Access to Emergency Alerts for People with Disabilities
Recommendations for Accessible Emergency Notification

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National Center for Accessible Media at WGBH

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Access Alerts Project Summary

WGBH's National Center for Accessible Media (NCAM) has led the "Access to Emergency Alerts for People with Disabilities" (Access Alerts) project, funded by the U.S. Department of Commerce's Technology Opportunities Program.[1]

Through a national advisory board and national working group, NCAM united a variety of stakeholders representing consumers, industry, government, and academia in a collaborative effort to research and disseminate replicable approaches to make emergency warnings accessible to people with sensory disabilities (people who are deaf, late-deafened, hard of hearing, blind, visually impaired, or deaf-blind).

Project outcomes include:

1. An information requirements model for accessible messaging, based on existing authoritative works and Access Alerts working group input;

2. Consumer and social science research about effective messaging and warning variables for people with sensory disabilities;

3. A national emergency management survey report on existing and planned practices for accessible emergency notification;

4. A proof-of-concept sample multi-modal accessible message that was field-tested for receipt across multiple devices;

5. Recommended practices, guidelines and policies to government, industry, emergency management and consumers for accessible messaging (this report); and

6. A public online resource repository[2], established for the project deliverables listed above, as well as: presentations and articles by project staff; subject-related articles; services; research; and federal, state and community initiatives to address accessible notification to individuals with sensory disabilities.

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[1] The "Access to Emergency Alerts for People with Disabilities" project: http://ncam.wgbh.org/alerts

[2] The Access Alerts resource repository: http://ncam.wgbh.org/alerts/resources.html

About the Access Alerts Recommendations Report

Informed by Access Alerts project participants and activities, this report is offered at the project's conclusion as a broad framework of guidelines and policies for making emergency notifications accessible to people with sensory disabilities (people who are deaf, late-deafened, hard of hearing, blind, visually impaired, or deaf-blind).

The report is formatted to present recommendations specific to separate target audiences; recommendations that are applicable to multiple audiences are repeated for each. Recommendations summarize lessons learned and recommended practices that can be explored in more detail through information on the Access Alerts resource repository or within a number of related works referenced in this report. As research and practice in this field evolve, other studies will continue to emerge. NCAM also encourages stakeholders in accessible emergency communication to continually assess how ongoing advancements in technologies, standards, policies and practices can be applied to their efforts, products and services.

Because the term "emergency" can be subject to interpretation, this report defines a threshold criterion for an emergency message as "imminent threat to human life or health". This definition deliberately excludes threats to property only, and deliberately does not specify how many humans need to be at risk, thus covering the use of government warning systems for AMBER and other missing-person-at-risk alerts.

Because the term "imminent" is also subject to interpretation, this report assumes that if other less disruptive means of communications (e.g., news releases, mailers, etc.) can be used effectively, the situation doesn't qualify for use of a government-run emergency warning system. Various stakeholders, including the Access Alerts working group, have accepted these definitions.

Access Alerts Recommendations

Consumers

1. Maximize opportunities for systemic change by collaborating with state and local consumer agencies and organizations that are chartered to address the needs of people with sensory disabilities, as follows:

    A) Establish relationships with local government's emergency management offices and first responders, and let them know your communications preferences for being notified in an emergency;

    B) Share information, funding opportunities, and specific ways to collaborate;

    C) Participate in emergency management drills and planning, and ask to be included if invitations to participate have not been offered;

    D) Participate in voluntary registries for consumer notification, and be sure to understand the registry program's full scope and limitations for what they do – and do not – provide consumers; and

    E) If voluntary registries for consumer notification do not exist, consult with emergency management professionals and first-responders to determine if their secure establishment is appropriate in your jurisdiction.

2. Encourage local media to fulfill their obligations for accessible emergency broadcasts, and file complaints with the Federal Communications Commission (FCC) if their obligations are not met.[3]

3. Learn about emergency warning capabilities currently available from existing services provided by National Weather Service systems (e.g. NOAA Weather Radio (NWR), NOAA Weather Wire Service (NWWS), and resources on the NOAA Web site)[4], and consider the use of Public Alert ™ devices[5] that provide emergency alerting capabilities to people with disabilities.

4. Keep up with emerging mobile and Web-based social networking technologies and services (e.g., Twitter.com) and the evolving ways local emergency management/first responders are using them to notify people in emergencies.

