A Developed Ideal Emergency Management Program Setting and Plan:
A Case Study of Navarro County

by

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Abstract

This research serves three main purposes. First, it defines county responsibilities and develops an ideal emergency management program based on the relevant literature. Second, these responsibilities and the ideal program are compared to the emergency program in Navarro County. Finally, based on the comparison, recommendations are made on how to improve the emergency program in Navarro County. The three methodologies utilized in the research are document analysis, observations, and interviews. Document analysis is used to examine Navarro County's emergency management plan, budget, and ordinances. Interviews were conducted with the county's Emergency Management Coordinator and Director. Observations were made while attending a Local Emergency Planning Committee (LEPC) meeting with members of the emergency program. Overall, the emergency program in Navarro County meets the standard developed by the ideal program. Improvements could be made by developing more mitigation plans, increasing the budget for the emergency program, and by participating in more first responder training.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

Disasters and emergencies have can occur at any moment, causing devastation and chaos. Recent events demonstrate the destructive impact of these events. Hurricanes Katrina and Rita caused billions of dollars in damage and cost thousands of lives. Events such as September 11 demonstrated the need for preparedness and response capabilities at state, federal, and especially local levels. These disasters and others will continue to test the abilities of emergency programs designed to deal with the preparation, response, and recovery efforts that surround any emergency.

While the aforementioned emergencies show the importance of a well-designed emergency program and response at the federal level, they also emphasize the need for well-developed emergency programs at the local level. According to Thomas Drabek, "the first line of responsibility for public protection resides with local government" (Drabek 1985, 85). In 1994, William Waugh named counties "the local governments of the future" (Waugh 1994, 255). The future is now, and the ability of county governments to protect both urban and rural areas and to develop closer relationships with the state, makes them ideal settings for emergency management programs.

While counties themselves may be the logical settings of emergency management programs, the programs themselves must meet a certain standard in order to ensure their effectiveness. Certain components must be present in the county to ensure the effectiveness of the emergency program.

Research Purpose

The purpose of this research serves three main goals. First, by using the relevant literature on the subject of emergency management, county responsibilities are defined. This literature also serves in developing an ideal emergency program. This ideal program will outline the necessities at each stage of an emergency management program. Second, this research compares Navarro County and its emergency management program to the developed model. Finally, based on the comparison, this research makes recommendations to Navarro County for improving its program.

The first half of this research is devoted to the development of a conceptual framework which outlines county responsibilities and develops an ideal emergency management program. The relevant literature on the subject is utilized in the development of the ideal program. County responsibilities, mitigation, preparedness, response, and recovery are the categories which make up the conceptual framework. The latter four elements of the model are the stages of an emergency program.

The second part of this research is devoted to the comparison of the ideal program developed from the literature to the program in Navarro County. Comparison of the ideal program and Navarro's program employs the three methods: focused interviews, document analysis, and observations. Recommendations for the improvement of the program in Navarro are made after the data have been collected and analyzed.

Chapter Summaries

Chapter 2 reviews the literature on emergency management. From this literature review, county responsibilities are defined, while a model emergency management

program is developed. This ideal program is presented in the conceptual framework, a tool used throughout the research as a guide to follow.

Chapter 3 provides information on the geographical, sociological, and governmental aspects of Navarro County. This chapter discusses the size and population, local industries that play a role in the emergency needs of the county, as well as the general hierarchy of the leadership in Navarro's emergency program. This chapter also includes an outline of the laws and regulations that provide the county with the necessary authority for the implementation of the emergency program.

Chapter 4 not only outlines the methodology used in conducting the research, but also discusses the reasons for the methods used, as well as any problems associated with these methods. Chapter 4 also presents an operationalization table. This table links the conceptual framework with the methods used.

Chapter 5 is the results chapter. It presents and examines the data collected from the research. The data are organized using the conceptual framework as a guide. The research methods are organized by the relationship with the elements of the framework.

Chapter 6 concludes the research by presenting recommendations for the Navarro County emergency program. A table outlines the findings of the comparison between the ideal emergency program and the program in Navarro County.

CHAPTER 2

AN OUTLINE OF COUNTY RESPONSIBILITIES AND AN IDEAL

EMERGENCY PROGRAM

Recent events have shown how unpredictable and devastating disasters and emergencies can be. In the past few months, our country has been tested and tried to the limit of its capabilities; our citizens have suffered and died, while our cities have been destroyed. Floods, hurricanes, and tornadoes cannot be prevented. They are forces of nature, impossible to stop. On the other hand, when these events do occur, people are there to protect us. After taking a closer look at the aftermath of any disaster, natural or otherwise, certain individuals work tirelessly to get life back to normal. These individuals make emergencies their living. While the public commonly recognizes organizations such as the Federal Emergency Management Association, FEMA, or other federal organizations, it is the individuals at the local level, those at the heart of the emergency, who respond first. Emergency management originates at the local level with programs that are closest to the people they are striving to protect.

