

Concept of Operations for Protecting Special-Needs Populations in the Alabama CSEPP Footprint, *Revision 3*

prepared by
Decision and Information Division
Argonne National Laboratory

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for
Alabama Emergency Management Agency

by
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Alabama Emergency Management Agency

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IN THE ALABAMA CSEPP FOOTPRINT, REVISION 3**

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CONCEPT OF OPERATIONS FOR PROTECTING SPECIAL-NEEDS POPULATIONS IN THE ALABAMA CSEPP FOOTPRINT

1 INTRODUCTION

The purpose of this document is to describe accepted strategies that help residents who need special assistance achieve “maximum protection” in the unlikely event of an accidental release of chemical weapons agent from the Anniston Army Depot (ANAD) affecting the adjoining off-post communities. This document identifies necessary protective actions, describes a plan for supportive training, and develops logistical procedures to deliver equipment, supplies, tools, instructions, and other components of the emergency preparation and response. It is intended to outline how special-needs population protection is being provided, but is not a detailed plan or set of implementing procedures. Because means and methods evolve over time, this document will continue to be revised, as needed, to reflect changes in knowledge, policies, or available technology. Revision 3 of this Concept of Operations represents the final concept of operations for the contract between the Alabama Emergency Management Agency and Argonne National Laboratory (September 30, 2005) and the transfer of operational authority for protecting the special-needs population to the off-post community.

The key objective of off-post ANAD-area emergency planning efforts is to provide “maximum protection” for the general public from the consequences of a chemical weapons accident at ANAD.¹ The basic goal of maximum protection in chemical weapons emergency preparedness planning is “to mitigate the effects of an accident to the maximum extent practicable.”² In Alabama, this has been further defined as a risk of no greater than “one fatality in 2,500,000 years,” which is one-tenth of one percent of the fatality risks to which the general public is exposed from other potential accidents, such as automobile crashes.³

The special-needs population in the Alabama Chemical Stockpile Emergency Preparedness Program (CSEPP) footprint is a subset of the general population living in the communities surrounding ANAD that has been identified in accordance with the program’s

¹ Pub. L. No. 99-145, § 1412(c)(1)(A), 50 U.S.C. § 1521(c)(1)(A). Applicable CSEPP guidance also states that emergency response plans are to provide “adequate protection” for persons with special needs, but neither defines that term nor states to what extent “adequate protection” may differ from “maximum protection.” CSEPP Guidance, Special Population Checklist, § 8.9.1. In view of the absence of any rationale in the guidance for planning a lower level of protection for the special-needs population, as well as the risk that planning to provide less protection to persons with disabilities might violate the Americans with Disabilities Act, 42 U.S.C. § 12111 et seq., it is assumed that CSEPP planning for persons with special needs should be for the same level of protection, i.e., “maximum protection,” as for the general population. See *Shirey v. City of Alexandria School Board*, 229 F.3d 1143 (4th Cir. 2000), 2000 U.S. App. LEXIS 21236 (per curiam).

² Chemical Stockpile Emergency Preparedness Program Policy Paper No. 1, May 1991.

³ Department of the Army/Federal Emergency Management Agency, 2000, “Chemical Stockpile Emergency Preparedness Program Joint Memorandum: Alabama Chemical Stockpile Emergency Preparedness Program Risk Criterion Policy for Protective Action Decisions,” March 31.

guidance.⁴ Persons with special needs include those without vehicles in which to evacuate, latchkey children, and persons with disabilities that could prevent them from taking the actions recommended for the general public to protect themselves in case of a chemical weapons agent release. These are the persons on whom this document focuses. Emergency planning for persons in institutions and facilities with controlled populations at the time of an accident, such as children in school or daycare centers, nursing home residents, hospital patients, and prison inmates, is carried out through preparation of “special facility plans,”⁵ and is outside the scope of this document.

The communities surrounding ANAD have been grouped into emergency planning zones for the chemical weapons hazard (depicted in Figure 1). The “immediate response zone” (IRZ) is a roughly circular area with a radius varying from 6.2 to 12.4 miles (10-20 km) surrounding ANAD.⁶ The IRZ encompasses the communities where the public might have less than 1 hour to respond to a release, and where sheltering in place may be the most effective protective action.⁷ The IRZ includes parts of both Calhoun and Talladega Counties. The off-post areas within the IRZ that are closest to ANAD (all within Calhoun County) are referred to as the “pink zones” and are defined below.

The “protective action zone” (PAZ) begins at the outer border of the IRZ and extends outward in all directions for a radius of approximately 18.6 to 31.1 miles (30-50 km) from ANAD.⁸ The PAZ includes the area where most people could effectively respond to an agent release through evacuation.⁹ The PAZ surrounding ANAD includes parts of Calhoun, Clay, Cleburne, Etowah, and Talladega Counties, as well as all of St. Clair County.

⁴ Wernette, D., and G. Lueschen, 2001, A Summary Report on Efforts to Identify Residential Household Special-Needs Populations in the Alabama Chemical Stockpile Emergency Preparedness Program Footprint, Argonne National Laboratory, Argonne, IL, April 30.

⁵ Federal Emergency Management Agency and Department of the Army, 1996, Planning Guidance for the Chemical Stockpile Emergency Preparedness Program, § 8.9.1, Special Populations Planning Checklist, May 17.

⁶ CSEPP Accident Planning Base Review Group, et al., 1998, Emergency Response Concept Plan for the Chemical Stockpile Emergency Preparedness Program, Rev. 1, Vol. 1: Emergency Planning Guide for the Anniston Chemical Activity CSEPP Site, ANL/DIS/TM-48, May, Fig. 3.1.1.

⁷ Carnes, S.A., et al., 1989, Emergency Response Concept Plan for Anniston Army Depot and Vicinity, ORNL/TM-11093, October, p. 35.

⁸ CSEPP Accident Planning Base Review Group, et al., 1998, Fig. 3.1.1.

⁹ Carnes, S.A., et al., 1989, p. 35.

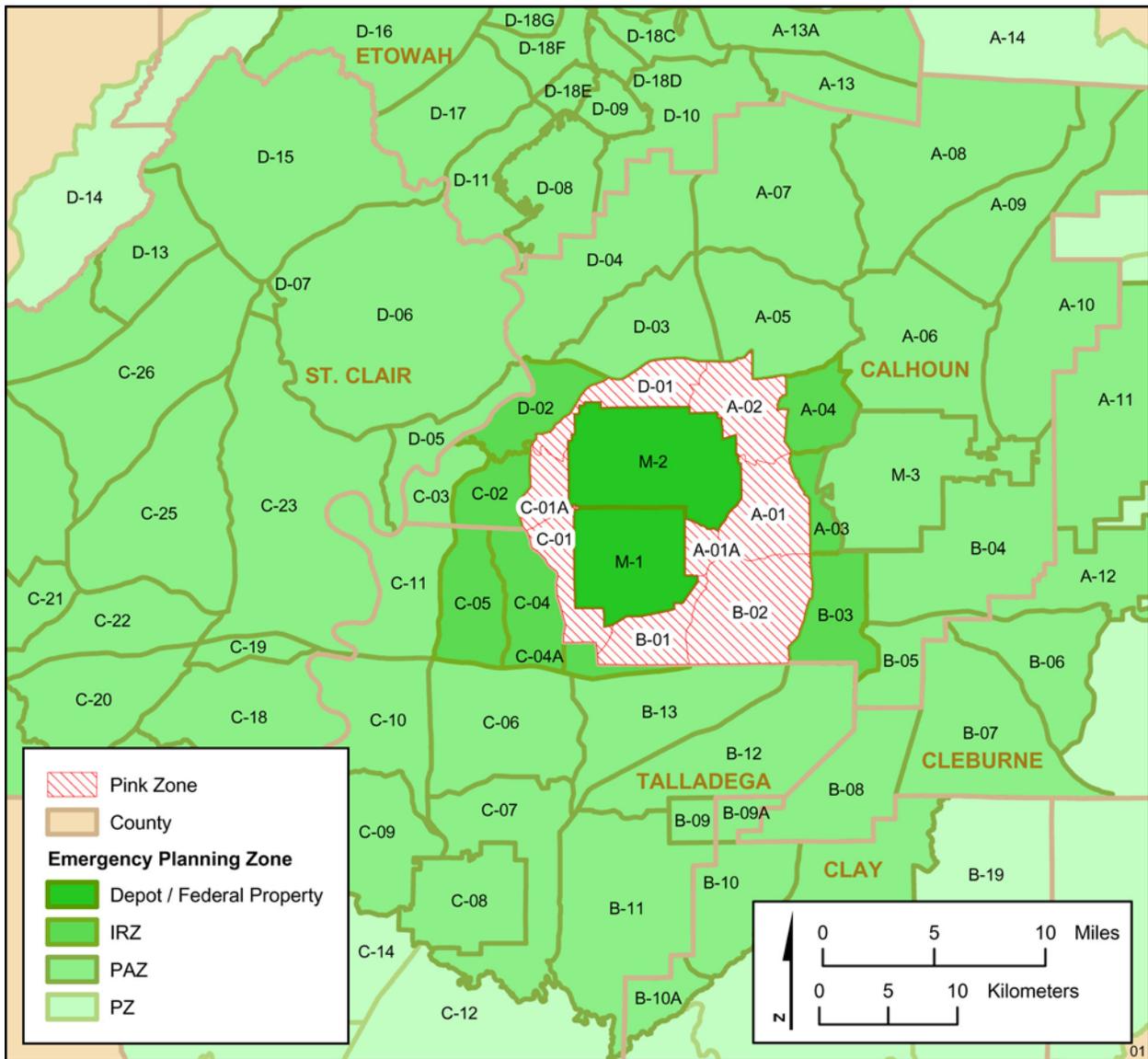


FIGURE 1 Alabama CSEPP Footprint

The IRZ and PAZ in the Alabama CSEPP footprint are further divided into 104 “emergency management zones”¹⁰ to define areas where county Emergency Management Agencies (EMAs) can selectively implement different protective actions.¹¹ The eight off-post emergency management zones designated as A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01, which are “in close proximity to the chemical agent storage areas and the disposal facility

¹⁰ CSEPP Accident Planning Base Review Group, et al., 1998, Fig. 12.1.1.