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[3] FCC Rules and Factsheets re: accessible emergency information: http://www.fcc.gov/cgb/dro/emergency_access.html

[4] National Weather Service systems: http://www.noaa.gov

[5] National Weather Receiver (NWR) consumer information: http://www.nws.noaa.gov/nwr/nwrrcvr.htm

5. Be an effective advocate for your communication needs in all public venues. Parents of children with sensory disabilities: work with emergency managers at schools, libraries, etc. to ensure children's communication needs are included in the venue's emergency action plan.

6. When shopping for cell phones/mobile devices, inform vendors of how their accessibility features compare to other vendors' product capabilities for people with disabilities.

Emergency Management Professionals/First Responders

7. Identify and publicize to all staff your organization's/jurisdiction's designee(s) who are responsible for accessible emergency communications (including compliance with federal mandates, statutes, and laws on emergency information access).

8. Identify how people with sensory disabilities are notified of an emergency in your jurisdiction, and the extent to which consumers consider these methods effective.

9. In coordination with your jurisdiction's Emergency Operation Plan (EOP) and/or Standard Operating Procedures (SOP's): ensure that a cross-departmental plan is developed and regularly updated for accessible notification that covers considerations including administrative, budgetary, outreach, policy, publicity, regulatory, technology, training, and workflow.

10. Utilize access to the National Weather Service (NWS) infrastructure currently offered through the HazCollect program[6] to implement more timely and increased local emergency access to currently available NWS emergency warning capabilities.

11. Integrate universal access considerations into all aspects of first responder training. Advance the understanding that universal design and universal access benefit everyone, not just people with disabilities.

12. Actively involve people with disabilities in emergency planning for the development and periodic review of policies and procedures that impact them. Individuals selected should ideally be members of established disability advocacy organizations in order to represent group as well as individual issues.

13. Include people with disabilities in emergency exercises and drills.

14. Partner with state and local consumer agencies that are chartered to address the needs of people with sensory disabilities to share information, funding opportunities, and specific ways to collaborate.

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[6] National Weather Service HazCollect program: http://www.nws.noaa.gov/ops2/ops24/hazcollect.htm

15. In bids and contracts, require providers of notification equipment and services to offer accessibility features that enable interoperable, multi-modal messaging (e.g., text, voice, video, etc.), including conformance with the "Common Alerting Protocol" (CAP) OASIS standard.[7]

16. Apply the [Access Alerts information requirements model](#)[8] as a checklist to ensure accessible messaging in every aspect of the emergency notification chain (e.g., message content, equipment used for message development and distribution, etc.).

17. Research, acquire and implement accessible communications resources that are specifically designed to facilitate communication in an emergency between people with sensory disabilities and first responders (e.g., sign language charts, Braille materials, speech-to-text and text-to-speech applications, etc.)

18. Produce and maintain a library of fully accessible (text, audio, video) multimedia emergency messages that can be delivered via mobile devices, the Web and broadcast media, shown in shelters, etc.[9] To maximize efficacy, explore cooperative public/private ventures with state agencies and consumer disabilities advocacy organizations that may be working on similar products and services.

19. Keep up with emerging mobile and Web-based social networking technologies (e.g., Twitter.com) and the evolving ways local emergency management/first responders are using them to notify people in emergencies.

20. Fully pursue public/private-funding opportunities to distribute accessible notification equipment to people with sensory disabilities.

21. Ensure that subscription sign-ups for emergency alerts and voluntary registrations are accessible (e.g., Web sites, etc.).

22. Create a culture of cooperation with state and local jurisdiction's members of the disability community and their representative advocacy organizations, to engender their trust to participate in emergency planning and drills, and voluntary consumer registries. Work with local consumer disabilities advocacy organizations to ensure that consumers with disabilities understand their volunteer registry program's full scope and limitations for what they do – and do not – provide consumers.

23. Research and share effective practices with other emergency management professionals and jurisdictions.

24. Pursue opportunities to study, fund and expand the availability of multi-lingual emergency messaging.

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[7] The CAP Cookbook:
http://www.incident.com/cookbook/index.php/Welcome_to_the_CAP_Cookbook

[8] Access Alerts information requirements model, based on existing authoritative works and Access Alerts Working Group input:

http://wgbh.org/ncam/alerts/information-requirements

[9] Access Alerts proof-of-concept sample accessible message:
http://ncam.wgbh.org/alerts/resources.html

Equipment Manufacturers (Notification Equipment)

25. Challenge traditional definitions and assumptions of accessible products and the market for them. Most requirements for disability access will also benefit the mass market well beyond the approximately 28 million Americans who are deaf or hard of hearing, and the approximately 21.2 million Americans who have vision loss.