Purpose

The purpose of this literature review is two-fold. First it defines and explains county responsibilities in an emergency management program, and second, it discusses the key components necessary to implement an effective county emergency management program. Why examine county emergency management programs? The reason is simple: Counties have a unique position in the hierarchy of governments, which, in turn,

provides the best position to respond in the event of an emergency. Most people are aware of the police force and the fire department's role in protecting the public; however, most are unaware that it is the emergency management personnel that take the lead during such emergencies or disasters. Using the relevant literature, this chapter assesses the requirements of a county with an emergency program and develops the ideal program setting. This ideal setting is important due to the ever expanding responsibilities of county governments over the past fifty years (Batts 2005, 15). The chapter also uses the literature to develop an ideal emergency management program. According to Shields (1998, 215), ideal types are structures or points of reference. These standards are developed to show in detail what county governments and emergency management programs should include to ensure that the officials and the programs themselves are capable of preparing for and protecting the public during an emergency.

County Responsibilities

To reiterate, counties have a unique position that allows them to develop useful and much needed emergency management programs. Why are counties the best locations and not cities or states? Why do counties allow their emergency management programs to work so effectively? "Despite the important augmentations and specialized functions that are provided by state and federal agencies…the first line of responsibility for public protection resides with local government" (Drabek 1985, 85). The ability of a county to cover a wider area of jurisdiction and to develop plans that are useful in both urban and rural settings makes counties the preferable location for the development of emergency plans over cities. Counties are able to provide the best of both worlds. They possess the

state's expertise and the local proximity of cities. The expanding capabilities of counties make them the logical choice for the implementation of emergency management programs.

Even though counties are a logical and preferable setting for emergency management programs, it does not necessarily make them qualified. So what must each county have in order to ensure that they are capable of providing the best protection to the public? The requirements and qualities developed from the literature make up the ideal county government and present all of the necessary factors to provide an effective and efficient emergency management program.

First Response

A review of the literature suggests that the most important factor that each and every county with an emergency management program must possess is first response capabilities. "Local government has the first line of official public responsibility" (McLoughlin 1985, 165). When a disaster or an emergency occurs, counties are the closest resource and need to be able to respond quickly and efficiently in order to protect as much of the public and the properties as possible. "When disaster strikes, the major burden of response and recovery falls on the local authorities involving local resources" (Hardenbrook 2005, 1). While state and possible federal aid may eventually become available to emergency areas, their resources may not be made ready until after the event. In the meantime, the county has to maintain stability and protection of the public. Counties must also be able to coordinate efforts among police, fire and rescue, and Emergency Medical Service (EMS). According to Comfort (1985, 156), planned coordination allows for a more effective response and recovery. The inability to react

during disastrous events will cost lives, time, and money. Any county with the desire to develop an emergency management program must first be sure that their first response capabilities are intact.

Intergovernmental Relationships

A strong relationship with the State is another key requirement of any county government. "In recent years, the growing capability of local public officials together with the experience and resources of emergency management personnel at the state and federal levels, have contributed to the improved ability to recover from a major disaster" (Rubin & Barbee 1985, 57). Rubin and Barbee suggest the development of intergovernmental relationships, because no local government alone can deal with all of the problems associated with emergency situations. Local entities, including counties, simply do not have the necessary resources or capabilities to provide complete relief without the assistance of other entities. With a close relationship to the State, a county can keep the paths of communication open. The counties, in turn, will have access to the State's resources and will be more aware of potential financial aid available to them in the event of an emergency.

Close relationships with other governments also allow for a more productive recovery. "To achieve a greater role in improving the speed and quality of recovery, local officials must find ways to ensure more productive intergovernmental relationships in post disaster recovery, to compete for scarce resources, and to enhance the community level decision making" (Rubin & Barbee 1985, 59). The growing trend of regional emergency management solidifies the importance of communication and relationships with other governments and agencies. A county's ability to develop intergovernmental

relationships more thoroughly protects the public and can prevent future loss. Mutual aid agreements between governments and agencies are also beneficial. According to McEntire and Meyers (2004, 187), these agreements "can help resolve some of the frustrations resulting from resource scarcity, personnel shortages, and the need for specific expertise." Whether from the state, federal, or other governments, aid is a necessity, and the development of relationships with these entities increase a county's support.

Coverage Area

Waugh (1994, 255) argues counties cover a greater area and serve more people than municipalities. This argument is due to the fact that the area is much larger than those of most local municipal governments. Since "counties typically provide a wider range of services to residents in unincorporated areas," they need to be sure that they have the capabilities necessary (Waugh 1994, 255). Danny Batts (2005, 12) points out that the need of broad coverage is rooted deep in the history of the emergency of counties. The responsibility of ample coverage can be accomplished through the extensive and elaborate plans of action allowing a county to respond to any and all emergencies in any part of the region. Counties are typically able to "institutionalize county-wide administrative functions," which is one reason emergency programs are able to thrive at this level (Waugh 1994, 256). Effective programs provide the same protection to all residents. In order to ensure a county has a comprehensive program, it needs to ensure capabilities expand across a wide area, protecting the county's residents.

