

# Development of Minimum Standards for Emergency Shelter Operation in Sharp County, Arkansas

## 2009-2010

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#### **Acknowledgments:**

I would like to thank Terry Baker, R.S., my former supervisor, for encouraging me to apply to EPHLI, as well as, James Tanner, R.S. for his support and encouragement over the past year.

I would also like to thank my mentor and team (Chris Rustin REHS and Clayton Horton R.S.) for always being there to provide feedback and support as I began to develop my project.



## **EXECUTIVE SUMMARY:**

Since 2008, Sharp County, Arkansas has experienced four natural disasters. These included a tornado, two floods, and an ice storm. As a result of these disasters, emergency shelters were opened to provide sanctuary to those who were displaced. Although the State of Arkansas does not have shelter regulations currently in place, the Arkansas Department of Health is required to assess these shelters to monitor the sanitation practices as well as the general health of the evacuees throughout the time of shelter operation. As a result of these assessments, it was found that of eight known shelters in the County, five were lacking not only in the facilities to provide an adequate level of sanitation, but also in the proper training to operate a shelter.

A systems thinking approach was used to identify why these gaps existed and aid in finding a solution. As a result, it was determined that a minimum standard for shelter operation in Sharp County was needed, as well as a system to track where shelters were operating, and the services they were able to provide.

A template of minimum standards is in development that not only will address the physical facilities needed but also includes a requirement for annual training in shelter operation, food safety, and other environmental health issues that pertain to emergency shelters. As part of the tracking system: shelters will be classified by services provided, required to obtain approval from the Sharp County Health Unit on their facilities prior to an emergency, and will need to contact the Sharp County Office of Emergency Management and the Sharp County Health Unit prior to operation.

Once this project is completed it will be presented to the Sharp County Office of Emergency Management, Arkansas Department of Human Services, Red Cross, and shelter operators for their comments/suggestions and revised prior to presenting to the Sharp County Quorum Court for approval and implementation. If this project is found to be successful, it will be submitted to the State Board of Health for potential statewide implementation.

## **INTRODUCTION/BACKGROUND:**

Disasters can strike anytime, anywhere—be it a plane crash, tornado, hurricane, chemical spill, or ice storm. While the types of disasters may differ greatly, they may share one common denominator; a number of people will be forced to leave their homes in search of food and shelter. The number of people impacted may be as few as one or two families to as many as an entire city, county or potentially even state. Commonly communities will rally together to provide a facility that can provide refuge to those in need.

Recently in North Central Arkansas, the citizens have been affected by these disasters four times. Since 2008, Sharp County has endured two floods, a tornado, and most recently an ice storm in 2009 that left many without electricity for as long as three weeks. During that time several churches and other facilities opened themselves up as an emergency shelter.

At the present time, the State of Arkansas does not have regulations in place that establish minimum standards for the operation of emergency shelters; however, during these events the Arkansas Department of Health is required to assess these facilities to ensure the health of the citizens of the State remains protected. The Division of Environmental Health Protection assesses these shelters daily for deficiencies in sanitation practices as well as food safety.

As a result of these assessments it was learned that many of the shelters in Sharp County were not only unprepared to serve as shelters but also were untrained in shelter management, food safety and sanitation, in addition to other non environmental risks. It was also observed that tracking the location and operation of these shelters was difficult; as several shelter facilities opened without notifying the local office of Emergency Management.

Potential environmental health risks observed during these disasters included:

- Pets in the shelter facility
- Food being used that was from an unapproved source (wild deer, homemade casseroles, etc.)
- Food workers using unsafe food handling practices
- Lack of potable water
- Lack of facilities in the food preparation area to wash hands and sanitize utensils/equipment
- Shower/bathing facilities unavailable

**Problem Statement:**

*During times of disaster, emergency shelters are lacking in facilities as well as sanitation training; a minimum standard for emergency shelter operation is needed to maintain an adequate level of environmental health despite the adverse conditions.*

