communications at all levels of the response effort.⁹ Building on the concept of using the Army Signal Corps as a model, the law directed the Secretary to consult with the Secretary of Defense in the development of the pilot projects, including review of standards, equipment, and protocols.¹⁰

Congress also raised the bar for performance and accountability. Section 7303 (a) (1) set program goals for the Department of Homeland Security, in consultation with the Secretary of Commerce and the FCC. Briefly, the goals were to:

- Establish a comprehensive, national approach for achieving interoperability;
- Coordinate with other federal agencies;
- Develop appropriate minimum capabilities for interoperability;
- Accelerate development of voluntary standards;
- Encourage open architecture and commercial products;
- Assist other agencies with research and development;
- Prioritize, within DHS, research, development, testing and related programs;
- Establish coordinated guidance for federal grant programs;
- Provide technical assistance; and
- Develop and disseminate best practices.

⁵ The National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report: Final Report of the National Commission on Terrorist Attacks Upon the United States*, (Washington: GPO, 2004), p. 397.

⁶ P.L. 108-458, Title VII, Subtitle C, Sec. 7303 (d), ‘Sec. 510 ‘(a).

⁷ P.L. 108-458, Title VII, Subtitle C, Sec. 7303 (d), ‘Sec. 510 ‘(b).

⁸ P.L. 108-458, Title VII, Subtitle C, Sec. 7304 (a).

⁹ P.L. 108-458, Title VII, Subtitle C, Sec. 7304 (b).

¹⁰ P.L. 108-458, Title VII, Subtitle C, Sec. 7304 (d).

Other provisions of the Intelligence Reform and Terrorism Prevention Act permitted federal funding programs to make multi-year commitments for interoperable communications for up to three years, with a ceiling of \$150 million for future obligations.¹¹ The act authorized annual sums for a period of five years to be used for programs to improve interoperability and to assist interoperable capability in high-risk urban areas; the FY2005 authorization was \$22,105,000; the amount rises each year to \$24,879,000 in FY2009.¹²

The act included a requirement that any request for funding from DHS for interoperable communications “for emergency response providers” be accompanied by an Interoperable Communications Plan, which must be approved by the Secretary.¹³ Criteria for the Plan were also provided in the act.¹⁴

The act conveyed the sense of Congress that “interoperable emergency communications systems and radios should continue to be deployed as soon as practicable for use by the first responder community, and that upgraded and new digital communications systems and new digital radios must meet prevailing national, voluntary consensus standards for interoperability.”¹⁵

Spectrum allocation, needed for radio communications by first responders and other emergency workers, is also an important issue. The act required two studies on spectrum and communication networks for public safety and homeland security,¹⁶ to be prepared for Congress by year end 2005.¹⁷ The FCC was designated to lead a study on spectrum needs for emergency response providers. The Secretary of Homeland Security, with the FCC and the National Telecommunications and Information Administration (NTIA), was required to prepare a study on strategies to meet public safety and homeland security needs for first responders and all other emergency response providers.¹⁸

The FCC report was released December 2005. For the study, the FCC sought comment on whether additional spectrum should be made available for public safety, possibly from the 700 MHz band. Comments received from the public safety community overwhelmingly supported the need for additional spectrum, although other bands besides 700 MHz were also mentioned. The FCC did not make a specific recommendation for additional spectrum allocations in the short-term although it stated that it agreed that public safety “could make use of such an

¹¹ P.L. 108-458, Title VII, Subtitle C, Sec. 7303 (e).

¹² P.L. 108-458, Title VII, Subtitle C, Sec. 7303 (a) (3).

¹³ P.L. 108-458, Title VII, Subtitle C, Sec. 7303 (f).

¹⁴ P.L. 108-458, Title VII, Subtitle C, Sec. 7303 (f) (1 -5).

¹⁵ P.L. 108-458, Title VII, Subtitle C, Sec. 7303 (I) (2).

¹⁶ P.L. 108-458, Title VII, Subtitle D, Sec. 7502 (a).