¹¹ Federal Emergency Management Agency and Department of the Army, 1996, Planning Guidance for the Chemical Stockpile Emergency Preparedness Program, § 5.1, May 17.

located on ANAD,” are the “pink zones” where “citizens have limited time within which to respond in the event of a chemical accident or incident (CAI).”¹²

In 1998, the Alabama Emergency Management Agency (AEMA) and the six Alabama CSEPP County Emergency Management Agencies (county EMAs) initiated an effort to identify and characterize the special-needs population in the Anniston CSEPP community. By late 2001, that activity had produced a dataset of information by emergency management zone (updated in 2003) and developed a computerized geographic information system (GIS) with which to facilitate the emergency planning effort. This concept of operations for the special-needs population begins the emergency planning effort.

In addition to this introduction, this document includes four other sections. Section 2 provides a brief overview of the planning approach for special-needs response. Section 3 analyzes protective action options. Section 4 outlines the training design for adults with physical, medical, or mental problems and impairments; persons who only lack transportation; caregivers/other helpers (including family members, relatives, neighbors, and friends, as well as service agencies and organizations); employees of vendors with responsibilities for emergency response equipment distribution; latchkey children (including children who regularly provide their own care for several hours); and elected officials and media outlets. Finally, Section 5 considers logistical requirements to support these initiatives.

¹² Memorandum of Understanding among Calhoun County, Anniston Army Depot and Anniston Chemical Activity for Initial Activation of Alert and Notification System for Pink Zones during a Chemical Accident or Incident, §§ I, III(D) (March 13, 2003).

2 ALABAMA SPECIAL-NEEDS POPULATION PLANNING APPROACH

The starting point for this concept of operations is to provide a brief overview of the most important aspects of the problem of planning for persons with special needs located in the Alabama CSEPP footprint who need assistance in case of an accident. Section 2.1 describes the hazards posed by a chemical weapons accident at ANAD or other hazard events. Section 2.2 summarizes possible protective actions that are available to area residents in case of such an accident. Section 2.3 characterizes the situation regarding the special-needs population that would exist in the six Alabama CSEPP counties in the unlikely event of a chemical weapons agent release at ANAD. Section 2.4 presents the results of a series of special-needs planning workshops that were convened in the area during Fall 2002. Section 2.5 presents key assumptions that significantly affect the planning effort. Section 2.6 describes an operational approach and design for special-needs population planning.

2.1 HEALTH HAZARDS FROM ANAD CHEMICAL WEAPONS AGENT RELEASE

Prior to the beginning of the ANAD chemical weapons demilitarization program in August 2003, ANAD stored approximately 2,254 tons of chemical warfare agents in a variety of weapons configurations. The chemical weapons agents present in the ANAD stockpile include the non-persistent nerve agent GB, the persistent nerve agent VX, and vesicants (blister or mustard agents) HD and HT. The chemical and physical properties of these chemical agents affect how they might travel from an accident site on ANAD to nearby communities; chemical agent toxicity determines their health impacts.

If chemical agent is released, the magnitude of the impact depends on a number of factors, including how much of the agent was released, the type of agent released, the type of release (spill, fire, explosion), weather conditions, distance from the accident, and the ability of the population to take protective actions, among others. For this concept of operations, the probability of a particular accident occurring with a specific weapon and agent mixture is not addressed. For planning purposes here, the underlying assumption is simply that an accident could occur that causes a quantity of chemical weapons agent to reach the surrounding off-post population.

For all accident scenarios, the primary hazard to the population is agent vapor. Vapors are considered the primary injury producers because they can be carried downwind quickly. If a fire or explosion occurs, there is a probability (an extremely low one) that unprotected persons in close proximity to ANAD could be exposed to minute droplets of agent.

2.2 POSSIBLE PROTECTIVE ACTIONS

Protection from exposure to vapors can be accomplished in two ways: leaving the area (evacuation) before the vapor plume arrives or by taking shelter (which may need to be followed by evacuation). Evacuation has the advantage that protection from exposure is complete. In areas

from which it is not possible to relocate before the plume arrives, sheltering in a building with little infiltration of outside air offers the best protection available. However, the degree of protection offered by sheltering is affected by how long shelters are exposed to agent, the methods used to reduce air infiltration, whether sheltering is started (i.e., safe rooms are sealed) before arrival of the chemical plume, and whether persons exit their shelters at the optimum time for avoiding unnecessary exposure as contaminated vapor inevitably seeps into safe rooms. In theory, up to four levels of sheltering effectiveness can be implemented:

- **Normal:** Involves closing all windows and doors, turning off heating and air conditioning systems, and remaining in an interior “safe room.”
- **Expedient:** Involves fast and simple additions to normal sheltering and may include placing a rolled towel at the base of the safe room door; taping over air vents, electrical outlets, or other openings in the safe room; taping over door cracks; or taping plastic sheets over windows.
- **Enhanced:** Involves measures such as caulking, sealing, and structural modifications that reduce the ability of vapors to enter a building or safe room.
- **Pressurized:** Involves using special filter-blower units to pressurize a tightly sealed safe room. The filter-blower filters incoming air and produces an outflow of air through building leakage points that keeps out contaminated air.

Not all of these shelter-in-place methods are appropriate or have been adopted for the general population by the counties surrounding ANAD; the protective actions that each jurisdiction has selected are discussed in Section 3.1. Furthermore, persons who have sheltered in areas that may have been affected by contaminated vapor will need to ventilate their shelter after exiting and then evacuate the area until it is safe to return. Sheltering in place is expected to be the optimum protective action for special-needs populations and is discussed in more detail in Section 3.2.

Scientific studies have found that by just placing a towel at the base of the door to the shelter room and taping over the vents of a bathroom with a window, airflow into the room can be reduced by almost 20%. Putting tape around the door and taping a sheet of plastic over the window reduces airflow by over 30%.¹³ Oak Ridge National Laboratory found that taping was essential to the reduction of air infiltration, while plastic sheeting was not a critical element for reducing air infiltration.¹⁴ Using a recirculating charcoal filter fan in the room adds even more

¹³ Blewett, W.K., et al., 1996, Expedient Sheltering in Place: An Evaluation for the Chemical Stockpile Emergency Preparedness Program, U.S. Army, SBCCOM, June.

¹⁴ Sorensen, J.H. and B.M. Vogt, 2001, Will Duct Tape and Plastic Really Work? Issues Related To Expedient Shelter-In-Place, Oak Ridge National Laboratory, ORNL/TM-2001/154, August.

protection.¹⁵ Overall, for the elderly, mobility impaired, or handicapped persons who may lack the physical ability or resources to tape and seal a room, the choice of the room, the baseline tightness of the room, and variation in the abilities needed to implement expedient protection are the key sheltering-in-place issues.¹⁶ A disadvantage of sheltering in place is that the protection it offers decreases over the time that the shelter is exposed to agent. However, scientific studies have found that even normal sheltering can be protective for relatively long periods of time (more than five hours).¹⁷

2.3 SPECIAL-NEEDS POPULATION SITUATION

Information related to the numbers of persons with special needs and their distribution within the Alabama CSEPP footprint is summarized in this section. More detailed information on the reported disabilities and assistance needs of registered persons with special needs is presented in Appendix A. This appendix also provides a brief summary of research findings regarding the likely reactions of persons with special needs and their caregivers and other helpers to a chemical weapons agent release.

The Alabama CSEPP IRZ and PAZ counties have gathered considerable information about persons with special needs located within their jurisdictions. A variety of methods were used over several years to obtain this data,¹⁸ including:

- telephone and in-person interviews of a randomly-selected 10% of IRZ households;
- telephone and in-person interviews with persons referred by individuals, community leaders, private organizations, and government agencies;
- door-to-door canvassing in the pink zones;
- self-registration in response to saturation mailings, targeted mailings to special groups, newspaper ads, and distributions of forms to selected locations; and
- verification through direct mail of data provided previously.

¹⁵ Blewett, W.K., and V.J. Arca, 1999, Experiments in Sheltering in Place: How Filtering Affects Protection Against Sarin and Mustard Vapor, U.S. Army, SBCCOM, June.

¹⁶ Sorenson and Vogt, 2001.

¹⁷ Ibid.

¹⁸ See Argonne National Laboratory, 2001, Design and Implementation of Data Maintenance Methods, September 27; Lueschen, G., and D. Wernette, 2001, A Summary Report on Efforts to Identify Residential Household Special-Needs Populations in the Alabama Chemical Stockpile Emergency Preparedness Program Footprint, April 30.

The focus of this activity was to encourage persons with special needs who may require assistance in the unlikely event of an accidental release of chemical agent from ANAD to self-identify and register with AEMA. Greater resources were available for this effort within the pink zones and the IRZ than within the PAZ. Consequently, the resulting data may not be representative of any particular jurisdiction or population group in the whole Alabama CSEPP footprint. Furthermore, these data are highly perishable because changes in the life circumstances of persons with special needs occur frequently. Therefore, annual data updates under the auspices of the Alabama and the six county EMAs are intended to keep this information current, in accordance with CSEPP guidance.¹⁹ Finally, anomalies and internal contradictions within data records were resolved by classifying respondents as needing assistance if they indicated that any of the protective actions could not be implemented. Figure 2 shows where the 5,892 households of persons with special needs who reported that they need assistance in case of an accident were located within the Alabama CSEPP footprint at the time of the annual 2002-03 data update, which began in early June 2002 and concluded on April 10, 2003.