**Cost of Changing:**

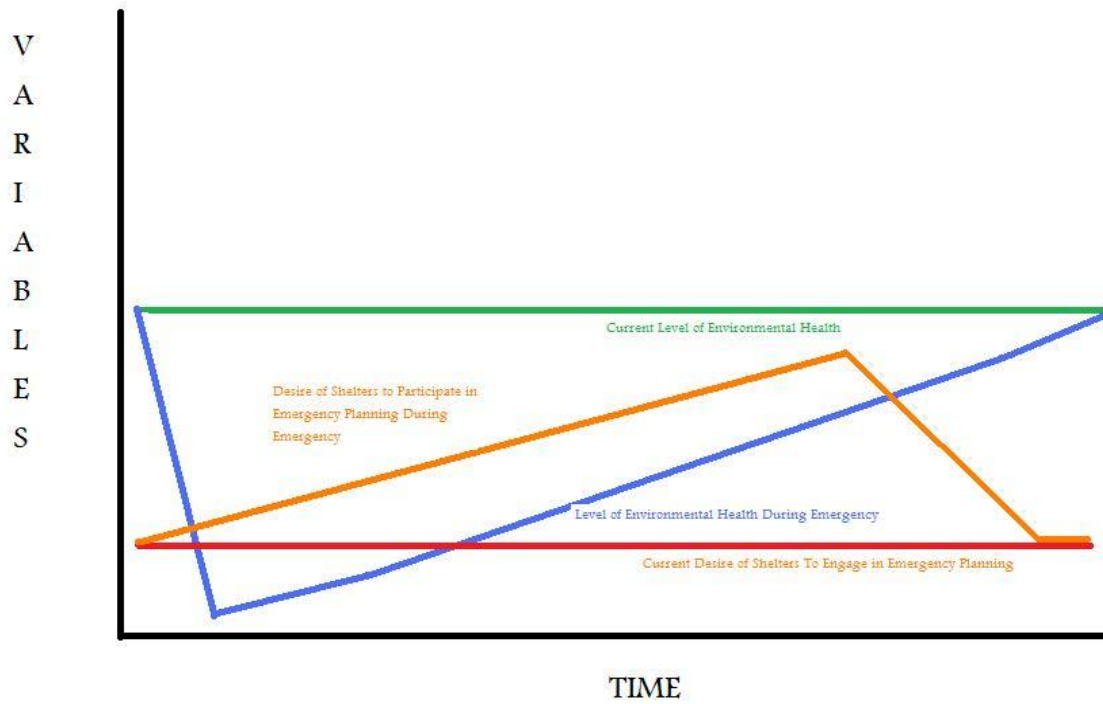
During an emergency the main goal of shelters is to provide a warm place to sleep and a hot meal to those who are in need. Shelter operators do not consider that while their actions are well intentioned, serious illnesses can result if basic sanitary standards are not met. Operators do not see the cost of upgrading the kitchen, installing showers, or training volunteers being equal to the services they are able to provide at the time. Many shelters are operated by churches that also have other projects that they feel are more important than planning for the next emergency. In other words, shelters may feel that it is easier to do things the way they want instead of what is actually necessary to maintain the level of environmental health that the public has come to expect in their day to day lives.

Furthermore, in order to train shelter operators and volunteers it will take additional funds and time that may not be available to state and local emergency agencies due to being understaffed and/or underfunded.

	<b>Changing</b>	<b>Not Changing</b>
<b>Benefits</b>	<ol style="list-style-type: none"> <li>1. Decreased risk of food borne illness and other environmental health risks while the public is sheltered.</li> <li>2. Shelter operators/volunteers are better trained and prepared for disasters, thereby lowering the feeling of being overwhelmed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Shelter operators can focus time/money on other important projects.</li> <li>2. State and local authorities are able to focus on their primary jobs.</li> </ol>
<b>Costs</b>	<ol style="list-style-type: none"> <li>1. Increased costs and effort to inform and educate shelter operators and volunteers.</li> <li>2. Increased cost to the shelter operators in order to upgrade their facilities to meet standards.</li> </ol>	<ol style="list-style-type: none"> <li>1. Potential for food borne illness outbreak, spread of diseases (i.e. Influenza).</li> <li>2. Cost and efforts of state/local/red cross to try to provide the services needed during emergencies.</li> <li>3. Loss of confidence in state/local agencies as well as shelters to provide adequate shelters.</li> </ol>

**Chart 1.**

**Behavior Over Time Graph:**



**Figure 1**

Legend:

Green —The standard level of environmental health protection

Blue —The level of environmental health protection during time of emergency

Orange—The desire of shelter operators to engage in emergency planning during an emergency

Red—The desire of shelter operators to engage in emergency planning before and after the emergency