26. Apply the Access Alerts information requirements model as a checklist to ensure accessible messaging in every aspect of the emergency notification chain (e.g., message content, equipment used for message development and distribution, etc.).

27. Involve consumers with disabilities in consumer research/usability testing to inform universal design considerations for product development.

28. Conform to the Common Alerting Protocol (CAP) OASIS standard to ensure interoperability with other systems and equipment.

29. Reference the Consumer Electronics Association CEA-2009 Receiver Performance Standard for Public Alert Receivers in the development of emergency warning devices for people with disabilities.[10]

30. Pursue opportunities to study, fund and expand the availability of multi-lingual emergency messaging.

Government (Federal)

31. Fund a federal government-sponsored body (public/private partnership advisory/working group) to address public warning issues to pursue the improvement of emergency warning capabilities for the general public, with specific goals for better access for people with disabilities. Either model the entity after the Partnership for Public Warning (PPW)[11] or the Access Alerts working group and advisory board; or reactivate the PPW under federal sponsorship.

32. Fund development of education about effective public warning, including publishing a brochure for wide distribution that outlines the findings and recommendations of the Access Alerts project. Perhaps the most important issue to understand about improving public warning systems to better serve people with disabilities is that it is not (in the end) a technology problem — it is an education problem.

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[10] CEA Receiver Performance Specification for Public Alert Receivers CEA-2009-A (ANSI): http://www.ce.org/Standards/browseByCommittee_2627.asp

[11] Partnership for Public Warning (PPW): http://www.ppw.us

33. Recommendations for the FCC Commercial Mobile Alert Service (CMAS)[12]:

   A) Ensure that the public interest is consistently served by involving a fair balance of consumers to industry participants. Specifically include representatives of consumers with disabilities and the elderly in regular review of the initial Commercial Mobile Service Alert Advisory Committee (CMSAAC) recommendations and subsequent revisions, and in industry specifications that impact consumers' use of the CMAS and receipt devices for it;

   B) Because the CMAS will be initially text-based, design the system architecture to allow secure access by third party services that can provide alternate distribution of text for sign language and text-to-speech translation;

   C) Increase the existing 90-character limit for CMAS text messages – consumers are accustomed to and expect more information;

   D) Increase the ability to target messages to geographic areas more precise than the county level;

   E) Minimize unnecessary header information in alert messages;

   F) Maximize the intensity of vibration signals in wireless devices, as they will be an important part of how all consumers, but especially consumers with disabilities, are notified through the FCC's Commercial Mobile Alert Service (CMAS);

   G) Deliver notifications in additional formats (e.g., audio, video, etc.) with accessibility profiles developed for each;

   H) Pursue opportunities to study, fund and expand the availability of multi-lingual emergency messaging;

   I) Ensure that the OASIS Emergency Management Technical Committee[13] continues to develop the Common Alerting Protocol (CAP) standard to allow for the fullest possible range of descriptions of emergencies that are translated from CAP code fields to emergency message information; and

   J) Ensure that CMAS providers integrate CMAS into their operational plans that address the availability of network transmitters in an emergency.

34. Maximize inter-agency and intra-agency coordination and integration between all federal agencies with responsibility for emergency notifications and accessibility.

35. Fund training for state and local municipalities in how to comply with/implement legislative accessibility requirements and CAP-compliant messaging.

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[12] Commercial Mobile Alert Service:

http://www.fcc.gov/cgb/consumerfacts/cmas.html

[13] OASIS Emergency Management Technical Committee

http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=emergency

36. Require bids and contracts with providers of notification equipment and services to include accessibility features that enable multi-modal messaging, including conformance with the Common Alerting Protocol (CAP) OASIS standard.[14]

37. Ensure that FEMA implements accessibility considerations throughout its Integrated Public Alert and Warning Systems (IPAWS)[15] program.

38. Apply the Access Alerts information requirements model as a checklist to ensure accessible messaging in every aspect of the emergency notification chain (e.g., message content, equipment used for message development and distribution, etc.).