¹⁷ P.L. 108-458, Title VII, Subtitle D, Sec. 7502 (d).

¹⁸ P.L. 108-458, Title VII, Subtitle D, Sec. 7502 (b).

allocation in the long-term to provide broadband services.”¹⁹ It qualified this statement by observing that spectrum is only one factor in assuring access to mobile broadband services for emergency response. It further announced that it would move expeditiously to see whether the current band plan for the 24 MHz at 700 MHz currently designated for public safety could be modified to accommodate broadband applications.²⁰

The second required study, to be conducted by DHS in cooperation with the FCC and the NTIA, has not been released in final form. In addition to the requirement from Congress, the Secretary of Homeland Security had also been ordered by a Presidential Executive Memorandum to participate in a national study of spectrum policy.²¹ The Presidential Spectrum Policy Initiative planning process is moving forward under the direction of the NTIA and will apparently incorporate information intended to meet the congressional study requirement.²²

The act also included a sense of Congress provision that the 109th Congress should pass legislation supporting the Commission’s recommendation to expedite the release of spectrum.²³ This was addressed by the 109th Congress in the Deficit Reduction Act, discussed below.

Radio-Frequency Spectrum and the Deficit Reduction Act. The Balanced Budget Act of 1997 required the FCC to allocate 24 MHz of spectrum at 700 MHz²⁴ to public safety, without providing a hard deadline for the transfer.²⁵ The

¹⁹ *Report to Congress on the Study to Assess Short-term and Long-term Needs for Allocations of Additional Portions of the Electromagnetic Spectrum for Federal, State and Local Emergency Response Providers*, Federal Communications Commission, December 19, 2005, at [http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-262865A1.pdf]. (Paragraph 99). Viewed November 21, 2006.

²⁰ *Ibid.*, paragraph 100.

²¹ Presidential Determination: Memorandum for the Heads of Executive Departments and Agencies, The White House, Office of the Press Secretary, November 30, 2004, available at [<http://www.whitehouse.gov/news/releases/2004/11/20041130-8.html>]. Viewed November 16, 2006.

²² “[The Federal Strategic Assessment Plan] will address the fragmentation, shortage, interference and security issues related to spectrum used by public safety organizations.” Written testimony of John M. R. Kneuer, Acting Assistant Secretary for Communications and Information, NTIA before Senate Committee on Commerce, Science and Transportation, “Wireless Issues and Spectrum Reform,” March 14, 2006. See also [<http://www.ntia.doc.gov/osmhome/spectrumreform/index.html>] and [http://www.ntia.doc.gov/ntiahome/press/2006/specadvisory_110306.pdf] for program background and status. Viewed November 16, 2006.

²³ P.L. 108-458, Title VII, Subtitle D, Sec. 7502 (a).

²⁴ Radio frequency spectrum is measured in hertz. Radio frequency is the portion of electromagnetic spectrum that carries radio waves. The distance an energy wave takes to complete one cycle is its wavelength. Frequency is the number of wavelengths measured at a given point per unit of time, in cycles per second, or hertz (Hz). Typical designations are: kHz — kilohertz or thousands of hertz; MHz — megahertz, or millions of hertz; and
(continued...)

channels designated for public safety are among those currently held by TV broadcasters; they are to be cleared as part of the move from analog to digital television (DTV). The 9/11 Commission urged that Congress take prompt action to assure the release of spectrum at 700 MHz — allocated for public safety, but not released — to support needed interoperable network and more robust communications capacity.