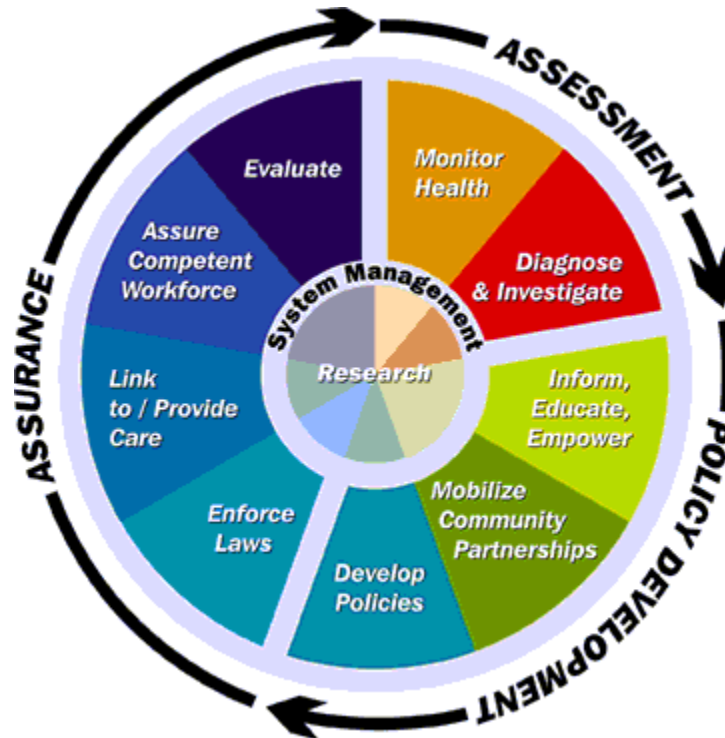


Figure 3 Osaki, Ten Essential Public Health Services<sup>2</sup>

**10 Essential Environmental Health Services:** This project addresses 4 of the 10 Essential Environmental Health Services by:

Essential Environmental Health Service #1 Monitor environmental and health status to identify and solve community environmental health problems: This project establishes a tracking system to monitor where shelters are operating and the types of service they are able to offer. In doing so, environmental health risks will be more easily identified.

Essential Environmental Health Service #3 Inform, educate, and empower people about environmental health issues: Upon implementation, this project will require shelters operators to receive training in emergency shelter management, sanitation, and food safety.

Essential Environmental Health Service #4 Mobilize community partnerships and actions to identify and solve environmental health problems: Will strengthen community partnerships through stakeholder involvement during the development of minimum standards.

Essential Environmental Health Service #5 Develop policies and plans that support individual and community environmental health efforts: Policies are being developed that will establish minimum standards for emergency shelter operation.

### *National Goals Supported*

This project supports the following National Goals:

**1. CDC Health Protection Goals<sup>3</sup>:**

Preparing People for Emerging Threats—establishes minimum standards for emergency shelters that require preregistration with the Sharp County Health Unit as well as annual training of support staff.

**2. National Strategy to Revitalize Environmental Public Health Services<sup>4</sup>:**

Goal II: Support Research—this project supports the intent of this goal by:

- Engaging community involvement during stakeholder meetings
- Incorporating public health practices that focus on prevention

**3. Environmental Health Competency Project: Recommendation for Core Competencies for Local Environmental Health Practitioners<sup>5</sup>:**

- Demonstrating a capacity to evaluate the effectiveness or performance of procedures and programs
- Showing the ability to solve problems
- Exhibit the capacity to plan, implement, and maintain fiscally responsible programs/projects using appropriate skills, and prioritize projects across the employee's entire workload
- Utilizing the capacity to form partnerships and alliances with other individuals and organizations in order to enhance performance on the job

Logic Model r.7/9/09

Goal: Improve Public Health During Emergencies by Standardizing the Operation of Emergency Shelters