Financing

Although having the capabilities and desire to help those affected by an emergency are important, they are not the first step. Counties must first know and find ways to fund the implementations of a program and its recovery efforts. The best plans and implementation efforts mean nothing if a county cannot afford to carry them out. Counties need to know what financial aid is available and what they stand to lose in the event of an emergency. When a disastrous event hits a community, there is a sudden and devastating loss of a tax base and business. Cochrane (2004, 291) maintains that the "post disaster liabilities will cause a long term drag on economic growth." The loss of these two sources of income can devastate a county if it no longer has an impact on the county's budget.

Many areas, when devastated by an emergency, receive federal funding, which only covers a maximum of 75% of the costs (Settle 1985, 101). "State and local governments still need to understand the importance of the financing alternatives at various stages of disasters, particularly since federal aid is not assured" (Settle 1985, 102). Counties should be aware of the financial cost in their area, especially with the properties they hold. "It would help if counties and cities all had fixed asset accounting systems-listing of all properties and facilities estimated value and depreciation schedule" (Settle 1985, 103). Before disasters occur, county governments need to understand what it will cost to recover and what arrangements should be made during the recovery. There are numerous options available to counties in regards to program funding and recovery. For counties wishing to develop an emergency management program, knowledge of

program funding is crucial and the basis for many other requirements essential for county programs. After all, if no funds become available, no program will develop.

Ordinances

To ensure the emergency program and plan function, officials must first lay the foundation for the program's authority. According to McEntire and Myers (2004, 142), this foundation provides the key to a successful program. To implement new ideals, guidelines, and functions for an emergency program, officials need to develop a set of ordinances or laws. Thus, the program's authority will be legally based in the set of ordinances and these laws provide the officials with the judicial power to perform the details of the emergency plan. They not only develop the hierarchical rankings for County officials and their duties, but provide the emergency management officials the power to develop mutual aid agreements (McEntire & Myers 2004, 143). These ordinances provide the public with the rules and guidelines to be followed in the event of an emergency. They also provide those in charge with the power to do what is necessary. In conclusion, to ensure an emergency program is fully capable, officials must develop these ordinances.

Public Education

Another important aspect includes public education. County officials need to continue educating the public for their safety and assistance. McEntire and Myers (2004, 149) point out that emergency plans can utilize the public as a resource. The public can provide manpower and resources vital during an emergency. Public education informs the people of what can happen in order to help them better prepare in the event of an

emergency. Informing the public about the goals and responsibilities of an emergency program heightens the preparation and protection for an emergency.

<p style="text-align:center"><u>Emergency Program Stage Requirements</u></p>

The discussion of requirements for a county wishing to implement an emergency management program is only the beginning. The requirements of the county are dwarfed in comparison to the needs and requirements of the program itself*.* The basic necessities required in a county are the foundation upon which the emergency program is built. Without these basic requirements, the development of an ideal emergency management program would be difficult. To begin with, an effective emergency management program must meet a standard set of criteria. These criteria are developed at each stage of an emergency program. Scholars and practitioners have divided the emergency management programs into a set of four stages: **mitigation, preparedness, response, and recovery**. These four stages will be developed by detailing emergency management program requirements and expanding the development of each stage within the program. Emergency management plans allow counties to protect the public and properties. If the plans are inadequate, the counties cannot perform their duties; therefore, it is critical that each county understands and allows a program to function.

Mitigation

The first stage of any emergency management program is mitigation. Mitigation includes "activities that reduce the degree of long term risk to human life and property from natural and man made disasters" (McLoughlin 1985, 166). The focus of mitigation "is on improving community capabilities to withstand future disasters" (Godschalk &

Brower 1985, 64). According to Godschalk and Brower (1985, 64), there are three main goals that a mitigation strategy should meet. First, the hazard should be contained or modified. Second, the people and the facilities in hazard areas should be protected. Finally, the use of hazard areas should be limited. Methods for meeting these goals vary and often depend on the county and area of implementation; thus, every county with an emergency management program should meet these goals.

Vulnerability Assessments

To begin a mitigation strategy, or plan, a county must first know the types of emergencies to which they are prone, what areas will be most affected by these emergencies, and what causes the areas to be more susceptible. This understanding is often referred to as vulnerability. Vulnerability, as defined by Weichselgartner (2001,88), is "the condition of a given area with respect to hazard, exposure, preparedness, prevention, and response characteristics to cope with specific natural hazards." According to Alexander (2005, 163), emergency plans "should be based on a careful and exhaustive assessment of what is likely to happen when an emergency occurs." Hardenbrook (2005, 14) emphasizes that vulnerability assessment is a must when developing approaches to dealing with an emergency. A review of the literature suggests that counties should conduct a vulnerability analysis for all emergencies in order to proceed with the development of an emergency management plan.