Provisions in the Deficit Reduction Act of 2005 plan for the release of spectrum by February 18, 2009²⁶ and would create a fund to receive spectrum auction proceeds and disburse designated sums to the Treasury and for other purposes.²⁷ The fund would transfer \$7.363 billion to the Treasury to reduce the budget deficit as specified in H.Con.Res. 95.²⁸ Other disbursements from the fund include advances of up to \$1.5 billion to assist consumers with the transition to digital television²⁹ and a grant program of up to \$1 billion for public safety agencies to deploy systems on the 700 MHz spectrum they will receive as part of the transition.³⁰ The fund's disbursements are to be administered by the NTIA, which was empowered to borrow funds for communications interoperability grants effective October 1, 2006.³¹ The Congressional Budget Office projected that the grants program for public safety will receive \$100 million in FY2007, \$370 million in FY2008, \$310 million in FY2009 and \$220 million in FY2010.³² However, the 109th Congress, in its closing hours, passed a bill with a provision requiring that the grants program receive “no less than” \$1 billion be provided “no later than” September 30, 2007.³³ The grants are to go for “the acquisition of, deployment of or training for the use of interoperable communications systems that utilize, or enable interoperability with communications systems that can utilize”³⁴ spectrum at 700 MHz.³⁵ A key criteria is that at least 20% of the costs for acquisition and deployment come from non-federal sources.³⁶

²⁴ (...continued)

GHz — gigahertz, or billions of hertz.

²⁵ 47 U.S.C. § 309 (j) (14).

²⁶ P.L. 109-171, Sec. 3002 (a) (1) (B).

²⁷ P.L. 109-171, Sec. 3004 (3) “(E) “(I) and (ii).

²⁸ P.L. 109-171, Sec. 3004 (3) “(E) “(iii).

²⁹ P.L. 109-171, Sec. 3005 (b).

³⁰ P.L. 109-171, Sec. 3006.

³¹ P.L. 109-171, Sec. 3006 (b).

³² Congressional Budget Office Cost Estimate, S. 1932, Deficit Reduction Act of 2005, January 27, 2006, p. 21, [<http://www.cbo.gov/showdoc.cfm?index=7028&sequence=0>].

³³ Call Home Act of 2006, S. 2653, S.Amdt. 5218 (Senator Stevens).

³⁴ P.L. 109-171, Sec. 3006 (a) (1).

³⁵ P.L. 109-171, Sec. 3006 (d) (3).

³⁶ P.L. 109-171, Sec. 3006 (c).

The Homeland Security Appropriations Act, 2007. The destruction caused by Hurricanes Katrina and Rita in August-September 2005 reinforced the recognition of the need for providing interoperable, interchangeable communications systems for public safety and also revealed the potential weaknesses in existing systems to withstand or recover from catastrophic events. Testimony at numerous hearings following the hurricanes suggested that DHS was responding minimally to congressional mandates for action, most notably as expressed in the language of the Intelligence Reform and Terrorism Prevention Act. Bills subsequently introduced in both the House and the Senate proposed strengthening emergency communications leadership and expanding the scope of the efforts for improvement.³⁷ Some of these proposals were included in Title VI of the Homeland Security Appropriations Act, 2007 (P.L. 109-295). Title VI — the Post-Katrina Emergency Management Reform Act of 2006 — reorganized the Federal Emergency Management Agency (FEMA), gave the agency new powers, and clarified its functions and authorities within DHS.³⁸

Subtitle D — the 21st Century Emergency Communications Act of 2006 — created an Office of Emergency Communications and the position of Director, reporting to the Assistant Secretary for Cybersecurity and Communications.³⁹ The Director is required to take numerous steps to coordinate emergency communications planning, preparedness, and response, particularly at the state and regional level. These efforts are to include coordination with Regional Administrators⁴⁰ appointed by the FEMA Administrator to head ten Regional Offices.⁴¹ Among the responsibilities of the Regional Administrators is “coordinating the establishment of effective regional operable and interoperable emergency communications capabilities.”⁴²

Two major programs previously supported by other sections of the Department of Homeland Security are included in the responsibilities of the Director of Emergency Communications — SAFECOM⁴³ and participation in the Integrated Wireless Network (IWN).⁴⁴ IWN was planned as a joint law enforcement network for the Departments of Justice, the Treasury, and Homeland Security. DHS has been

³⁷ A discussion of key bills introduced during the 109th Congress regarding public safety communications appears in CRS Report RL32594, *Public Safety Communications Policy*, by Linda K. Moore.