39. Make subscription sign-ups for alerts fully accessible. Publicize the availability of subscription-based alert sign-up via informational literature, announcements and advertisements.

40. Produce and maintain a library of fully accessible (text, audio, video) multimedia emergency messages that can be delivered via mobile devices, the Web and broadcast media, shown in shelters, etc. To maximize efficacy, explore cooperative public/private ventures with state agencies and consumer disabilities advocacy organizations that may be working on similar products and services.

41. Expand current state and federal grant programs to fund new research and training programs for accessible notification.

42. Include assistive emergency warning technology in state and local programs charged with servicing the needs of people with disabilities.

Government (State and Local)

43. Require bids and contracts with providers of notification equipment and services to include accessibility features that enable multi-modal messaging, including conformance with the Common Alerting Protocol (CAP) OASIS standard.

44. Apply the Access Alerts information requirements model as a checklist to ensure accessible messaging in every aspect of the emergency notification chain (e.g., message content, equipment used for message development and distribution, etc.).

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[14] Common Alerting Protocol (CAP) Fact Sheet
http://www.incident.com/cookbook/index.php/CAP_Fact_Sheet

[15] FEMA IPAWS Web site: http://www.fema.gov/emergency/ipaws/

45. Produce and maintain a library of fully accessible (text, audio, video) multimedia emergency messages that can be delivered via mobile devices, the Web and broadcast media, shown in shelters, etc. To maximize efficacy, explore cooperative public/private ventures with state agencies and consumer disabilities advocacy organizations that may be working on similar products and services.

46. Make subscription sign-ups for alerts fully accessible. Publicize the availability of subscription-based alert sign-up via informational literature, announcements and advertisements.

47. Pursue opportunities to study, fund and expand the availability of multi-lingual emergency messaging.

48. Minimize unnecessary header information in alert messages.

49. Research and apply effective accessibility practices from other states and municipalities.

50. When establishing and/or promoting voluntary consumer registries for emergency notification, maximize the success rate by clearly conveying the registry program's full scope and limitations for what they do – and do not – provide consumers.

51. Develop and seek funding for a state-level disability coordinator position if one does not exist (reference FEMA's establishment of a disability coordinator position in June 2007[16]).

52. Expand current state and federal grant programs to fund new research and training programs for accessible notification.

53. Consider ways in which the EAS Required Monthly Test (RMT) and other notification system tests can be used for consumer outreach (i.e., as a means to publicize the availability of a voluntary registry for emergency alerts, etc).

Media

54. Deliver notifications to mobile devices and as many other distribution means as possible.

55. Ensure that broadcasters' companion Web sites are fully accessible, including sign-up for notifications.

56. Ensure that onscreen graphics do not obscure closed captioning, and that on-screen emergency information is made available via speech (either spoken, or using a text-to-speech application). [17]

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[16] FEMA press release for appointment of Disability Coordinator: http://www.fema.gov/news/newsrelease.fema?id=37220

[17] Reference NCAM's "Access to Locally Televised On-Screen Information" project, funded by the U.S. Department of Education: http://ncam.wgbh.org/onscreen/

57. Better utilize the technology providing instant access to emergency warnings provided by the National Weather Service (NWS) through the FCC required Emergency Alert System (EAS) equipment installed at each broadcast facility, and explore the utilization of digital captioning technology inherent in Digital Television (DTV) to deliver emergency warning messages from NWS/NWR to people with disabilities.

58. Research and apply effective accessibility practices from other broadcasters.

59. Ensure that all station personnel (e.g., management staff, technicians, on-air talent, etc.) with responsibility for emergency information on broadcast channels, mobile media and the Web are trained in regulations and best practices for accessible emergency broadcasting, and prominently post the materials for ready reference.

60. Produce and maintain a library of fully accessible (text, audio, video) multimedia emergency messages that can be delivered via mobile devices, the Web and broadcast media, shown in shelters, etc. To maximize efficacy, explore cooperative public/private ventures with state agencies and consumer disabilities advocacy organizations that may be working on similar products and services.

61. Make subscription sign-ups for alerts fully accessible. Publicize the availability of subscription-based alert sign-up via informational literature, announcements and advertisements.

62. Comply with the FCC regulations on emergency notification to ensure presentation of information in aural and visual formats.