Prevention and Long Term Protection

After a county performs a vulnerability assessment, areas have strengthened capabilities in planning and responding to emergencies. "Adequate prevention measures can be found more easily after vulnerable areas have been identified" (Weichselgartner

2005, 92). By taking possible consequences into consideration, officials can take measures in order to prevent certain disasters from occurring. The prevention and protection measures taken in the building of dams and spillways as well as the proper use of development plans serve as an example of how officials may prevent possible disasters. The correct use of a vulnerability analysis reemphasizes what is stated by Comfort (1985, 155) in that "the quality of information search accomplished in one phase affects the capability for effective organizational decision-making in succeeding phases." Prevention, however, is not always possible. Some events cannot be stopped. Due to these spontaneous events, assessing an area's vulnerability is useful in developing long-term protection plans. Counties develop these plans in advance in order to protect their residents. If officials do not have a plan in place, they cannot be expected to act effectively in an emergency. Once officials recognize vulnerable areas within their jurisdictions, they will be better equipped to develop plans to protect the public and the properties, no matter what emergency they face.

Planning

After the vulnerability assessment, the next step in the preparation of a mitigation strategy is planning. An emergency plan, according to Alexander (2005, 159), "is a coordinated set of protocols for managing an adverse event, whether expected or untoward, in the future." Planning must meet certain requirements in order to be effective. To develop an effective emergency program, planners must take into consideration the information gathered from the vulnerability assessment.   A piece of information drawn from the assessment could include the location of hazard areas. From this information, managers can develop land use plans that "guide urban growth so that

hazards to persons, property, and community welfare are minimized" (Godschalk &
Brower 1985, 65). There should be only one emergency plan, but the plan should be
flexible enough to work in any emergency event.

Alexander (2005, 162) maintains that generic plans allow the county to "tackle
unexpected emergencies and unexpected impacts from those emergencies." Emergency
plans should also be developed to cover more than one year; "communities should
prepare a multi-year development plan tailored to meet its unique situation and
requirements" (McLoughlin 1985, 171). This approach allows communities to strengthen
their abilities and develop solutions that can be implemented over the years. When it
comes to developing a plan, numerous issues should be addressed. According to Clary
(1985, 23), successful mitigation plans address control, planning, administration,
political, and economical constraints. Plans need to be developed in the best interest of
the community. Often, the best plan and the popular plan are not the same, emergency
management programs must develop plans based on what is best not on what is popular.

Preparedness

If the mitigation stage of the emergency management program limits the effects of
a disaster, then the preparedness stage readies those involved. The preparedness stage
consists of "activities that develop operational capabilities for responding to an
emergency" (McLoughlin 1985, 166). Activities at this stage include training, warnings,
and additional planning. At this stage in the program, policies developed in the
mitigation stage are implemented and expanded. For example, funding or sources of
income uncovered in the mitigation stage can be pursued and obtained to prepare for a
disaster or fund the continuance of the program. During the preparedness stage,

arrangements should be made with the relevant agencies-local, state and federal. Also, additional equipment should be located, and officials should finalize agreements with outsiders, such as mutual aid agreements during the preparedness stage.

Training and Exercises

Perhaps the most important element of the preparedness stage of an emergency program is training. Training for a disaster tests the effectiveness of the program and those involved. When developing these exercises, managers are encouraged to push and demand more from responders, especially those in leadership positions. However, exercises "must be rooted within what is probable" (Drabek 1985, 90). Tests cannot be conducted unless they are based on actual capabilities. While tests have to be based on reality, those involved should work harder in training than in an actual emergency. If responders know how to behave, decisions can be made easier, and these "emergency exercises are in part undertaken to rehearse and embed such recognition primed behaviors" (French & Niculae 2005, 3). This allows officials to see exactly what their people can do. Knowing the capabilities of the workforce can help plan a more effective response and recovery. Practicing and conducting exercises is important since there are many steps involved in an emergency exercise. Exercises can range from discussions, commonly called "table-top" exercises, to full-scale exercises which test every aspect of an emergency program (Watkins 2000, 166-167).

As an organization undergoes more detailed and comprehensive exercises, the more they are testing. With exercises and drills, the people involved can learn their roles and simulate a real emergency situation. Also, based on these exercises, officials can see where improvements need to be made. The exercises aid developing cooperation among

the different agencies involved. Exercises help maintain an organization's capabilities, because "the ability to take appropriate and effective action against any hazard must be continually maintained or it will diminish significantly over time" (McLoughlin 1985, 169). Clary (1985, 24) states "testing emergency measures in simulated conditions is crucial to their effective functioning during an actual disaster." Clary's argument explains why drills and exercises contribute to a vital part of the preparedness stage in every emergency management program.

Warning Systems

When disasters strike, training and exercises should allow the emergency management personnel to respond accurately. What steps can officials take to prepare the emergency teams and the public before the disaster strikes? Warning systems act as an integral part of the preparedness stage in order to relay relevant information. Warning time should typically be more than a day before a disaster and "include specific advice; [such as] evacuation plans and routes established" (Weichselgartner 2001, 91). With warning systems, officials relay the emergency and have plenty of time to ensure the program takes proper precautions. For the public, these systems provide an opportunity to avoid the path of a disaster and to make the proper arrangements to ensure that their property and belongings will be protected as much as possible. Warning systems help aid in the response, according to Drabek (1985, 91), who argues that "agencies at all levels of government should seek to improve the capabilities of local warning networks." Advanced warning systems help save lives and reduce risk to the public and officials. Counties must develop and utilize a warning system that is best suited for the area. Although there are a variety of systems available, each has its own strengths and

weaknesses. Thus, county officials must develop a warning system that benefits the majority of the people during an emergency (McEntire & Myers 2994, 145).