Table 1 summarizes the characteristics following the 2004-05 annual update of the registered Alabama CSEPP special-needs population residing in the pink zones, the remainder of the IRZ, and the PAZ. Some 3,880 households with persons with special needs reported that they would require assistance with evacuation or sheltering in the six CSEPP counties around ANAD. A total of 1,923 (50%) of those registering for special assistance in the CSEPP footprint reside in Calhoun County. Of the remaining persons with special needs in the six-county area, 13% are located in Talladega County, 21% reside in Etowah County, 14% are in St. Clair County, and 2% live in Clay and Cleburne Counties. Others have registered who reside outside of the PAZ. They are not included in these totals. An additional 159 persons with special needs reside in the rural areas of Cleburne (47) and Clay County (112) adjacent to the PAZ.

In the pink zones, the remainder of the IRZ, and the PAZ, 83% of those needing special assistance of any kind reportedly face some times or situations that would prevent them from evacuating the area, exiting from shelters, or relocating from the area after exiting their shelters by themselves or with help from family members. Almost 63% report being unable to create a shelter in the event that sheltering is required.

2.4 SPECIAL-NEEDS POPULATION PLANNING WORKSHOPS

Planning workshops for agencies and organizations that serve and support persons with special needs were held in five of the CSEPP footprint counties during Fall 2002 (Calhoun County – September 30, Talladega County – October 17, Clay County - November 19, St. Clair County – November 21, and Etowah County – December 5). A total of 115 agencies and

¹⁹ Federal Emergency Management Agency and Department of the Army, 1996, Planning Guidance for the Chemical Stockpile Emergency Preparedness Program, § 8.9.1, Special Populations Planning Checklist, May 17.

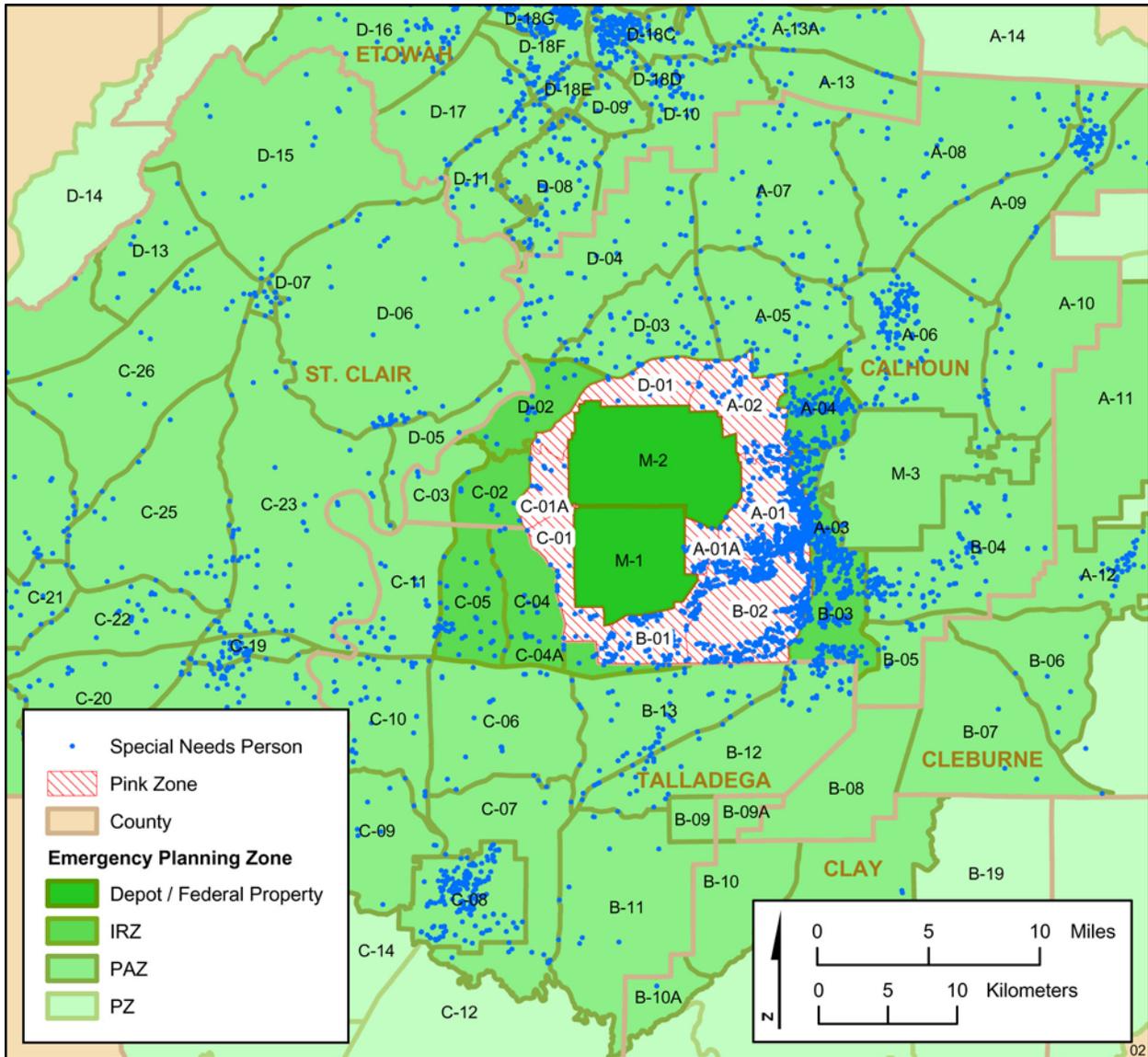


FIGURE 2 Locations of Persons with Special Needs in 2003

organizations were invited and more than half attended the workshops. The purpose of the workshops was to discuss needs and accommodations for both registered and unregistered persons with special needs and strategies for providing assistance before, during, and following an accident involving chemical weapons agent. The typical response to the workshops by attendees was appreciation for the information provided and the opportunity to provide input and recommendations. Attendees also expressed the desire to be included in future special-needs planning initiatives.

TABLE 1 Characteristics of Registered Alabama CSEPP Footprint Special-Needs Households

Population Group	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County		Group Total ^b
	Pink Zones ^a	Rest of IRZ	PAZ					IRZ	PAZ	
Persons with physical, medical, or mental disabilities who reported needing assistance ^c	840	564	456	2	81	806	534	48	448	3779
- To evacuate	747	476	383	2	65	692	435	37	373	3210
- To shelter	648	449	345	2	61	644	364	35	340	2880
- Both to evacuate and to shelter	576	384	296	2	51	567	314	28	294	2512
Persons without reported disabilities but unable to evacuate	28	22	13	0	0	15	13	0	10	101
Latchkey children ^d	87	73	70	0	12	99	78	4	74	497
Total registered for assistance ^e	868	586	469	2	81	821	547	48	458	3880

^a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

^b The columns should not be added to produce totals for each row because there are group overlaps and gaps. For example, about half of latchkey children are located in households that also include persons with physical or mental disabilities. Some persons without disabilities also report an inability to shelter.

^c Persons in this category reported having one or more physical, medical, or mental problems. Persons who reported that they cannot drive but reported no other disability are not included.

^d This group includes children with physical, medical, or mental disabilities who might also be included in the first four rows of the table.

^e An additional 159 persons with special needs reside in the rural areas of Cleburne (47) and Clay County (112) adjacent to the PAZ.

Following the workshops, 32 agencies and organizations responded to a follow-up questionnaire and indicated their willingness to help in one or more of the following areas:

- seven agencies/organizations said they would provide technical assistance for the design of special-needs shelter kits or protective action accommodations;
- fourteen agencies/organizations said they would help with the design of education and training materials for persons with special needs and their caregivers;
- eighteen agencies/organizations said they would help deliver training and education for persons with special needs and their caregivers;
- twenty-nine agencies/organizations said they would help with outreach to persons with special needs and their caregivers; and
- twenty-three agencies/organizations said they would help register persons with special needs.

In their responses to the questionnaire, many agencies also offered to play a leadership role with the special-needs planning efforts. Agencies and organizations that interact with and serve persons with special needs in the Alabama CSEPP footprint are generally supportive of participation in ongoing planning, training, and outreach efforts to the special-needs populations. Because needs in each county vary considerably, plans for agency and organization involvement will also vary. At a minimum, however, regular communication by county EMAs with agencies and organizations about special-needs planning initiatives and activities is necessary to identify problems, sustain interest, reinforce messages, and avoid breakdowns in the event of an emergency.

2.5 KEY PLANNING ASSUMPTIONS

The following key assumptions are intended to provide the basis for county EMA planning for persons with special needs following a chemical weapons agent accident, as well as for many other hazards. The purpose of identifying these assumptions is to develop a consensus about what needs to be in place at the time of an accident in order to provide maximum protection. Some of these conditions already exist, whereas others do not. Those conditions that are not yet in existence must be a focus of planning and implementation activities. The list of planning assumptions that follows is divided into conditions that are in place and conditions that are in process.