63. Provide captions and audio descriptions for video delivered on the Web[18].

64. Instruct on-air news personnel to audibly describe what is visually presented (e.g., maps, remote broadcasts, especially those that depict emergency conditions, etc.).

65. Consider ways in which the EAS Required Monthly Test (RMT) and other notification system tests can be used for consumer outreach, i.e., as a means to publicize the availability of a voluntary registry for emergency alerts, etc.

Message Creation

66. Apply the Access Alerts information requirements model as a checklist to ensure accessible messaging in every aspect of the emergency notification chain (e.g., message content, equipment used for message development and distribution, etc.).

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[18] Reference resources available from the WGBH National Center for Accessible Media: MAGpie http://ncam.wgbh.org/webaccess/magpie

67. Develop consistency in message format (order of information, etc.) to help people differentiate an emergency message from others they may receive. Examples include the FCC Commercial Mobile Service Alert Advisory Committee (CMSAAC) recommendations: the most important information should be presented first; and use clear and simple language whenever possible, with minimal use of abbreviations.

68. Deliver messages in aural and visual forms.

69. Produce and maintain a library of fully accessible (text, audio, video) multimedia emergency messages that can be delivered via mobile devices, the Web and broadcast media, shown in shelters, etc. To maximize efficacy, explore cooperative public/private ventures with state agencies and consumer disabilities advocacy organizations that may be working on similar products and services.

70. Minimize unnecessary header information in alert messages.

71. Provide consumers with more information and message detail when possible, and in multiple formats in addition to text.

72. Reference the National Weather Service (NWS) Directives'[19] Standard Operating Procedures that address the form and content of effective emergency messages.

Mobile (Wireless) Service Providers

73. Fully participate in the FCC Commercial Mobile Alert Service (CMAS), and develop network architecture and system capacity that will support text messages longer than 90 characters and messages in aural and visual form.

74. Ensure the integration of the FCC Commercial Mobile Alert Service (CMAS) into operational plans that address the availability of network transmitters in an emergency.

75. Challenge traditional definitions and assumptions of accessible products and the market for them. Most requirements for disability access will also benefit the mass market well beyond the approximately 28 million Americans who are deaf or hard of hearing, and the approximately 21.2 million Americans who have vision loss.

76. Provide a greater variety of lower-priced accessible mobile devices for consumers with disabilities, with screen-reader and text-to-speech conversion capability.

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[19] National Weather Service (NWS) Directives: http://www.nws.noaa.gov/directives/

77. Ensure that consumers are readily informed of their choices for mobile device accessibility features at all points of purchase:

    A) Provide mobile device sales representatives with adequate training and materials so they are well versed in product lines' accessibility features and can readily offer and demonstrate them;

    B) Ensure that consumer Web sites are accessible[20];

    C) Ensure that consumers can easily navigate mobile service providers' Web sites to locate mobile devices with accessibility features. Incorporate content about accessibility features into the content navigation, specific product listings, and search criteria for device features; and

    D) Consider establishment of a cooperative venture between mobile carriers to establish centrally located accessibility demonstration venues.

78. Develop alternate means by which mobile device batteries can be recharged or replaced in power outages:

    A) Develop wireless devices that can run on household (off-the-shelf, long shelf-life) batteries; and

    B) Develop alternative ways to charge proprietary device batteries.

79. Maximize the intensity of vibration signals in wireless devices, as they will be an important part of how all consumers, but especially consumers with disabilities, are notified through the FCC's Commercial Mobile Alert Service (CMAS).

80. Minimize unnecessary header information in alert messages.

Notification Services

81. Enable notification to mobile devices to the full extent possible.

82. Make subscription sign-ups for alerts fully accessible. Publicize the availability of subscription-based alert sign-up via informational literature, announcements and advertisements.

83. Minimize unnecessary header information in alert messages.

84. Offer consumers as many granular options for subscription opt-in as possible, to combat user fatigue/"cry-wolf" syndrome.

85. Provide captioning for video provided via the Web or mobile devices.

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[20] Web Content Accessibility Guidelines (WCAG) 2.0:
http://www.w3.org/TR/2008/REC-WCAG20-20081211/

86. Produce and maintain a library of fully accessible (text, audio, video) multimedia emergency messages that can be delivered via mobile devices, the Web and broadcast media, shown in shelters, etc. To maximize efficacy, explore cooperative public/private ventures with state agencies and consumer disabilities advocacy organizations that may be working on similar products and services.