³⁸ Information on the FEMA reorganization is provided in CRS Report RL33729, *Federal Emergency Management Policy Changes After Hurricane Katrina: A Summary of Statutory Provisions*, by Keith Bea *et al.*, Government and Finance Division.

³⁹ P.L. 109-295, Title VI, Sec. 671(b) ‘Title XVIII, ‘Sec. 1801 ‘(a) and ‘(b).

⁴⁰ P.L. 109-296, Title VI, Sec. 671(b) ‘Title XVIII, ‘Sec. 1801 ‘(c) ‘(7).

⁴¹ P.L. 109-296, Title VI, Sec. 611, ‘Sec. 507 ‘(a) and ‘(b).

⁴² P.L. 109-296, Title VI, Sec. 611, ‘Sec. 507 ‘(c) ‘(2) ‘(C).

⁴³ P.L. 109-296, Title VI, Sec. 671(b), ‘Title XVIII, ‘Sec. 1801 ‘(c) ‘(2).

⁴⁴ P.L. 109-296, Title VI, Sec. 671(b), ‘Title XVIII, ‘Sec. 1801 ‘(c) ‘(3).

represented in the IWN Joint Program Office through the Wireless Management Office of the Chief Information Officer.⁴⁵

Another important organizational shift required by the new law is the requirement that the Director of Emergency Communications coordinate, with the cooperation of the National Communications System (NCS), the establishment of a national response capability. The NCS has been designated the Primary Agency and Emergency Support Function Administrator for the Communications Annex of the Federal Response Plan.⁴⁶ Originally created to assure continuity of the federal government and its operations, NCS has a small role in state and local response and recovery. The Secretary of Homeland Security created the executive position of Assistant Secretary for Cyber Security and Telecommunications.⁴⁷ Responsibilities reportedly included NCS and the National Cyber Security Division.⁴⁸ It is not clear whether these responsibilities will transfer to the Assistant Secretary of Cybersecurity and Communications, created by statute.⁴⁹

The law also instructs the Director of Emergency Communications to work with the Director of the Office of Interoperability and Compatibility (OIC). The responsibilities of the Office of Interoperability and Compatibility are clarified regarding standards development, research, developing and assessing new technology, coordination with the private sector, and other duties.⁵⁰ The development of a comprehensive research and development program is required.⁵¹

Among the key responsibilities assigned to the Director of Emergency Communications is to assist the Secretary for Homeland Security in carrying out the program responsibilities required by the Intelligence Reform and Terrorism Prevention Act in Sec. 7303 (a) (1) [6 U.S.C. 194 (a) (1)], summarized on page 4, above. Other responsibilities of the Director include conducting outreach programs, providing technical assistance, coordinating regional working groups, promoting the development of standard operating procedures and best practices, establishing non-proprietary standards for interoperability, developing a National Communications Plan, working to assure operability and interoperability of communications systems

⁴⁵ Memorandum of Understanding Between the Department of Homeland Security, the Department of Justice, and the Department of the Treasury Regarding a Joint Tactical Wireless Communications System, at [<http://www.usdoj.gov/jmd/iwn/schedule.html>]. Viewed November 21, 2006.

⁴⁶ National Response Plan, ESF #2-1, Department of Homeland Security, December 2004 at [http://www.dhs.gov/xlibrary/assets/NRP_FullText.pdf]. Viewed October 19, 2006.

⁴⁷ "Homeland Security Secretary Michael Chertoff Announces Six-Point Agenda for Department of Homeland Security," Homeland Security Press Room, July 13, 2005 at [http://www.dhs.gov/xnews/releases/press_release_0703.shtm]. Viewed November 21, 2006.

⁴⁸ "DHS Names Cyber-Security Chief," by Ryan Naraine, eWeek.com, September 18, 2006.