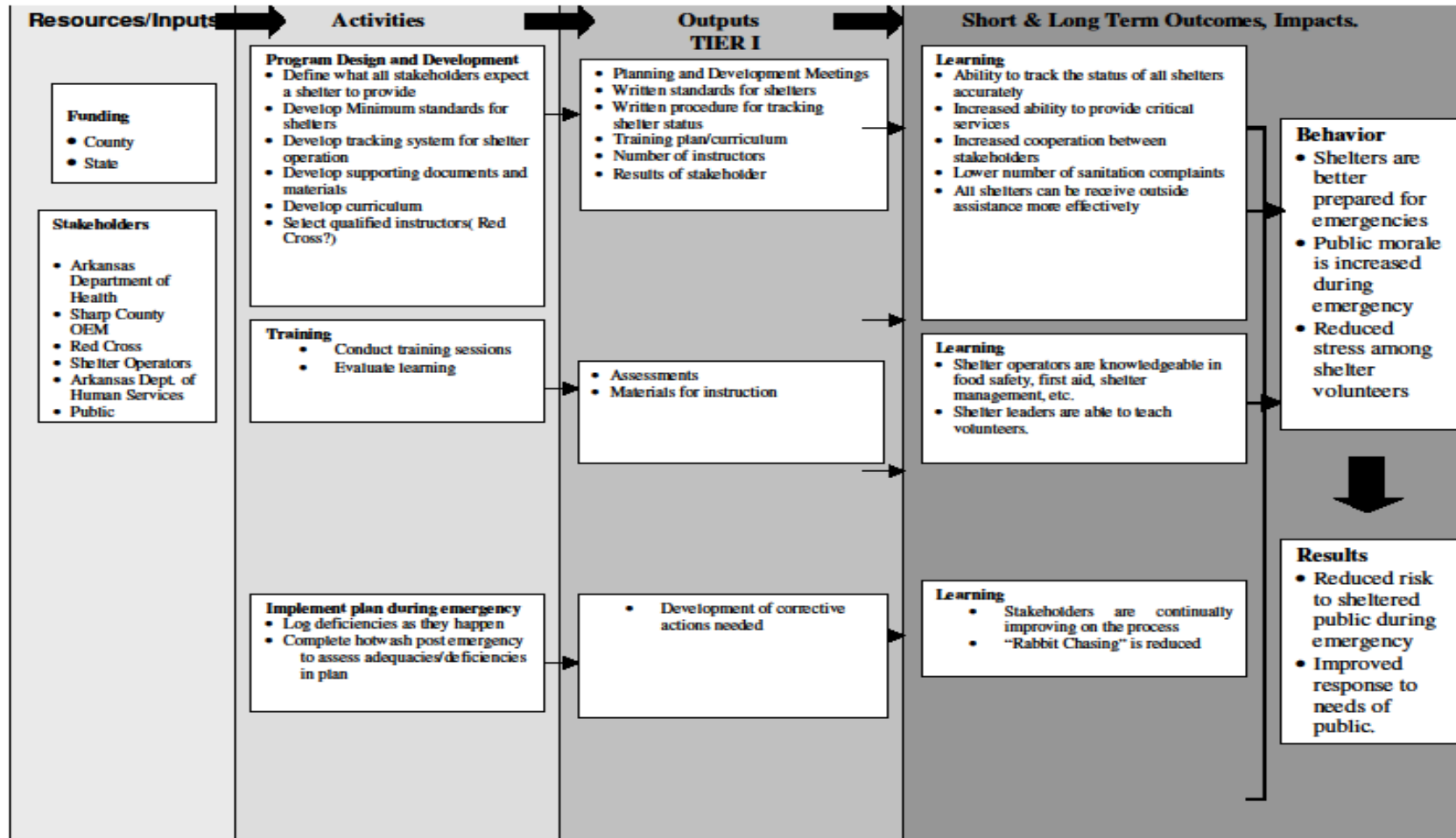


Figure 4--Project Logic Model

## **PROJECT OBJECTIVES/DESCRIPTION/DELIVERABLES:**

**Program Goal:** To standardize the quality of services provided at emergency shelters by establishing minimum standards to operate as an emergency shelter and establish a tracking system to monitor shelter operation.

**Health Problem:** During recent disasters, emergency shelters are not equipped or trained to identify environmental health risks. Which could lead to potential food borne illness outbreaks, as well as unsanitary conditions within the shelters

**Outcome Objective:** By October 31, 2010 a protocol for shelter operation and tracking will be implemented in Sharp County, AR and will be ready to activate during an emergency situation.

**Determinant:** The ability to effectively monitor shelter operation and administer necessary training to operators.

**Impact Objective:** By October 31, 2010 100% of the facilities desiring to be shelters in Sharp County AR, will meet the minimum standards for shelter operation and be registered with the Sharp County Office of Emergency Management (OEM).