County resources may be insufficient to assist all persons with special needs in the Alabama CSEPP footprint in case of a chemical weapons agent release at ANAD. Consequently, persons with special needs are responsible for planning and providing their own assistance, as much as they are capable of, at the time of such an accident. In particular, the county EMAs expect that each person with special needs will develop a “Help Network.” Help Networks are

synonymous with “personal support networks” in American Red Cross emergency planning doctrine.²⁰ According to the American Red Cross, personal support networks “should be people you trust and who could check to see if you need assistance. They should know your capabilities and needs, and offer help within minutes.” Persons who need such assistance should:

“Complete a written assessment of your needs with your network. . . . This can help your network members learn the best ways to assist you and offer additional ideas for you to think about: emergency information list, medical information list, disability-related supplies and special equipment list, evacuation plans, relevant emergency documents, and personal disaster plan. Arrange with your network to check on you immediately if local officials give an evacuation order or if a disaster occurs. Do this before an emergency happens so that your network members can help you when you need them. Also, ask your network to notify you of an emergency you may not know about.”

A number of the assumptions that follow, as well as the special-needs protective action options, training design, and logistics requirements described in the remainder of this document, are based on recognition and acceptance by the special-needs population of this personal responsibility.

2.5.1 Conditions Currently in Place

- The special-needs population in the Alabama CSEPP footprint has been identified through a self-registration process.
- The identities of registered persons with special needs will change over time (due to deaths, new conditions, temporary disabilities) and will need to be periodically updated. As a consequence, resources will need to be appropriately re-allocated.
- Persons with special needs are responsible for preparing themselves for emergencies to the maximum extent possible.
- Persons with special needs who have all the help needed (e.g., from family, relatives, neighbors, and friends) to take protective actions are not part of this plan.
- Persons with special needs who do not have arrangements (e.g., with family, relatives, neighbors, and friends) for help in taking protective actions have reported their needs to their respective Alabama CSEPP county EMA by registering for assistance.

²⁰ American Red Cross, Disaster Preparedness for People with Disabilities, available at <http://www.redcross.org/services/disaster/beprepared/disability.wpd>.

- Persons with special needs who have registered for assistance are addressed by this plan.
- Special assistance requests in the immediate aftermath of a chemical weapons agent release may not be accommodated through county EMAs due to the overwhelming number of requests for assistance that are anticipated.
- Sheltering in place is the optimal initial strategy to protect persons with special needs.
- Persons who have sheltered in place may need to evacuate from the area after they have been directed to exit from their shelters.
- Anniston CSEPP community residents receive public outreach information from county EMAs, AEMA, FEMA, ANAD, utility companies, the Program Manager for Eliminating Chemical Weapons, and public and private agencies and organizations about preparing for and responding to a variety of natural, technological, and terrorism disasters, including an accident at ANAD.²¹
- A continuing effort has been made to instruct and update the general public about their responsibilities and choices in preparing for and responding to all hazards.
- Toll-free telephone assistance is available during normal business hours to registered and prospective persons with special needs.
- Persons with special needs are eligible to receive the same equipment and training that are being made available to the general population in the zones where they reside. Additional equipment and training, as well as supplemental delivery options, may be available to persons with disabilities.
- The system of service delivery to the special-needs population is sufficiently flexible to accommodate increasing numbers of registrants as information circulates about the services provided.
- All county Emergency Operations Plans for persons with special needs are up-to-date.

²¹ Examples of such information include: Your Family Supplies Kit by FEMA and American Red Cross; Your Family Disaster Plan by FEMA and American Red Cross; Disaster Preparedness Coloring Book by FEMA and American Red Cross; Helping Children Cope with Disaster by FEMA and American Red Cross; Food and Water in an Emergency by FEMA and American Red Cross; What's Your Plan by the National Weather Service, AEMA, and American Red Cross; Access Emergency Survival Handbook by Edie Hand Foundation and Alabama Concerned Citizens for Emergency Survival Services Committee; county calendars; county newsletters; county CSEPP brochures; and other preparedness materials.

2.5.2 Conditions in Process

- Persons with special needs are educated to assess their needs for adequate caregiver/other helper arrangements in order to obtain maximum protection.
- Where appropriate, special-needs population planning groups develop strategies for assisting registered persons with special needs.
- Caregivers/other helpers receive needed training and prepare to assist registered persons with special needs to carry out protective actions.
- Special training program accommodations needed by registered persons with special needs in order to implement protective actions are accomplished.
- Registered persons with special needs, as well as their caregivers/other helpers, receive training to assist them on how to exit their shelters at the appropriate time (including ventilating their shelters), and possibly to evacuate from the area.
- The SPP software and responder training on its use are current at all times.

2.6 OPERATIONAL PLANNING DESIGN

This concept of operations for the special-needs population requires follow-up activities for implementation. The purpose of such efforts would be to develop procedures for providing assistance to the registered special-needs population in the Alabama CSEPP footprint before, during, and after a chemical weapons agent release. Annexes to county EMA CSEPP plans have been produced to record implementation activities for protecting the special-needs population.

An integral part of this operational planning effort and its implementation is to foster communication among all stakeholders, county EMA planners, community leaders, persons with special needs, representatives of special-needs groups, representatives of organizations and agencies, and technical experts. They are among those who should be included in the process at varied and appropriate levels of interest and commitment to solving the problem. Thus, diverse special-needs planning groups provide focused attention to the problems posed for the registered special-needs population by a chemical weapons agent release. These groups require specific information and technical assistance, such as lessons learned from special-needs planning in other communities, design approaches for successful collaborations, communication support, and assessment tools. The groups also would need to document its findings and conclusions and create implementation strategies that address such subjects as training and logistics. Resources to mobilize and support this effort may be necessary for certain participants.

3 SPECIAL-NEEDS PROTECTIVE ACTION OPTIONS

Planning for the special-needs population takes place within the context of planning for the general population. Within this context, providing maximum protection for persons with major impairments and disabilities presents a significant additional challenge. Disasters and emergencies do not discriminate; individuals with impairments who are routinely dependent on technical aids and equipment, medication, and assistance from others will be at a greater disadvantage in dealing with the associated problems.

Section 3.1 briefly summarizes the protective actions that are available for the general population in the Anniston CSEPP community. Section 3.2 reviews alternatives for providing equivalent protection to registered persons with special needs.

3.1 PROTECTIVE ACTIONS FOR THE GENERAL POPULATION IN THE ALABAMA CSEPP FOOTPRINT

For the general population in the Anniston CSEPP community – especially in the pink zones – development of protective actions for a release of agent has been an extremely difficult challenge for the planning community. This section briefly summarizes the strategies that are planned in order to enable the general population to carry out protective actions.²²

Decisions about protective actions will be made individually by each county EMA, both during the planning process and at the time of an event. Although all six county EMAs recognize that sheltering in place and evacuation are the two major protective action options available for the general public, their decisions regarding implementation methods and timing may vary. A third option for some counties is for the population to take no immediate action, but to stay informed through the Emergency Alert System radio and television stations.

The population in the pink zones and in the IRZ areas outside the pink zones will be instructed to shelter in place under most circumstances.²³ Whether the general public located in the PAZ will be instructed to shelter in place or to evacuate the area will depend on conditions at the time of an event. Table 2 summarizes the protective action strategies that are planned for the Alabama CSEPP footprint's general population in each county under most foreseeable circumstances.

²² Due to the dynamic planning process presently under way, material in this section about protective actions in Calhoun County is based on discussions between D. Champ of the Calhoun County EMA and W. Metz and E. Tanzman of Argonne National Laboratory on June 5 and August 21, 2002, and W. Metz and D. Ford of the Calhoun County EMA on October 23, 2003.

²³ However, evacuation may be necessary under certain circumstances. For example, evacuation may be the protective action of choice in case of an igloo fire.

TABLE 2 Alabama CSEPP Footprint General Population Protective Action Strategies

Protective Action Strategy ^a	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Pink Zones ^b	Rest of IRZ	PAZ					IRZ	PAZ
Tone alert radio	X	X	X	X ^c	X ^c	X ^c	X ^c	X	X ^c
Expedient sheltering ^d using offered shelter-in-place kit	X	X	X	X	X	X	X	X	X
Portable room air cleaner	X	X						X	X ^f
Respiratory protection devices ^e	X								
Evacuation and shelter-in-place training	X	X	X	X	X	X	X	X	X
No action, stay informed	X	X	X	X	X	X	X	X	X

^a The material in this table is based on interviews by W. Metz of Argonne National Laboratory of D. Champ of the Calhoun County EMA on June 5 and July 12, 2002; of A. Poole of the Clay County EMA on June 6, 2002; of B. Collison of the Cleburne County EMA on June 6, 2002; of D. Waits of the Etowah County EMA on June 7, 2002; of E. Hayes and B. Schaefer of the St. Clair County EMA on June 7, 2002; of G. Holcomb, Jr., of the Talladega County EMA on June 5, 2002, and January 15, 2003; and of J. Smith and D. Ford of the Calhoun County EMA on October 23, 2003. Additional discussions about this subject occurred during the 2002 CSEPP Integration Planning Workshop on December 10-12, 2002, and the Alabama CSEPP Integration Planning Team on January 8, 2003.

^b The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

^c Tone alert radios are being distributed to households located within 11.4 miles of ANAD in these counties.

^d Normal and enhanced sheltering in place are not included in county protective action plans. Collective protection is included in county protective action plans for certain schools and special facilities.

^e Respiratory protection devices are being offered to registered persons with special needs in the pink zones during home visits (explained in Section 3.2) provided that they can satisfy the same requirements as the general population.

^f Residents of zones B-12 and B-13 are being offered portable room air cleaners.