⁴⁹ P.L. 109-296, Title VI, Sec. 611, 'Sec. 514 '(b).

⁵⁰ P.L. 109-295, Title VI, Sec. 671(b), 'Title XVIII, 'Sec. 672.

⁵¹ P.L. 109-295, Title VI, Sec. 671(b), 'Title XVIII, 'Sec. 673.

for emergency response, and reviewing grants.⁵² Required elements of the National Emergency Communications Plan⁵³ include establishing requirements for assessments and reports,⁵⁴ and an evaluation of the feasibility of developing a mobile communications capability modeled on the Army Signal Corps.⁵⁵ General procedures are provided for coordination of emergency communication grants,⁵⁶ and for a Regional Emergency Communications Coordination (RECC) Working Group.⁵⁷ An Emergency Communications Preparedness Center is to be established.⁵⁸ Specific provisions are included covering urban and other high risk communications capabilities that closely resemble the provisions of the Intelligence Reform and Terrorism Prevention Act.⁵⁹

The formation of the regional working groups, the RECCs, responded in part to requests from the public safety community to expand interoperable communications plans to include the second tier of emergency workers. Non-federal members of the RECC include first responders, state and local officials and emergency managers, and public safety answering points (911 call centers).⁶⁰ Additionally, RECC working groups are to coordinate with a variety of communications providers (such as wireless carriers and cable operators), hospitals, utilities, emergency evacuation transit services, ambulance services, amateur radio operators, and others as appropriate.⁶¹

Implications for the 110th Congress: First Responders and Other Emergency Personnel. Some of the provisions included in the Homeland Security appropriations act (P.L. 109-295) amplify or reiterate Congressional requirements — first established in the Intelligence Reform and Terrorism Prevention Act — that have not been acted upon or not fully met by DHS. By raising the profile of the management of emergency communications within DHS, the act has given Congress more measurable objectives to assess the development of a plan, and other elements critical to achieving operable and interoperable communications capabilities across the nation. In addition to addressing fundamental policy issues such as standards development and funding, the 110th Congress could explore DHS's response to legislative requirements, such as planning and coordination at the state and regional level. Congress has also required assessments of emergency

⁵² P.L. 109-295, Title VI, Sec. 671(b), 'Title XVIII, 'Sec. 1801.

⁵³ P.L. 109-295, Title VI, Sec. 671(b), 'Title XVIII, 'Sec. 1802.

⁵⁴ P.L. 109-295, Title VI, Sec. 671(b), 'Title XVIII, 'Sec. 1803.

⁵⁵ P.L. 109-295, Title VI, Sec. 671(b), 'Title XVIII, 'Sec. 1803 '(d) '(4) '(A).

⁵⁶ P.L. 109-295, Title VI, Sec. 671(b), 'Title XVIII, 'Sec. 1804.

⁵⁷ P.L. 109-295, Title VI, Sec. 671(b), 'Title XVIII, 'Sec. 1805.

⁵⁸ P.L. 109-295, Title VI, Sec. 671(b), 'Title XVIII, 'Sec. 1806.

⁵⁹ P.L. 109-295, Sec. 671(b), 'Title XVIII, 'Sec. 1807.

⁶⁰ P.L. 109-295, Sec. 671(b), 'Title XVIII, 'Sec. 1805 '(b) '(1).

⁶¹ P.L. 109-295, Sec. 671(b), 'Title XVIII, 'Sec. 1805 '(c).

communications capabilities,⁶² including an inventory that identifies radio frequencies used by federal departments and agencies.⁶³

9/11 Commission Recommendations. As noted above, Congress responded to the 9/11 Commission recommendation about emergency communications with provisions in the Intelligence Reform and Terrorism Prevention Act.