### **Stakeholders:**

- American Red Cross
- Sharp County Judge and Emergency Management Officer
- Arkansas Department of Health
- Local Churches and Businesses acting as shelters
- Arkansas Department of Human Services

### **Contributing Factors:**

1. Lack of ability to track the operation of shelters.
2. Lack of minimum standards inhibits the ability to provide an adequate level of environmental health protection.
3. Lack of training on environmental health issues

## **METHODOLOGY:**

### ***Process Objectives:***

1. By September 31, 2010, Sharp County will have an ordinance that establishes minimum standards for serving as an emergency shelter.

#### **Event:** Stakeholder Meeting(s)

##### **Activities:**

- Obtain input from stakeholders as to what is expected from shelters.
- Draft ordinance defining minimum standards for the operation of emergency shelters
- Present system and documents to the Sharp County Quorum Court (SCQC).
- Gain approval as an ordinance from SCQC
- Educate those wanting to serve as shelters about the ordinance.

2. By October 31, 2010, 100% of shelters in Sharp County will understand the protocol for reporting their status and capabilities to the OEM.

#### **Event:** Stakeholder meeting(s)

##### **Activities:**

- Develop a procedure for obtaining approval to operate as a shelter.
- Develop a system of reporting the status and capabilities to the OEM.
- Draft necessary documents that will be required by the tracking/reporting system.
- Present draft to SCQC
- Obtain approval from SCQC for the implementation of the tracking system.

3. As an ongoing project, all approved shelters will be required to obtain a specific amount of training pertaining to shelter management, sanitation, food safety, and other health risk factors.

#### **Event:** Training sessions

##### **Activities:**

- Determine specific training that is needed.
- Establish a tracking system for training
- Find qualified instructors
- Provide training sessions to disseminate information about shelters and environmental risks that are associated with their operation

**Next Steps:**

- Research potential grants or loans available to shelters
- Meet with stakeholders in Sharp County to discuss importance of environmental health in shelters and how public health could be impacted during disasters.
- Meet with stakeholders to develop minimum standards for shelters
- Present proposed standards to Sharp County Quorum Court for approval
- If proved successful submit plan to the State Board of Health for potential statewide implementation

**Expected Outcomes:**

The expected outcomes of the successful completion of this project include a reduction in the environmental health risks that are currently present in emergency shelters in Sharp County, increased communication between all stakeholders, as well as shelters that are better prepared for all risks associated with an emergency situation. Ultimately, if found to be successful in Sharp County and is applied statewide; this should result in an increased level in environmental health protection for all citizens of Arkansas.

**LEADERSHIP DEVELOPMENT OPPORTUNITIES:*****Jeff L. Jackson R.S.***

Participating in Cohort V of the Environmental Public Health Leadership Institute (EPHLI) has provided me with new tools to address emerging, as well as, recurring issues in environmental health. Additionally, EPHLI has introduced me to a network of environmental health professionals from across the United States who have helped me to understand that, while geographically different, all environmental health professionals are facing the same issues. The relationships and knowledge I have gained, from the fellows and instructors of Cohort V, will no doubt prove to be an invaluable asset both personally and professionally.

As the first fellow selected to attend from the State of Arkansas, I am truly honored to have had the opportunity to attend EPHLI and am looking sharing the skills and practices that I have learned with my colleagues.

## **ABOUT THE EPHLI FELLOW**

Jeff Jackson R.S. has been employed as an Environmental Health Specialist for the Arkansas Department of Health since March, 2006. Mr. Jackson is currently stationed in Sharp County; however, he also covers Izard and Fulton County as well. His duties include the assessment of swimming pools and retail food services, issuing onsite wastewater permits, and responding to general sanitation complaints.

In December 2005, Mr. Jackson received his BSE in General Science with an emphasis in Biology from Arkansas State University. He has maintained registration with the Arkansas Board of Registered Sanitarians since May of 2007. His professional affiliations include the Arkansas Public Health Association as well as the Arkansas Society of Professional Sanitarians, of which he has served on the Executive Committee as Treasurer, since 2007. In 2009, Mr. Jackson was selected by his peers as the Sanitarian of the Year.

Mr. Jackson resides on his family cattle farm in Ash Flat, AR and competes in tie-down roping at rodeos and other events throughout the year.

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