Because the health threat from airborne chemical agent releases is highest in the pink zones, considerable effort and resources have been devoted to improving the protection provided by sheltering in place. Among the strategies being implemented for the general population in the pink zones are:

- **tone alert radios** for hazard notification;
- **shelter-in-place kits** including such items as duct or painter's tape, plastic sheeting, scissors, towels, and instructions for their use to reduce infiltration of outside air;
- **portable room air cleaners** for use in conjunction with shelter-in-place kits to remove any chemical weapons agent that may infiltrate the safe room;
- **respiratory protection devices** that can be donned for limited periods to provide a specially filtered individual air supply while sheltering in place or evacuating; and
- **collective protection** by over-pressurizing or filtering the air of a large room (e.g., an auditorium or cafeteria) or area in certain facilities, such as schools and nursing homes, in order to protect to all facility occupants simultaneously.

Public education is a key part of protective action planning for the general population. A variety of outreach activities are ongoing by county EMAs, AEMA, and the U.S. Army Chemical Materials Agency, such as providing speakers from county EMAs to school assemblies, fraternal and social organizations, and community events; operating a community outreach office; sponsoring a large public information campaign; distributing materials at special events; and saturation mailings of emergency planning calendars and materials to residents. In addition, local news media coverage of the planning effort plays an important role in the general public education process.

3.2 PROTECTIVE ACTIONS FOR PERSONS WITH SPECIAL NEEDS WHO REGISTER FOR ASSISTANCE

The county EMAs in the Alabama CSEPP footprint recognize that, for registered persons with special needs, providing maximum protection from a chemical release requires a different assortment of protective action strategies than are required for the general population or for institutionalized persons with special needs. Detailed planning for implementation of these strategies is needed, and disabled persons should be included in the planning process to ensure that their points of view and concerns are adequately addressed prior to an emergency in order to minimize adverse impacts on these individuals and their communities.^{24,25} Section 3.2.1

²⁴ National Organization on Disability, 2002, Guide on the Special Needs of People with Disabilities for Emergency Managers, Planners & Responders, Washington DC, available at www.nod.org.

presents the strategies that will be used to enhance the ability of persons with special needs to shelter in place or to be evacuated. Section 3.2.2 discusses the potential impacts of different impairments on the capability of persons to successfully carry out protective actions. Plans for carrying out these strategies are presented in Sections 4 and 5.

3.2.1 Strategies for Protecting Persons with Special Needs

Some protective action strategies and preparedness components are the same for the general population and for persons with special needs (e.g., assembling a kit of family disaster supplies). Some additional specific strategies are needed to assist persons with special needs to shelter in place or evacuate the area after exiting their shelters. The following alternatives may be provided as appropriate by zone:

- **special-needs shelter-in-place kits** with easier-to-handle components;²⁶
- **caulking, sealing, and structural modifications** to enhance shelters more completely than may be possible using expedient sheltering;
- **portable room air cleaners** that could be set up for immediate operations with remote switches and an indicator lamp to show air cleaner activation, for those who would otherwise be unable to switch them on when instructed to do so;
- A **“Help Network”** concept under which a person with special needs relies on pre-established contacts or volunteers to them in preparing for and taking protective actions during and after an emergency (e.g., in evacuating before a hazard arrives, exiting a shelter after the hazard has passed, or evacuating the area after exiting a shelter);
- **tone alert radios** for persons with special needs who live beyond the boundary within which the general population receives these alerting devices, in order to provide an extra measure of assurance that these special populations will be alerted promptly to the possible need to take protective actions; and
- **special-needs-related training**, which is explained in Section 4.

Table 3 summarizes the strategies that are being provided at county EMA staff request in each of the planning zones if resources are available to implement them.

²⁵ Parr, A.R., 1987, Disasters and Disabled Persons: An Examination of the Safety Needs of a Neglected Minority, Disasters, 11(2).

²⁶ For details of the product testing, see Argonne National Laboratory, 2003, Testing of Alternative Shelter-in-Place Materials for Use by Persons with Special Needs, August.

TABLE 3 Protective Action Strategies for Registered Persons with Special Needs

Protective Action Strategy	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Pink Zones ^a	Rest of IRZ	PAZ					IRZ	PAZ
Shelter-in-place kit	X	X	X	X	X	X	X	X	X
Caulking, sealing, and structural modifications	X								
Portable room air cleaner delivered and set up if requested; remote switch as needed	X	X						X	X ^b
Help Network	X	X	X	X	X	X	X	X	X
Tone alert radio	X	X	X	X	X	X	X	X	X
Special-needs-related training	X	X	X	X	X	X	X	X	X

^a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

^b Residents of zones B-12 and B-13 are being offered portable room air cleaners.

3.2.2 Impacts of Impairments on Ability to Take Protective Actions

Different impairments have varying impacts on one's ability to take protective actions. Some conditions, such as back problems, may make it difficult or impossible to implement expedient shelter-in-place measures without assistance, but may have little or no impact on the ability to evacuate prior to plume arrival, to shelter in place, or to evacuate from the area after exiting shelters. Other conditions, such as inability to drive, may have no effect on the ability to shelter in place, but may make it impossible without assistance to evacuate prior to plume arrival or after exiting shelter.²⁷ The information that the special-needs population reported about both their conditions and their ability to take protective actions is extremely valuable for planning purposes. It is being used to identify the number of households for whom protective action strategies beyond those for the general public need to be provided, and to characterize the types of additional strategies that are needed.

Nevertheless, it is important to recognize that the information that some persons with special needs have reported appears to be anomalous. For example, some reported that they have profound disabilities and lack family help yet also indicated that they need no assistance. Others reported conditions that would not appear to hinder evacuating, sheltering in place, or evacuating the area after exiting shelter, but stated that they were not capable of taking these protective actions on their own. Where such apparent contradictions in the reported information exist, the planning process must include efforts to obtain clarification. This will be accomplished through mechanisms described in Section 5.

²⁷ Accessible transportation was a verified reason for 29% of disabled households not evacuating when ordered to do so in the face of Hurricane Bonnie. Van Willigen, M., et al., 2002, "Riding Out the Storm: Experiences of the Physically Disabled during Hurricanes Bonnie, Dennis, and Floyd," Natural Hazards Review, Aug.

4 SPECIAL-NEEDS TRAINING DESIGN

Varied instructional and training efforts are needed to maximize protection of the special-needs population on the basis of the options presented in Section 3. Targeted instruction and training are critical for those with special needs, both to combat anxiety and to stimulate implementation of protective actions.

Instructional materials and training formats have been designed to be consistent with approved safety and protective action practices and current public outreach activities being carried out by AEMA and county EMAs. The basic principle being stressed is that, ultimately, each individual is responsible for knowing his/her protection options and for planning for emergencies. In the unlikely event of a release of chemical weapons agent, all residents need to protect themselves and help each other because county emergency services may not be able to respond to the overwhelming number of requests that could be made for assistance in this or other kinds of emergencies.

All instructional materials and training formats are submitted for review to local agency and organization personnel who interact with persons with special needs, emergency professionals, technical experts, and county EMAs. Attempts are made to involve persons with special needs in the review and testing of draft training materials to ensure that the perspective of the target audience is recognized and incorporated.

The special-needs planning workshops (see Section 2.4) produced recommendations for working with persons with special needs and their caregivers/other helpers. Some of the more frequently mentioned ideas included these:

- Keep preparedness and protective action messages simple and easy to understand; show people what to do.
- Reinforce preparedness messages through as many contacts as possible.
- Make an effort to confront, reduce, and eliminate misinformation and myths.
- Help people develop and update personal preparedness plans and kits.
- Respect the dignity and decision-making ability of persons with special needs.
- Place educational and instructional materials in highly visible and accessible locations.

To provide the education needed, a combination of instructional materials and training presentations have been developed and implemented. These are based on sound principles of emergency planning and public communication and incorporate workshop recommendations. All instructional materials and training presentations are consistent with current county instructions. Assessment and evaluation methods for these materials have been implemented. Tailored

instructional materials and training presentations, based on the ability to reach the audience members, are being provided to the following seven audiences:

- adults with physical, mental, or medical problems and impairments;
- persons who only lack transportation;
- caregivers/other helpers;
- employees of vendors with responsibilities for emergency response equipment distribution;
- latchkey children, including children who regularly provide their own care for several hours;
- elected officials and media outlets; and
- the general population.

Table 4 shows the medium that is being provided to each audience. As this activity continues to develop, it is possible that county- or zone-specific differentiation will occur. Tables 5-11 summarize the different types of instructional materials and training that are being delivered to each audience in the Alabama CSEPP footprint, based on expressed county EMA staff preferences.

Adults with physical, mental, or medical problems and impairments receive instructional materials that focus on improving the individual's assessment of his or her own ability to take protective actions, as well as enhancing each person's capabilities to take protective actions for which he or she is responsible. Information presented to these audiences is to be reinforced annually by letters and advertisements whose goal is to update the special-needs population database, as well as through literature that reaches these persons through outreach to various

TABLE 4 Instructional and Training Efforts for Selected Audiences

Audience	Instructional Materials	Training
Adults with impairments	X	X
Persons who only lack transportation	X	
Caregivers/other helpers	X	X
Vendor employees	X	X
Latchkey children	X	X
Elected officials and media outlets	X	
General population	X	X

TABLE 5 Types of Special-Needs Population Instructional Materials and Training for Adults with Impairments

Instructional Materials and Training	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Pink Zones ^a	Rest of IRZ	PAZ					IRZ	PAZ
Annual saturation mailing to general population inviting persons with special needs to register	X	X	X	X	X	X	X	X	X
Newspaper ads accompanying annual saturation mailing	X	X	X	X	X	X	X	X	X
Annual data verification mailing to registered persons with special needs	X	X	X	X	X	X	X	X	X
Instructional brochure mailing to registered persons with special needs in PAZ			X	X		X	X		X
Personal instruction during visits to install other equipment, caulking, sealing, or structural modifications	X	X						X	X ^b
Instruction to groups of senior citizens at selected centers, assisted-living facilities, and apartment buildings	X	X	X	X	X	X	X	X	X
Instructional mailing about persons with special needs through county newsletter					X				
Instructional brochure mailing about persons with special needs provided to the general population					X				
Self-registration outreach	X	X	X	X	X	X	X	X	X
Ongoing telephone contact through toll-free telephone hotline	X	X	X	X	X	X	X	X	X
Verify that all registered persons with special needs residing in the six-county CSEPP footprint who want TARs have received them and that the TARs are in working order	X	X	X	X	X	X	X	X	X

TABLE 5 (Cont.)