In addition to the recommendation, which urged the release of spectrum, creation of better communications connectivity in high-risk urban areas, and high priority for federal funding for communications capacity, the section containing this recommendation mentioned other concerns.⁶⁴ The Commission report commented on the impact on emergency response capacity when “an attack is large enough” and the need for “Teamwork, collaboration, and cooperation” as well as “regular joint training sessions.” The report states that “Public safety organizations, chief administrative officers, state emergency management agencies, and the Department of Homeland Security should develop a regional focus” The Commission expressed the opinion that the problems of communications at all three crash sites provided “strong evidence that compatible and adequate communications among public safety organizations at the local, state, and federal levels remains an important problem.”

Both the 108th and 109th Congresses provided authorities and funds to address the Commission’s concerns. P.L. 109-295, for example, specifies that \$770 million in discretionary grants “shall be for use in high-threat, high-density urban areas.”⁶⁵ The 110th Congress may reevaluate the funding needed to meet the Commission recommendation and concerns, as well as additional funding both for stand-alone programs for emergency communications and for the planning and coordination goals required by existing law.

Spectrum Policy. The requirements for studies on spectrum needs, as stated in the Intelligence Reform and Terrorism Prevention Act, have apparently not met the expectations of the public safety community, which continues to urge Congress to take more substantive steps. For example, the 110th Congress might find itself facing calls to reallocate for public safety use channels at 700 MHz that were designated for auction by the Deficit Reduction Act. There is also the issue of creating a structure where spectrum could be shared between the private sector and public safety. The FCC has responsibility for auctions and also for managing spectrum use by state and local first responders. Responsibility for managing federal use of radio frequencies rests with the NTIA. Congress could review the efforts of these two agencies to better coordinate spectrum policy.

⁶² P.L. 109-295, Title VI, Sec. 671(b), ‘Title XVIII, ‘Sec. 1803 (a).

⁶³ P.L. 109-295, Title VI, Sec. 671(b), ‘Title XVIII, ‘Sec. 1803 (a) (5).

⁶⁴ “Command, Control, and Communications,” *Op. Cit.* pp. 396-397.

⁶⁵ P.L. 109-295, Title III, Preparedness and Recovery, Office of Grants and Training, state and local programs (2) (A).

Emergency Alerts and Warnings

The current Emergency Alert System (EAS) was originally created as CONELRAD (Control of Electromagnetic Radiation) in 1951, as part of America's response to the threat of nuclear attack. In 1963, the system was opened to state and local participation. Through most of its existence, the alert system was known as the Emergency Broadcast System. The name was changed in 1994, when new, automated technology was established.⁶⁶ Much of the development of the new technology was undertaken by the National Oceanic and Atmospheric Administration (NOAA). Digitized signal technology for EAS is the same as that used for the NOAA Weather Radio (NWR).⁶⁷

In 1995 Congress placed responsibility for civil defense measures that include the present-day EAS with the Director of FEMA.⁶⁸ The FCC has been designated by FEMA to manage broadcaster involvement in EAS. The FCC currently provides technical standards and support for EAS, rules for its operation, and enforcement within the broadcasting and cable industries. FEMA works with the emergency response officials who, typically, initiate an EAS message for a state or local emergency. Non-federal EAS operational plans are developed primarily at the state and local level. DHS has proposed that FEMA and DHS "should be the primary point of contact" and act as the "Executive Agent" in managing alerts and warning information. In this proposal, the FCC would continue its regulatory role for broadcasting and wireless communications.⁶⁹

Working with the Association of Public Television Stations, DHS has completed successful pilots to test the implementation of digital technologies as the Digital Emergency Alert System (DEAS). They have jointly announced that DEAS capabilities will be installed in all Public Television stations by year-end 2007. DEAS uses the additional capacity that digital technology provides for broadcasting to send digitized alerts to almost any communications device, including wireless.⁷⁰ The rollout is part of the Integrated Public Alert and Warning System (IPAWS). It has been a joint effort of FEMA, the Information Analysis and Infrastructure Protection directorate at DHS, and the Association of Public Television Stations (APTS). Through modification to the technology used for digital TV broadcasting,

⁶⁶ A history of EAS is provided at an FCC website at [<http://www.fcc.gov/eb/eas/>].