Response

Through the development of a useful mitigation strategy, as well as training and warnings utilized in the preparedness stage, emergency personnel know they can begin preparation for the next stage of the emergency program, the response stage. In the response stage, emergency plans are set in motion, and preparation for the recovery phase begins (Waugh 1994, 254). Within this stage, "activities that occur during and immediately after a disaster strikes" are included (Clary 1985, 20). Response to an emergency or disaster can last from a few hours, to days, or months. To ensure a successful response, certain elements of the stage must be intact. First of all, all responders should know their roles. Second, decision makers should have access to new and relevant information. These factors required are vital in managing a response stage that runs smoothly and effectively.

Participants' Roles

Participant in the program must meet certain responsibilities. First, they must know their roles and priorities of the program. Often in an emergency, despite the frequent training and planning, confusion can occur especially when more than one group is involved. Horan and McCabe (2005, 13) note "in order to avoid [this] confusion during an emergency response, the two organizations focus on different aspect of the emergency." By designating responsibilities to certain personnel, officials can ensure that every aspect of the program is addressed. Each phase affects other phases; therefore, the better the training, the more effective the response. "Familiarity of the overall

concept of operations gained during the planning process can be the thread that ties the actions of each operating element together into a coordinated whole" (McLoughlin 1985, 169). Since emergencies test the abilities of those involved, organizations must guarantee that personnel designated as first responders know their roles in an emergency. If those who act first do not coordinate with each other, then they put the entire response in jeopardy.

Information

No matter how well responders are trained and how much of a warning officials are given during an emergency, there are going to be situations that change the way the plan will have to operate. While Schneider (1992, 143) argues that "departures from bureaucratic statues and guidelines no matter how well intentioned, inevitably have an adverse effect on the response process;" it has been shown that change is a necessary part of the process. This statement does not say changes cannot be planned for because they can. In order to implement changes however, participants need to have access to newly discovered data such as changes in the operating plan or new and relevant facts. "The effectiveness of decisions taken by organizations in action is directly related to the adequacy of information of available to the decision-makers" (Comfort 1985, 157). The simulations of the preparedness stage provide a foundation of information, but due to the constant change of conditions, managers need a way to gather, collect, and sort through this new information. "It is virtually impossible for a single manager to acknowledge much less comprehend the volume of information" (Comfort 1994, 402). Horan and McCabe (2005, 16) argue that "a fully effective response would undoubtedly encompass…the innovative use of information systems to monitor and contribute to

improved response times and reduced fatalities." Besides information systems, decision support systems should be utilized. These systems, like the information systems, "can help reduce the stress by managing the information flow and enhancing the decision-maker's cognitive process" (Wallace & de Balogh 1985, 136). With the advancements in technology and the capability of modern software, information can be made available to managers as soon as it occurs. Managers can guide responders more effectively and produce a more effective response with the aid of these systems. Not only will the response run more effectively but will also protect the lives of the public as well as the responders.

Victim's Services

The above-mentioned components of the response stage are vital tools in meeting another component, providing aid to the victims. During an emergency, responders need to have access to aid and services for those affected by the disaster. "After all, a key component of emergency management and clear public expectation is timely and appropriate emergency services to victims, whether during extreme or normal conditions" (Horan 2005, 15). The response phase of the emergency program includes duties such as "emergency medical assistance, reception and care, shelter and evacuation, and search and rescue" (McLoughlin 1985, 166). If the previous components of response capability and provision of relevant information are provided, the effectiveness can only be enhanced. The more effective the first response capabilities are, then the greater success managers will have in providing aid to the victims. Aid should be available to injured or stranded victims as soon as possible because programs should have the ability to respond quickly to limit the loss of life. Also, responders need to be able to provide the victims

with necessities including-but not limited to-food, water, and shelter. These factors must be acquired in order to ensure the program is meeting its many responsibilities.

Recovery

The final stage in the emergency management program is recovery. Recovery is "a complex intergovernmental process that affect the future of the community" (Rubin & Barbee 1985, 57). The recovery stage is a period that can last for days or years after a disaster. According to McLoughlin (1985, 166), "short term activities that restore vital life-support systems to minimum operating standards and long-term activities that return life to normal." Short-term activities, for example, would include cleaning up the mess left after a disaster or restoring power to a community (McLoughlin 1985, 166). Long-term activities could include the rebuilding of properties as well as the redevelopment of the community infrastructure. Clary (1985, 21) emphasizes the recovery stage is one that can last up to ten years. The goal of any recovery effort is "returning community functions and damaged areas to pre-emergency conditions" (McLoughlin 1985, 169). While communities can be devastated by disasters, they can also be strengthened as well. This ability to learn and improve serves to strengthen a community in the event of another disaster.