Instructional Materials and Training	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Prepare instructional materials for persons with special needs who have received TARs, giving TAR operation instructions, self-registration directions, the special-needs toll-free number, and other information as appropriate	X	X	X	X	X	X	X	X

a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

b Residents of zones B-12 and B-13 are being offered portable room air cleaners.

TABLE 6 Types of Special-Needs Population Instructional Materials and Training for Persons Who Only Lack Transportation

Instructional Materials and Training	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Pink Zones ^a	Rest of IRZ	PAZ					IRZ	PAZ
Information included in annual county calendar	X	X	X	X	X			X	X
Information included in general population flyer/brochure/county newsletter	X	X	X	X	X	X	X	X	X
Information included in instructional material mailings to registered persons with special needs in PAZ			X	X	X	X	X		X
Individual instruction to registered persons with special needs through toll-free telephone assistance line to find own transportation	X	X	X	X	X	X	X	X	X
Instructional material mailed to all registered persons with special needs lacking only transportation advising them to find own assistance	X	X	X	X	X	X	X	X	X
Verify that all registered persons with special needs residing in the six-county CSEPP footprint who want TARs have received them and that the TARs are in working order	X	X	X	X	X	X	X	X	X
Instructional material provided to persons with special needs who have received TARs, giving TAR operation instructions, self-registration directions, the special-needs toll-free number, and other information as appropriate	X	X	X	X	X	X	X	X	X

^a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

TABLE 7 Types of Special-Needs Population Instructional Materials and Training for Caregivers

Instructional Materials and Training	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Pink Zones ^a	Rest of IRZ	PAZ					IRZ	PAZ
Persons with Special Needs Action Resource Kit (PARK)					X			X	X
Caregiver Training Guide and Workbook	X	X	X	X	X	X	X	X	X
Caregiver training video	X	X	X	X	X	X	X	X	X
One-page fact and introductory video for caregivers concerning persons with special needs	X	X	X	X	X	X	X	X	X
Training sessions for caregiver organizations	X	X	X	X	X	X	X	X	X

^a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

TABLE 8 Types of Special-Needs Population Instructional Materials and Training for Vendor Employees

Instructional Materials and Training	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Pink Zones ^a	Rest of IRZ	PAZ					IRZ	PAZ
Sensitivity orientation for vendor managers and selected employees	X	X	X	X	X	X	X	X	X

^a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

TABLE 9 Types of Special-Needs Population Instructional Materials and Training for Latchkey Children

Instructional Materials and Training	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Pink Zones ^a	Rest of IRZ	PAZ					IRZ	PAZ
Schoolchildren Protective Action Resource Kit (SPARK)					X			X	X
Alabama CSEPP Education for Schoolchildren (ACES)					X			X	X
Letters from principals/superintendents mailed to parents of public and private schoolchildren	X	X	X	X			X		
Visits to schools by county EMA, fire, and police personnel	X	X	X	X	X	X	X	X	X
All-hazard public outreach information on family preparedness provided in brochures, newsletters, and calendars	X	X	X	X	X	X	X	X	X
Masters of Disasters	X	X	X	X	X	X	X	X	X
Verify that all registered persons with special needs residing in the six-county CSEPP footprint who want TARs have received them and that the TARs are in working order	X	X	X	X	X	X	X	X	X
Flyers/brochures distributed to parents of public and private school children	X	X	X	X	X	X	X	X	X
Instructional materials provided to persons with special needs who have received TARs, giving TAR operation instructions, self-registration directions, the special-needs toll-free number, and other information as appropriate	X	X	X	X	X	X	X	X	x

^a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

TABLE 10 Types of Special-Needs Population Instructional Materials and Training for Elected Officials and Media Outlets

Instructional Materials and Training	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Pink Zones ^a	Rest of IRZ	PAZ					IRZ	PAZ
Presentations to elected officials explaining special-needs population emergency planning in advance of special-needs data update (verification and saturation) mailing	X	X	X	X	X	X	X	X	X
Annual media advisory provided to media outlets explaining special-needs population emergency planning in advance of special-needs data update (verification and saturation) mailing	X	X	X	X	X	X	X	X	X
Newspaper ads placed in advance of data update (verification and saturation) mailing	X	X	X	X	X	X	X	X	X
County EMA official briefings of elected officials	X	X	X	X	X	X	X	X	X

^a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

TABLE 11 Types of Special-Needs Population Instructional Materials and Training for the General Population

Instructional Materials and Training	Calhoun County			Clay County PAZ	Cleburne County PAZ	Etowah County PAZ	St. Clair County PAZ	Talladega County	
	Pink Zones ^a	Rest of IRZ	PAZ					IRZ	PAZ
Saturation mailing to general population advising persons with special needs to build Help Network	X	X	X	X	X	X	X	X	X
Make public presentations about assisting persons with special needs to build a Help Network to those groups where education is requested, i.e., schools, PTOs, churches, civic organizations	X	X	X	X	X	X	X	X	X

^a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

organizations seeking new self-registrants. Instructional materials are being made available, depending on request, in audience-appropriate languages (e.g., English, Spanish, American Sign Language) and visual/symbolic forms (e.g., Braille). Efforts to accommodate groups of persons who are non-English speaking, forgetful/confused, not literate, blind, or deaf/hard-of-hearing have been initiated (i.e., teletypewriter or telecommunications device) based on county EMA requests. In addition, a toll-free telephone hotline and a TTY/TDD line are maintained and publicized for instruction in response to individual inquiries and for outreach. A telephone messaging center is available via a toll-free number to persons with special needs who seek to learn county EMA emergency communications messages, an assortment of prerecorded messages in English and Spanish, as well as the meaning of emergency tonal messages. Caregivers/other helpers are expected to also use these training materials to reinforce preparedness education and protective action implementation on a zone-appropriate basis.

Instructional materials for persons who have no disabling physical, mental, or medical problems and impairments and only lack transportation emphasize personal responsibility for securing alternative sources of transport and to provide suggestions for arranging rides in case evacuation is necessary. These materials provide information on how individuals can best secure rides themselves as well as on how to build a Help Network under discussion within CSEPP counties. The materials provide information on any available community organization and agency resources that might meet individual needs.

Instructional materials/training for caregivers/other helpers that interact regularly with persons with special needs are being provided. Interactions occur routinely in homes, in meetings, during recreational activities, during transport, as part of hospital outpatient programs, or through community programs that stress the importance of assisting persons with special needs in emergency preparedness. The materials and training teach these formal and informal caregivers how they can:

- reinforce personal responsibility for preparedness and protective action implementation;
- promote self-help planning as individual situations change, including development of individual Help Networks;
- assure that previously distributed educational and instructional materials are visible and accessible;
- contact vendors regarding equipment and material problems or concerns; and
- if appropriate, develop individual Help Networks for evacuation assistance.

Copies of previously existing instructional materials that are already being provided to persons with special needs (based on their zone location) are available to caregivers/other helpers. The materials prepared for this audience are given to vendors on request.

Presentations to managers and employees of vendors that deliver, install, or maintain equipment in the homes of persons with special needs focus on enhancing their sensitivity to the difficult situations faced by these persons. Such vendors include firms under contract to counties, AEMA, or Federal agencies to deliver, install, or maintain protective and notification equipment, as well as those performing structural modifications, caulking, and sealing in the homes of persons with special needs. These informal presentations improve the ability of vendor managers and employees to plan better for each individual's preparedness and protective action implementation, to interface with each person to create self-help plans tailored to accommodate environmental situations, and to set up and maintain equipment and materials to optimize the protection of household members. Guiding interactions between these vendor employees and persons with special needs maximizes the benefits to be derived from equipment and materials. The materials prepared for caregivers are available to vendors on request.

Instructional and training materials have been prepared for schoolchildren as a means of reaching both registered and nonregistered latchkey children. This strategy is based on best practices for teaching multi-hazard preparedness and protective response, as proposed in the Fall 2002 county planning workshops. County EMAs direct the preparedness message to children through a combination of in-school training, ongoing public education, and place-of-worship and community organization involvement.²⁸ Children are prepared for emergency situations by using a variety of teaching techniques, such as role playing in small groups, behavior modification exercises, self-instruction (self-verbalization, self-monitoring, self-evaluation), hosting community "latchkey awareness weeks," heightening parental awareness of problems through information dissemination procedures, and partnering with a variety of community programs.^{29,30,31,32} A critical goal is to maintain high levels of the desired emergency response behaviors through constant reinforcement.³³ Studies have shown that although parents and children believe that children are prepared for emergencies and disasters, they actually are not.³⁴ One study found that although parents had devised at-home rules and had fully informed their

²⁸ Peterson, L., 1989, "Latchkey Children's Preparation for Self-Care: Overestimated, Underrehearsed, and Unsafe," *Journal of Clinical Child Psychology*, 18(1), 36-43.

²⁹ Robinson, B.E., B.H. Rowland, and M. Colman, 1986, "Taking Action for Latchkey Children and Their Families," *Family Relations*, 35, 473-478.

³⁰ Peterson, L., 1989.

³¹ Peterson, L., L. Mori, and C. Scissors, 1985, "Mom or Dad Says I Shouldn't: Supervised and Unsupervised Children's Knowledge of Their Parents' Rules for Home Safety," *Journal of Pediatric Psychology*, 11(2), 177-188.