Public Venues (Transit Facilities, Schools, Museums, Sporting Venues, etc.)

87. Produce and maintain a library of fully accessible (text, audio, video) multimedia emergency messages that can be delivered via mobile devices, the Web and broadcast media, shown in shelters, etc. To maximize efficacy, explore cooperative public/private ventures with state agencies and consumer disabilities advocacy organizations that may be working on similar products and services.

88. Ensure frequent testing of public warning system equipment.

89. Actively involve people with disabilities in emergency planning (including drill planning) for the development and periodic review of policies and procedures that impact them. Individuals selected should ideally be members of established disability advocacy organizations who can represent group, as well as individual issues.

90. Include people with disabilities in emergency exercises and drills.

91. Partner with state and local consumer agencies that are chartered to address the needs of people with sensory disabilities to share information, funding opportunities, and specific ways to collaborate.

92. In bids and contracts, require providers of notification equipment and services to offer accessibility features that enable interoperable, multi-modal messaging (e.g., text, voice, video, etc.), including conformance with the "Common Alerting Protocol" (CAP) OASIS standard.[21]

93. Apply the Access Alerts information requirements model as a checklist to ensure accessible messaging in every aspect of the emergency notification chain (e.g., message content, equipment used for message development and distribution, etc.).

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[21] The CAP Cookbook:
http://www.incident.com/cookbook/index.php/Welcome_to_the_CAP_Cookbook

Resources

Access Alerts Information Requirements

The Access Alerts Information Requirements are based on existing authoritative works and Access Alerts working group input, as informed by Access Alerts project activities. These requirements serve as a checklist to be applied to the entire emergency message notification chain (e.g., equipment, distribution methods, message content, etc.)

Information Requirements for Access to Emergency Alerts

The information model for a warning message should:

1. Be compatible with various transmission systems (TC, W3C)

2. Provide warning message details in text form (RB, TC)

3. Provide warning message details in audio form (RB, TC)

4. Provide warning message details in image or other visual form (RB, TC, W3C)

5. Provide warning message details in multiple languages (RB, TC)

6. Use multiple forms of presentation appropriate to the needs of individual recipients (W3C)

7. Make appropriate use of font size, foreground/background color and other visual attributes in image and text presentations (W3C)

8. Use appropriate language for comprehension by the at-risk audience (W3C)

9. Allow extension of the information format to meet future needs (TC)

10. Facilitate delivery of the message to all recipients through multiple channels (WG)

Sources of Requirements

RB – Chapter Six of the NSTC "Red Book" report ("Effective Disaster Warnings", National Science and Technology Council, November, 2000)
http://www.sdr.gov/NDIS_rev_Oct27.pdf

TC – OASIS Emergency Management Technical Committee warning format requirements, 2003

http://www.oasis-open.org/committees/download.php/4020/Requirements_5-5-03.doc

W3C – World Wide Web Consortium (W3C) Web Content Accessibility Guidelines, http://www.w3.org/WAI/

WG – WGBH/NCAM Access Alerts Working Group

Access to Emergency Alerts for People with Disabilities

The Access to Emergency Alerts project unites emergency alert providers, local information resources, telecommunications industry and public broadcasting representatives, and consumers in a collaborative effort to research and disseminate replicable approaches to make emergency warnings accessible.
http://ncam.wgbh.org

Access Alerts Resource Repository

The Access Alerts Resource Repository was established to gather information about user needs, design requirements for accessible communications products and services, usability and social science research, subject-related news articles and conference proceedings.
http://ncam.wgbh.org/alerts/resources.html

Accessible Digital Media – Design Guidelines for Electronic Publications, Multimedia and the Web

http://ncam.wgbh.org/publications/adm/

Accessible Emergency Notification and Communication: State of the Science Conference Report - Technology Access Program, Gallaudet University

http://tap.gallaudet.edu/Emergency/Nov05Conference/Emergency-Research.asp

Americans with Disabilities Act and Emergency Preparedness and Response

http://ncseonline.org/NLE/CRSreports/06Jul/RS22254.pdf

Coalition of Organizations for Accessible Technology (COAT)