Financing

The main concern of any recovery effort is financing. After a disaster, a community's financial sources are severely limited. Disasters can cause a community to lose money in many different ways. There is the "loss of a tax base, particularly in the terms of property taxes," or loss of sales tax and businesses, in which the residents in many cases have lost their primary source of income. This loss, in turn, affects how much

20

money can be put back into the community's economy (Settle 1985, 102). Often the federal government provides assistance to devastated areas, but federal aid is only available if the area has been designated as a disaster area, and even then, federal aid only covers seventy-five percent (75%) of the costs. While all disasters seem devastating in one way or another, only those destructive enough can warrant federal aid.

"State and local governments still need to understand the importance of the financing alternatives…particularly since federal aid is not assured" (Settle 1985, 102). The recovery phase is another time when close relationships with other governments and agencies are beneficial. For county governments, a close relationship with the state opens the door to numerous financial aid opportunities. Rubin and Barbee (1985, 57) point out that "the growing capabilities of local public officials together with the experience and resources of emergency management personnel at the state and federal levels have contributed to the improved ability to recover from a major disaster." It takes money to recover, so officials need to be aware of programs available to them in order to provide the best recovery to the community. Disasters can destroy an area, but with a surplus of finances, that area can come back to life.

Learning from Problems

When disaster strikes, problems will occur, and a perfect plan and execution proves impossible. To maintain a well-organized and capable emergency management program, its participants must learn from the mistakes and problems that arise during a typical emergency. Disasters show communities where they are lacking, which areas need improvement, and what situations need planning. Communities must "include consideration of local hazards in the recovery plan for the affected area" (Rubin &

Barbee 1985, 58). If communities continue to use the same problematic plans or make the same mistakes discovered in the recovery phase of the program, future disasters could produce the same easily preventable problems. Comfort (1985, 161) argues that after an emergency, programs are expected to "review opportunities for mitigation in reconstruction which may prevent or inhibit reoccurrence of [the] disaster." This argument illustrates how the development of an emergency management program is continuous. Plans constantly evolve, utilizing new information and abilities to provide better protection to the public and properties. During the recovery phase, the program can utilize mitigation strategies and vulnerability assessments. In the rebuilding of a community, protection can be augmented, buildings strengthened, and improvements made. Past disasters can be used as a tool for uncovering holes in the program and strategies. "During recovery, significant opportunities for community planning to reduce future emergency impacts are frequently available" (McLoughlin 1985, 169-170). Managers should learn from the present problems to prevent the future ones. If problems are not resolved, it could cost the community lives and damage. Any problems discovered should be addressed to prevent any future occurrences.

Recovery Supplies

The recovery stage is a time for the community to return to their norm, at least to some degree. In order to achieve this normality, officials have to supply the residents' basic necessities and begin the rebuilding process. The ability of a community to recover from a disaster, according to Rubin and Barbee (1985, 60), depends on the "administrative competence of the local government and its resources." Supplies, however, are not solely needed for the rebuilding effort but for the victims as well. Items

such as food and water must be provided, and if housing is unavailable, appropriate shelter must be provided. During the recovery, officials must make plans to provide these basic needs.

Rebuilding

"Long-term recovery (i.e., the reconstruction process) is characterized by attention to rebuilding and new construction" (Rubin & Barbee 1985, 58). In order to return a community to pre-disaster conditions, officials must embark on a reconstruction plan, rebuilding those properties lost and improving those damaged. This part of the recovery phase also allows for the construction of structural improvements. Based on discoveries from the disaster, buildings can be rebuilt to withstand a larger and more devastating emergency, preventing loss in the future. By not attempting to rebuild, officials are limiting the capabilities of the recovery effort. This step in the recovery phase, like many of the others, can be made easier with a close relationship to the other governments involved. "Local officials must find ways to ensure more productive intergovernmental relationships in post-disaster recovery, [in order] to compete for scarce resources" (Rubin & Barbee 1985, 59). Supplies at this phase are a necessity, which is why communities must ensure that they can be provided, not only to rebuild, but also to sustain the residents until the community is back to normal.

Leadership

A main requirement of the recovery stage in the emergency management program is obtaining good leaders, individuals who are well-qualified to handle the situations that may arise. Rubin and Barbee (1985, 61) point out that "an effective recovery results from local officials' awareness and knowledge of community based reasons to act."

Effective leaders can create a recovery phase that runs more successfully. Leaders should

know what they need from the recovery phase and strive to achieve those goals.

"Leaders with some pre-disaster vision about the future economic development of a

community can be expected to fare better during recovery" (Rubin & Barbee 1985, 61).

Leaders also bring with them experience: thus the more experienced a leader is, the more

effective he or she can be. Communities must also rely on leaders who have the

knowledge of the resources, finances, and supplies necessary for a recovery. "Decision-

makers must become knowledgeable of key issues in order to make correct policy

decisions" (McLoughlin 1985, 166). If a leader is unaware of these necessities and where

they can be obtained, then the community cannot proceed further into the recovery phase.

In retrospect, by utilizing leaders with knowledge and experience, emergency

management programs can ensure confident leadership through any situation.