⁶⁷ See CRS Report RL32527, *Emergency Communications: The Emergency Alert System (EAS) and All-Hazard Warnings*, by Linda K. Moore.

⁶⁸ P.L. 103-337, National Defense Authorization Act for Fiscal Year 1995, Title XXXIV - Civil Defense, Sec. 603 (42 U.S.C. § 5196), amending the Federal Civil Defense Act of 1950 (64 Stat 1245).

⁶⁹ Letter dated November 5, 2004 from Michael D. Brown, Under Secretary, Emergency Preparedness and Response, Department of Homeland Security, FCC, EB Docket 04-296.

⁷⁰ "The Association of Public Television Stations and the Department of Homeland Security Put Digital Emergency Alert and Warning System to the Test," Association of Public Television Stations, press release, July 12, 2006 at [<http://www.aptv.org/news/deas.cfm>]. Viewed November 21, 2006.

APTS stations are providing a digital backbone for emergency alerts at the national level.

Bills — notably S.1753, Senator Jim DeMint, and H.R. 5785, Representative John Shimkus — introduced in the 109th Congress supported the development of DEAS. Key parts of proposed legislation would have expanded digital alerts through a National Alert Office established within the Department of Homeland Security. A nationwide alert system — the National Alert System — would have been developed with the assistance of a National Alert System Working Group. Responsibilities of the Director of the National Alert Office would have included implementing the Working Group’s recommendations, setting up and conducting a program of research and development, and managing the credentialing of public officials who would have been authorized to initiate alerts. This step would federalize the procedures for designating federal, state, local, and tribal officials authorized to request an emergency alert in the new National Alert System.

The above proposals were considered in S.Amdt. 4927 of the Security and Accountability for Every Port Act (SAFE Port Act) but eliminated during conference negotiations. Other language in the Senate amendment was retained, however, and enacted as part of the SAFE Port Act, P.L.109-347.

The SAFE Port Act. The Warning, Alert, and Response Network Act (WARN Act) as signed into law as Title VI of P.L. 109-347, will require the establishment of a Commercial Mobile Service Alert Advisory Committee by the FCC.⁷¹ Members will come from state, local and tribal governments, from industry and associations, and will include representatives of persons with special needs.⁷² This committee, within a year of formation, is to provide the FCC with recommendations on technical requirements, standards, regulation and other matters needed to support the transmittal of emergency alerts by commercial mobile service providers to their subscribers.⁷³ The FCC, alone or in consultation with the National Institute of Standards and Technology (NIST) of the Department of Commerce, has the responsibility of adopting proceedings that will be used in the promulgation and enforcement of rules reflecting the conclusions of the committee.⁷⁴ The digital broadcasting capacity of public television stations, described above, will be used to “enable the distribution of geographically targeted alerts by commercial mobile service providers,” based on recommendations that will come from the committee.⁷⁵ These provisions will assure the development of a new national warning system at the federal level, for presidential alerts, and will support development of alerts to commercial mobile devices. The WARN Act also includes provisions for commercial

⁷¹ P.L. 109-347, Sec. 603 (a).

⁷² P.L. 109-347, Sec. 603 (b).

⁷³ P.L. 109-347, Sec. 603 (c).

⁷⁴ P.L. 109-347, Sec. 602 (a).