³² Jones, R.T., and J.I. Haney, 1984, "A Primary Preventative Approach to the Acquisition and Maintenance of Fire Emergency Responding: Comparison of External and Self-Instruction Strategies," *Journal of Cognitive Psychology*, 12, 180-191.

³³ Jones, R.T., A.E. Kazdin, and J.I. Haney, 1981, "A Follow-Up to Training Emergency Skills," *Behavior Therapy*, 12, 716-722.

³⁴ Peterson, L., et al., 1985.

children of those rules, children were unable to recall the rules and failed to recognize what behaviors were and were not acceptable.³⁵ Therefore, the materials and training emphasize this.

Instructional and training materials continue to be developed for the general population as part of county EMA strategies to assist persons with special needs to build a Help Network. Materials seek to encourage volunteers to step forward. Training is available to interested schools, parent-teacher organizations, churches, civic organizations, and others.

Each set of instructional materials and training formats are distributed and implemented through a coordinated effort with appropriate county EMAs, AEMA, and cognizant Federal agencies. All materials are being distributed in concert with established state and county public programs to maximize distribution of materials and attendance at training sessions.

³⁵ Ibid.

5 SPECIAL-NEEDS LOGISTICS REQUIREMENTS

The logistics of procuring and delivering the equipment, instructional materials, and training specified in Sections 3 and 4 to thousands of persons with special needs and others with whom they interact is a difficult challenge. The purpose of this section is to present the systems through which this will be accomplished.

5.1 PROTECTIVE EQUIPMENT PROCUREMENT AND DELIVERY

Protective equipment to implement the strategies identified in Section 3 is delivered to persons with special needs largely through vendors. A separate direct-mail vendor (whose other responsibilities are explained below) carries out an extensive telephone outreach effort to encourage registered persons with special needs to take maximum advantage of this program, and to identify those who require home visits. Vendors have provided interpreters for households where the delivery process is more appropriately conducted in Spanish or sign language. The different delivery functions these organizations are carrying out are presented in Table 12.

5.2 INSTRUCTIONAL MATERIALS AND TRAINING PROCUREMENT AND DELIVERY

Procurement and delivery of instructional materials and training varies, depending on the audience and nature of the items. Considerable reliance is placed on a direct-mail contract vendor. Production and delivery of materials to audiences that do not receive training is carried out entirely by the direct-mail contract vendor. These audiences include persons who

TABLE 12 Special-Needs Protective Equipment Procurement and Delivery

Item	Procurement and Delivery Responsibility	Delivery Method(s)
Shelter-in-place kits	County EMA contract vendors	Varies among counties, including pickup from a distribution and training center and designated locations, delivery by mail, or delivery during home visits
Caulking, sealing, and structural modifications	U.S. Army Corps of Engineers through Federal Emergency Management Agency	Home visits
Portable room air cleaners delivered and set up if requested; remote switch as needed	Calhoun and Talladega County EMA contract vendors	Pickup from central warehouse or delivery to homes if requested
Tone alert radios	AEMA contract vendor	Home visits

only lack transportation, elected officials, and media outlets. Where audiences receive both materials and training, the delivery of materials by mail is carried out by the direct-mail contract vendor. These audiences include adults with impairments, caregivers, vendors, and latchkey children. Finally, the direct-mail contract vendor places all media advertisements and advisories and outreach materials for the purposes of promoting self-registration.

Delivery of instructional materials that are distributed at the time of training activities (i.e., for adults with impairments, caregivers/other helpers, vendors, and latchkey children) is carried out by the training vendor. These materials include SPARK, ACES, and the caregiver/other helper training brochure. This vendor also delivers all of the associated training at sessions and locations to be determined.

The direct-mail contractor vendor maintains a toll-free telephone hotline for individual contact with persons with special needs. Vendor staff can:

- assist in the self-registration process;
- report any situation changes to the appropriate county EMA;
- refer people to equipment and material distributors, county EMA offices, and agencies and organizations that are capable of providing selected services and support;
- support individual planning and preparation efforts with one-on-one instruction and reassurance; and
- mail requested instruction sheets and other information.

5.3 COORDINATION

The large number of activities and vendors involved in this process creates coordination challenges. Meeting this challenge is a central part of implementing the logistics associated with this concept of operations. This section briefly describes the coordination system.

First, information coordination is crucial. Because of the central role played by the direct-mail contract vendor in interacting with the special-needs population database, as well as with individual persons with special needs, this vendor is responsible for key information coordination. These activities include making referrals between vendors at their request of persons with special needs; making appointments for visits to the homes of persons with special needs that may need caulking, sealing, or structural modifications; and transmitting data among various vendors. In addition, the direct-mail contract vendor distributes quarterly data updates to AEMA and the six county EMAs in the Alabama CSEPP footprint.

Second, coordination among protective equipment vendors is essential. Figure 3 illustrates the delivery process used to carry out distribution of portable room air cleaners; shelter-in-place kits; tone alert radios; and caulking, sealing, and structural modifications to registered persons with special needs in the pink zones. Up to five telephone calls are made by the direct-mail contract vendor to each person to verify that he or she has a working tone alert radio, whether appropriate protective equipment has been received, and whether home visits are needed. In addition, assessment of homes in the pink zones for possible caulking, sealing, and structural modifications may be triggered by either the answers to a set of questions or by vendor employee identification of excessive air infiltration.

Third, Figure 4 illustrates the delivery process used to carry out distribution of portable room air cleaners, shelter-in-place kits, and tone alert radios to registered persons with special needs in the IRZ (plus zones B-12 and B-13 in the Talladega County PAZ). Up to three telephone calls are made by the direct-mail contract vendor to each person to verify that he or she has a working tone alert radio, whether appropriate protective equipment has been received, and whether home visits are needed. The vendor responsible for delivering equipment in Calhoun and Talladega Counties contacts those requesting delivery and arranges appointments for the delivery and installation of equipment and supplies.

Fourth, residents in the PAZ, including those with special needs, are entitled to shelter-in-place kits. The county EMAs are delivering the kits through one of three delivery systems – by either mail or door-to-door delivery service to residents who return postage-paid request cards, as well as by pickup at a distribution and training center or designated locations. The tone alert radio vendor makes up to four telephone attempts to reach each registered person with special needs to arrange appointments for delivery and installation.