Conceptual Framework

To peruse this research, two practical ideal categories are utilized. These

categories are County Responsibilities and Emergency Management Programs. The

Emergency Management Program category has been divided based on the four stages of

an Emergency Management Program; the stages are mitigation, preparedness, response,

and recovery. A review of the literature on emergency management details the

requirements that each category should meet. County responsibilities include necessities

for county governments to implement an emergency program. The literature also

outlines what needs must be met within each of the stages in an emergency management

program. Table 2.1, shown below, outlines how the literature leads to the development of

the conceptual framework. Each ideal category is shown with the relevant literature that

was used to develop the table's elements.

Table 2.1: Conceptual Framework: Linking Practical Ideal Categories to Literature

Ideal Type Categories	Sources
County Responsibilities: - First Response - Coordination with state and federal officials - Know ways to finance program and recovery - Develop plans of action - Establish Ordinances - Public Education	Alexander (2005) Batts (2005) Comfort (1985) McEntire & Myers (2004) McLoughlin (1985) Settle (1985) Watkins (2000) Waugh (1994) Wallace & De Balough (1985) Weichselgartner (2001)
Program Stages: **Mitigation** - Prevention and long term protection - Vulnerability Analysis - Planning	Clary (1985) Comfort (1985) Godschalk & Brower (1985) Hardenbrook (2005) McEntire & Myers (2004) McLoughlin (1985) Rubin & Barbee (1985) Settle (1985) Wallace & De Balough (1985)
Preparedness - Protection of life and property - Exercises and training - Warning Systems	Alexander (2005) Clary (1985) Comfort (1985) Erickson & Barratt (2004) Burling & Hyle (1997) Hardenbrook (2005) McEntire & Myers (2004) McLoughlin (1985) Rubin & Barbee (1985) Settle (1985) Watkins (2000) Wallace & De Balough (1985)
Response - All participants should know their roles - Access to relevant current information - Victim's Services	Clary (1985) Comfort (1985) Comfort (1994) Drabek (1985) French & Niculae (2005) Hardenbrook (2005) Horan & McCabe (2005) McLoughlin (1985) Rubin & Barbee (1985) Schneider (1992) Settle (1985) Wallace & De Balough (1985)
Recovery - Financing the recovery - Understand and fix mistakes for future emergencies - Plan for immediate provision of supplies and long-term rebuilding	Clary (1985) Cochrane (2004) Comfort (1985) Hardenbrook (2005) McLoughlin (1985) Rubin & Barbee (1985) Settle (1985) Wallace & De Balough (1985)

Conclusion

The role an emergency management program plays at the county level of government is a vital one. The growth of counties as the "focal point for local policy making and program administration" makes them the ideal spot to develop an emergency management plan (Waugh 1994, 255). What attributes must be present in a county to ensure the development of an effective and beneficial emergency management program? To start with, the ideal county government develops and maintains close relationships with the state. Disasters require "local action and regional and state support" (Waugh 1994, 256). Counties should develop and maintain outside relationships in order to efficiently protect the people and community. Counties should maintain their first response capabilities or "local action" needed. Since the state and region cannot mobilize as quick, it is up to the county to respond first. The vast area provides the county with an ideal location of an emergency program, however; counties must be able to provide support to all residents, including those in the rural parts of the area.   Counties cannot concentrate all efforts in the larger cities. They must be prepared to act in any part of the county. Counties must also take into consideration that money is a necessity. They need to have access to a financial backer and the programs available to them. Without financing, it becomes difficult for any program to be successful and effective. These factors test a county to ensure it is up the challenge of maintaining an emergency management program. Even though a county may not meet all of these requirements, it must be able to meet most. The people under their protection depend on the capabilities of the county, as it is the county's job to ensure public safety and well-being.

Any emergency management program developed by a community, county, or otherwise, must include the four stages of the emergency program. Those stages, as outlined above, include mitigation, preparedness, response, and recovery. Within each stage are specific needs that must be met by any organization attempting to implement an emergency program. In the *mitigation stage*, which is developed to "alleviate the impact of or prevent a hazard event," developers must include a vulnerability assessment (Clary 1985, 20). This assessment allows officials to know where they are most at risk. Also, proper planning must be conducted in this phase to ensure the program is able to work effectively. Within the *preparedness stage* of any program, officials should include training and exercises that allow the personnel to see what can happen during a disaster. This phase must include warning systems for both officials and the public. Protection of life and property is the main goal of this phase, and programs must strive to all they can to accomplish it.

In the *response stage* of a program, planners must provide first response capabilities and ensure that new and relevant information can be relayed in a timely manner. Availability of aid to the victims is also necessary in this stage. *Recovery* is the final stage of the program as well as the most important. In this stage, planners, officials, and other leaders must ensure financial stability for the community, not only to provide support but also to aid in the reconstruction of the community. Officials must learn from the mistakes to develop a more in-depth emergency program. They must also be knowledgeable about handling disasters, so experience of the official can play an important role in this stage. Supplies, materials, and resources must also be available from the state or other communities in the area. Finally, the emergency management

program is a cyclical one. It continues to develop and grow. From the recovery stage,

the program will enter the mitigation stage and begin all over again.