⁷⁵ P.L. 109-347, Sec. 602 (c).

wireless service providers to opt in or out of the emergency alert service, with requirements for informing consumers.⁷⁶

Programs specified in the law may be funded from the \$106 million that will be made available through the Digital Transition and Public Safety Fund established in the Deficit Reduction Act of 2005 (P.L. 109-171). The WARN Act authorizes the advancing of these funds effective October 1, 2006.⁷⁷ The fund is to be used to reimburse broadcast stations for reasonable costs incurred in complying with requirements for alerts under the program to be established by the committee.⁷⁸ These monies and other appropriations could be used to provide up to \$10,000,000 for grants to communities that are unserved or underserved by commercial mobile services, to acquire “outdoor alerting technologies.”⁷⁹ Funds also could be used to pay for a research and development program established under the act. This program is to support the development of technologies that can be used to expand the reach of alerts to commercial mobile devices. The program will be headed by the Homeland Security Under Secretary for Science and Technology, in consultation with NIST and the FCC.⁸⁰

Implications for the 110th Congress: Emergency Alerts. The WARN Act appears to support DEAS as the future backbone of public warning systems. However, the role of this backbone in providing standardized alerts and all-hazard warnings at the state and local level is not addressed. The focus of the new law is almost exclusively on developing regulations and technology that could effectively send geo-targeted alerts to commercial cell phones. The 110th Congress could choose to review the issue of assuring state and local access to the new emergency alert networks or possibly reconsider the federal role in assuring a fully-developed national network.

911 Calls and Systems

The viability of 911 networks is briefly addressed in the FY2007 Homeland Security Appropriations Act, with a requirement for the FCC to report to Congress on plans for rerouting 911 calls when 911 capabilities are impaired after a disaster.⁸¹ The report is due within 180 days of enactment, by April 2007 (the bill was signed into law October 4, 2006). This provision is in response to failures in 911 systems in areas affected by Hurricane Katrina. From reports received, it appears that emergency communications and 911 call centers in the Gulf Coast states were overwhelmed after Hurricane Katrina and subsequent flooding took out radio

⁷⁶ P.L. 109-347, Sec. 602 (b).

⁷⁷ P.L. 109-347, Sec. 606 (c).

⁷⁸ P.L. 109-347, Sec. 606 (b).

⁷⁹ P.L. 109-347, Sec. 605.

⁸⁰ P.L. 109-347, Sec. 604.

⁸¹ P.L. 109-295, Title VI, Sec. 671(b), ‘Title XVIII, ‘Sec. 674.

systems, cell towers and back-up generators.⁸² Testifying before Congress in September 2005 about courses of action to improve emergency communications, FCC Chairman Kevin J. Martin proposed that 911 systems be made more robust, with better backup capacity and recovery capabilities.⁸³

911 systems and call centers are typically operated at the state, county or community level. Federal laws that cover 911 include the Wireless Communications and Public Safety Act of 1999 (P.L. 106-81) — intended to make 911 technology universally available throughout the United States — and the ENHANCE 911 Act of 2004 (P.L. 108-494). This legislation creates a federal program for 911 implementation and coordination and authorizes funds for a matching grant program. The program would be jointly administered by the NTIA and the Department of Transportation (DOT). Appropriations for the program have yet to be allocated, although some funding is available through other programs. Support for the program is also promised from the Digital Transition and Public Safety Fund, created by the Deficit Reduction Act.⁸⁴

Implications for the 110th Congress: 911. Most 911 funding occurs at the state and local level. At the federal level, DOT assists wireless E-911 as an extension of its highway safety programs. Among other actions, a partnership between DOT and three public safety associations was formed in support of a Wireless Implementation Program.⁸⁵ During the 109th Congress bills were introduced, but not voted into law, in several key areas. These included moving forward with the federal program specified in the ENHANCE 911 Act, supporting the development of an IP-based network capability for 911, strengthening call centers with federal funding, and legislating requirements for 911 compliance for calls placed with Voice Over Internet Protocol. These issues could be revisited with new legislation in the 110th Congress.

⁸² See CRS Report RL32939, *An Emergency Communications Safety Net: Integrating 911 and Other Services*, by Linda K. Moore.

⁸³ For example, House of Representatives, Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, “Public Safety Communications from 9/11 to Katrina: Critical Public Policy Lessons,” September 29, 2005.

⁸⁴ P.L. 109-171, Sec. 3011.

⁸⁵ For details on DOT programs, see [<http://nena.org/dot/>]. Viewed November 17, 2006.