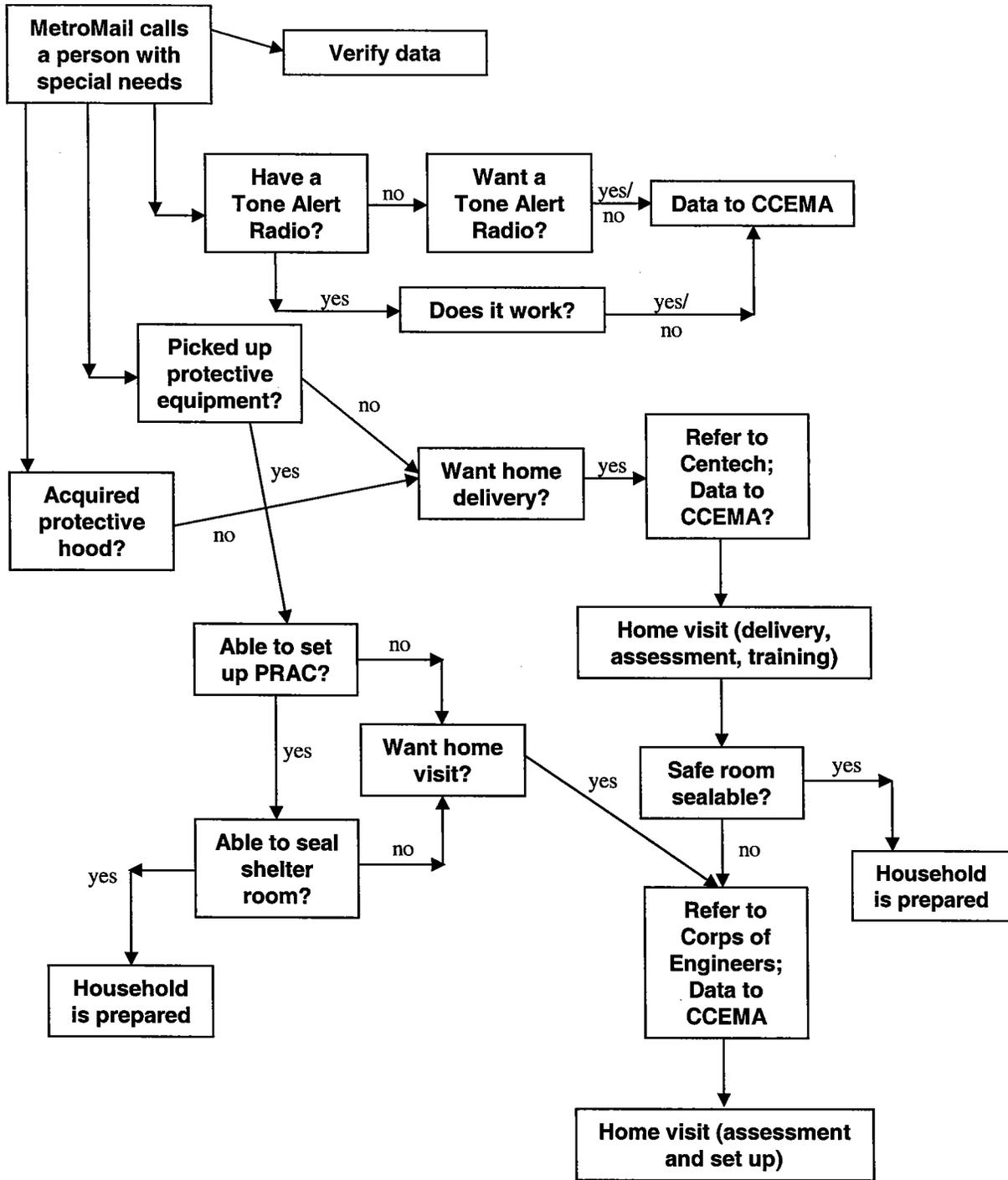


FIGURE 3 Vendor Process for Protective Equipment Delivery in the Pink Zone

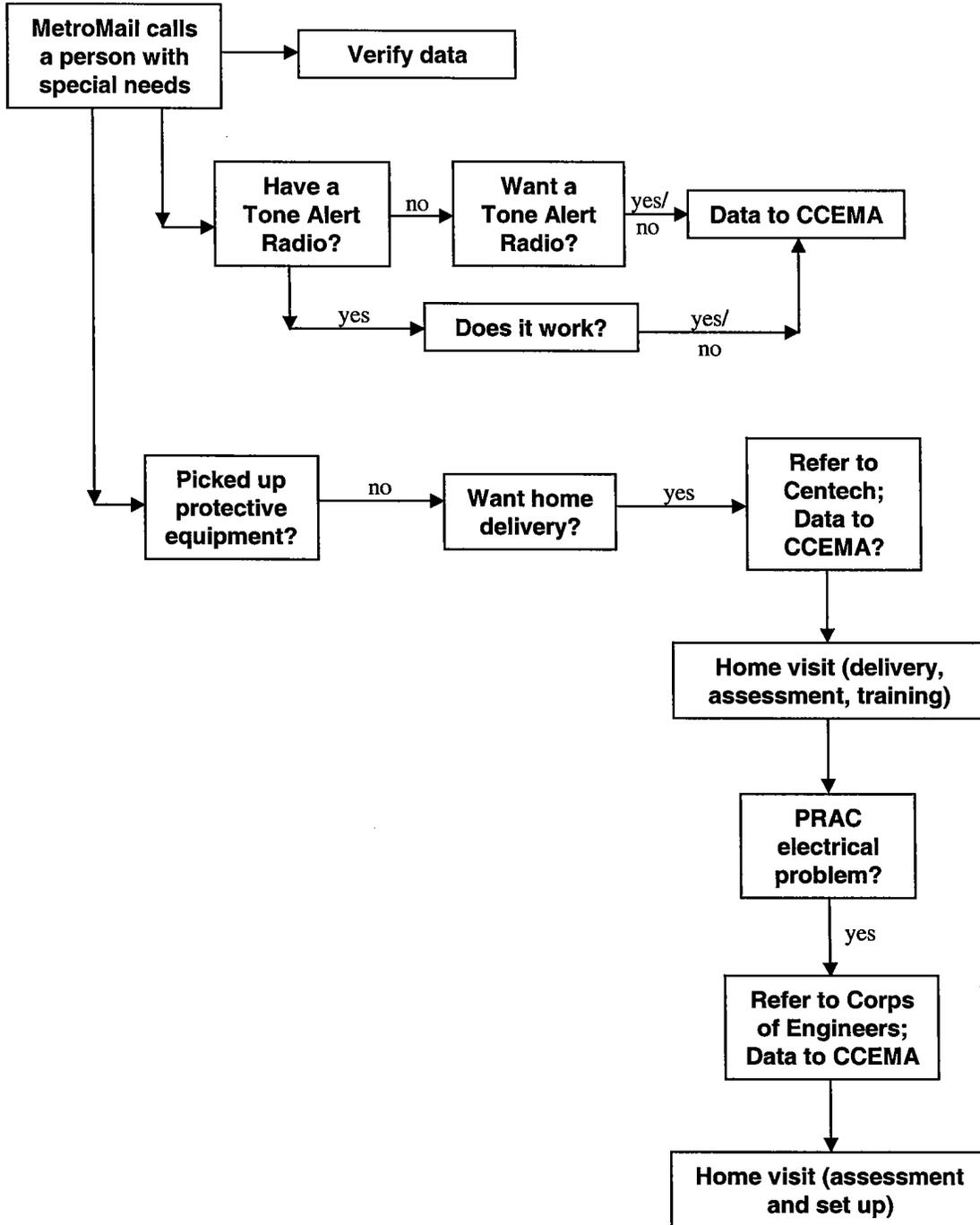


FIGURE 4 Vendor Process for Protective Equipment Delivery in the IRZ

APPENDIX A:
CHARACTERISTICS OF THE SPECIAL-NEEDS POPULATION

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CHARACTERISTICS OF THE SPECIAL-NEEDS POPULATION

The information in this appendix provides additional detail to supplement the statistics for the registered special-needs population in Section 2.3. Because it is important to understand how persons with special needs and those around them would respond to a chemical weapons agent release at ANAD, this section also briefly summarizes research findings related to the likely emergency responses of persons with special needs and their caregivers and other helpers.

In the self-registration process, persons with special needs were asked about their ability to take specific protective actions. Besides indicating their ability to shelter in place or evacuate, persons with special needs were also asked to provide subjective assessments of their disabling condition. Many registrants reported multiple disabilities (an average of 2.5 disabilities or conditions per registrant), which were not always consistent with their self-assessed ability to take protective actions. The numbers of persons reporting each type of disability are listed in Table A.1, which summarizes reported disabilities among registered persons with special needs in the pink zones, the rest of the IRZ, and the PAZ following the 2004-2005 update.

TABLE A.1 Reported Disabilities of Registered Persons with Special Needs

Special Need	Pink Zones ^a	Rest of IRZ	PAZ	Total
Cannot drive	587	400	1417	2404
Cannot walk well	643	433	1603	2679
Heart problem	420	283	924	1627
Physically unable	455	320	1139	1914
Vision problem	345	211	724	1280
Hearing problem	273	192	609	1074
Wheelchair	174	110	448	732
Is confused	302	173	669	1144
Mentally disabled	159	80	347	586
On oxygen	117	80	272	469
Confined to bed	42	28	102	172

^a The pink zones are A-01, A-01A, A-02, B-01, B-02, C-01, C-01A, and D-01.

Disaster Response Capabilities of Persons with Special Needs

The goal of special-needs planning in the Alabama CSEPP footprint is to achieve maximum protection of persons with special needs in the case of a chemical weapons agent release. The needs of this population group are diverse, and attitudes of persons with special needs towards preparedness and protective action response vary greatly. Some general conclusions from existing data and research are presented here:

- Most persons are motivated to reduce their risk. For example, some 66.2% of PAZ residents reported that they would participate in emergency preparedness classes about sheltering in place if they were told that evacuation would not be possible.³⁶ Assuming that the registered special-needs population shares this attitude, many can be expected to be open to such measures.
- People will probably engage in “confirmation behavior,” that is, after receiving a warning, they are likely to contact other sources they believe to be credible. Some 35.3% of the PAZ general population reported they expect to act at once, whereas others would turn to media, neighbors, police or 9-1-1, or family or friends to obtain more information before evacuating.³⁷ Where county EMAs instruct persons with special needs to shelter in place, preparing and educating individuals about the need for rapid response would be imperative because a chemical agent release may not afford sufficient time to engage in confirmatory behavior prior to taking protective action.

Some 89.3% of the PAZ general population reported that they definitely or probably will follow the advice of emergency officials.³⁸ This suggests that EMA officials, as credible and trusted authorities, should be highly visible in any training design. Furthermore, experience has demonstrated that people need to develop and practice their plans in order for them to be effective.

Response Capabilities of Caregivers and Other Helpers

People usually try to help each other in disaster situations. Family, relatives, neighbors, and friends are more likely to support persons with special needs if these caregivers and other helpers feel confident that they have the knowledge, skills, and abilities to be of aid. Training can provide this valuable capability. Some 78% of Calhoun County PAZ residents strongly agreed or agreed that they would help their neighbors in case of a chemical weapons agent release from ANAD.³⁹ We can anticipate that many persons with special needs will be able count on family,

³⁶ Wernette, D., 2001, Final Report on PAZ Residents’ Attitudes and Intentions Regarding a Chemical Accident at the Anniston Army Depot, June 29, p. 13.

³⁷ Ibid. at p. 15.

³⁸ Ibid. at p. 16.

³⁹ Ibid. at p. E-8.

relatives, neighbors, and friends who will carry the burden after they have been trained properly.⁴⁰ Volunteer caregivers (non-kin) for the non-institutionalized, frail elderly are themselves generally aged 65 or older.⁴¹

The counties in the Alabama CSEPP footprint also contain many service organizations and agencies whose representatives have expressed concern and willingness to participate in efforts to assist persons with special needs. However, most of these service organizations and agencies have limited resources for such an effort. Research literature suggests that there are ways to successfully engage service organizations and agencies in collaborative ventures to mitigate the complex community problems that this emergency planning effort presents.⁴²

⁴⁰ Davis, K., 1990, "Emergency Alarms," *British Medical Journal*, 300, 1713-1716.

⁴¹ Barker, J.C., 2002, "Neighbors, Friends, and Other Nonkin Caregivers of Community-Living Dependent Elders," *Journal of Gerontology*, 57B(3), S158-S167.

⁴² National Organization on Disability, 2002; American Red Cross, 1999, *Assisting People with Disabilities: A Resource for Red Cross Disaster Services Staff*, Washington, D.C., available at www.redcross.org; California Governor's Office of Emergency Services, 2000, *Meeting the Needs of Vulnerable People in Times of Disaster: A Guide for Emergency Managers*, Sacramento, CA, available at www.oes.ca.gov.