Reporting the needs of consumers as represented by their leadership at over 200 national, regional, state, and community-based disability organizations.
http://www.coataccess.org/

Commercial Mobile Alert Service

The FCC's actions implements provisions of the Warning, Alert and Response Network Act ("WARN Act") which, among other things, allows CMS providers to voluntarily transmit emergency alerts to their subscribers.

http://www.fcc.gov/pshs/services/cmas.html

FCC Consumer Facts
http://www.fcc.gov/cgb/consumerfacts/cmas.html

Community Emergency Preparedness Information Network (CEPIN), A Program of Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI)

Training for first responders: "Emergency Responders and the Deaf and Hard of Hearing Community: Taking the First Steps to Disaster Preparedness"

http://www.cepintdi.org/default.aspx?pageid=4

Emergency Management Research and People with Disabilities: A Resource Guide

A report from The National Institute on Disability Research and Rehabilitation (NIDRR), highlighting research in emergency management and people with disabilities. The report includes descriptions of federal and private research projects, as well as recommendations from conferences.

http://www.naric.com/public/pubs.cfm

Emergency Preparedness and Emergency Communication Access: Lessons Learned Since 9/11 and Recommendations

From the Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN) and the Northern Virginia Resource Center (NVRC). The report includes recommendations for various telecommunication outlets such as broadcasters, the FCC and service providers.

http://www.cepintdi.org/default.aspx?pageid=78

Federal Communications Commission (FCC) Disability Rights Office

Legislation related to telecommunications relay service (TRS), access to telecommunications equipment and services by persons with disabilities, access to emergency information on television, and closed captioning.

http://www.fcc.gov/cgb/dro

Federal Communications Commission (FCC) Public Notices: Obligation of Video Programming Distributors to Make Emergency Information Accessible to Persons with Hearing Disabilities Using Closed Captioning

August 7, 2006:
http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-06-1600A1.pdf

December 29, 2006:
http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-06-2627A1.pdf

Media Security Reliability Council

Strategies and best practice documents to ensure the operation of broadcast and Multichannel Video Program Distributor facilities before, during and after a major event.
http://www.mediasecurity.org

National Council on Disabilities

NCD Report: "Saving Lives: Including People with Disabilities in Emergency Planning"
http://www.ncd.gov/newsroom/publications/2005/saving_lives.htm

National Weather Service (NWS)

A critical part of the NWS mission is to provide emergency warnings directly to the public.
http://www.nws.noaa.gov/

Partnership for Public Warning

The Partnership for Public Warning, a non-profit, public-private partnership, was established in 2002 to save the lives and property of people at risk from natural disasters, accidents and terrorism by improving the nation's alert and warning capabilities. As the only national organization dedicated to public warning, PPW provided an objective, consensus-based forum where all interested stakeholders – public and private – could work together to develop processes, standards, systems and strategies to ensure that the right people have the right information at the right time.
http://www.ppw.us

Section 508

Section 508 of the Rehabilitation Act requires access to electronic and information technology procured by federal agencies. The Access Board developed accessibility standards for the various technologies covered by the law. These standards have been folded into the federal government's procurement regulations.
http://www.access-board.gov/508.htm

Solutions for Multimedia and Web Accessibility from the WGBH National Center for Accessible Media

NCAM has created a number of tools to help create accessible multimedia and Web sites:

http://ncam.wgbh.org/webaccess/tools/index.html

Technology Access Program at Gallaudet University

http://tap.gallaudet.edu/

The Twenty-first Century Communications and Video Accessibility Act of 2008

H.R.6320 was introduced June 19, 2008 by Reps. Edward J. Markey (D-MA-7) and Heather Wilson (R-NM-1) to ensure that individuals with disabilities have access to emerging Internet Protocol-based communication and video programming technologies in the 21st Century. Please reference the Coalition of Organizations for Accessible Technology (COAT) Web site homepage for more information on the Bill's progress.

http://www.coataccess.org/

Wireless Rehabilitation Engineering Research Center (RERC), Wireless Emergency Communications Project

http://www.wirelessrerc.org/about-us/projects/development-projects/d3-wireless-emergency-communications.html/

Acknowledgments

NCAM wishes to thank the Access Alerts Advisory Board and Working Group members[22] for their contributions of expertise, resources and time to advance the Access Alerts project and these recommendations.

[22] http://ncam.wgbh.org/alerts/board.html