CHAPTER 3

RESEARCH SETTING

The composition of an area provides insight into the development of an emergency management program. Factors such as land area, population, geography, and local industry produce an emergency program capable of protecting the residents it is designed to serve. This chapter examines the components of Navarro County which includes, but is not limited to, the population of the county, major cities within its borders, land area of the county, and industries within the county. This chapter also examines the structure of the Emergency Management Program in Navarro County. Finally, the hierarchy and functions that its leaders serve in addition to the laws and ordinances used to establish the Emergency Programs authority are examined. All of these factors play an important role in the development and understanding of Navarro's emergency program.

County Geography

To begin with, Navarro County, as a whole, must be studied. Located in North Central Texas, Navarro is bordered by five counties: Henderson, Freestone, Limestone, Hill, and Ellis (Handbook of Texas 2006). The exact location of Navarro County in reference to its surrounding counties can be seen in Appendix 3 of this research. Covering an area of 1,086 square miles (County Information Project 2006), Navarro is comprised mainly of prairie lands with some woodland areas (Handbook of Texas 2006). Waterways located within the County's borders include Chambers and Richland Creeks. Navarro sits at 536 feet above sea-level at the highest elevation and at 293 feet at the

lowest. Five major railways and many major roadways, such as Interstate Highway 45,
U.S. Highway 287, and State Highway 75 run through the county (Handbook of Texas
2006).

Within Navarro's borders, lives an estimated population of 48,243 as of 2004,
which has increased since the 2000 census which estimated the population at 45,124
(County Information Project 2006). The population density of Navarro County is
measured at 42.1 people per square mile. Over half of the county's population lives in
the county seat of Corsicana with a population of 25,858. The next largest town within
the county is Kerens with a population of 1,785 (County Information Project 2006).

Navarro County is also home to a number of industries. Those specializing in oil
and natural gas extraction comprise the largest industry found in the county (Handbook
of Texas 2006). In 2004, the county produced 316,000 barrels of oil and 430,000 cubic
feet of gas (Handbook of Texas 2006). Other areas of industry within the county include
road construction and manufacturing.

Organization of the Emergency Program

In Navarro County, County Judge Alan Bristol serves as the county's Emergency
Management Director. This role was granted to Judge Bristol by the State of Texas who
appoints the position to the highest elected official in the county. Judge Bristol, in his
role, guides policy and establishes objectives and priorities to be met by the program. In
the event of an emergency he is responsible for monitoring the program and for
requesting assistance, if needed, from the Governor (Basic Plan 2004, 12-13). The day-
to-day responsibilities of the emergency program are the responsibility of Eric Meyers
who was appointed by Judge Bristol to act as the county's Emergency Management

Coordinator. Meyers's duties include keeping officials up to date on the program, coordinating program activities (including exercises, training, and testing), and coordinating with officials in the maintenance of the Emergency Operations Plan (Basic Plan 2004, 13).

The remainder of the Emergency Program consists of the active members in the participating agencies in the county. These are agencies that would play an active role in the event of an emergency. Agencies involved would include local fire departments and municipal police departments, the Navarro County's Sheriff's Department, local EMS and health services, and other volunteer organizations in the county. In Navarro, each agency is responsible for a particular part of the emergency program. Each must maintain and update their duties to ensure that their part of the plan is effective and efficient.

Authority

Navarro's development of its emergency program was created out of the authority granted to the county through federal and state laws. Under The *Robert T. Stafford Disaster Relief and Emergency Assistance Act*, which was amended in October of 2000, Navarro has been given the authority to develop an emergency program. The "Disaster Mitigation Act of 2000," as it is often referred to, states in Section 101 (Congressional findings and Declarations) Paragraph B, Part 2, that "it is the intent of the Congress by this act, to…encourage the development of comprehensive disaster preparedness and assistance plans, programs, capabilities, and organizations by the States and local governments."

Navarro County also receives authority from the State of Texas to develop its own emergency program. Under Texas Government Code 418, Subchapter E, Section 418.102 states that "each county shall maintain an emergency management program or participate in a local or interjurisdictional emergency management program that, has jurisdiction over and serves the entire county or interjurisdictional area." These two laws provide the broad authority needed by Navarro County for the development of its program.

These geographical, sociological, and governmental elements of Navarro County are important in understanding the county's emergency program. Each of these elements will, in some way, have an effect on the emergency program and how it operates. All elements of Navarro County from local industries to surrounding areas should be evaluated when developing an emergency management program. Therefore, an understanding of what affects the program is necessary in the examination of the program itself.

CHAPTER 4

METHODOLOGY

To conduct the research, a Case Study strategy has been utilized. The case study method, according to Yin (2003, 1), is used "when 'how' or 'why' questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context." The research for this Applied Research Project (ARP) focuses on answering the question of how the emergency management program in Navarro County compares to the ideal program developed from the relevant literature. To ensure the accuracy of the findings, triangulation was used. Triangulation is the use of multiple sources of evidence; this method, according to Yin (2003, 98), allows findings to be more convincing. The three methods of inquiry utilized in this ARP are interviews, document analysis, and direct observation. Table 4.1 explains how each method corresponds with the conceptual framework.

Table 4.1. Operationalization of the Conceptual Framework

Ideal Type Categories	Document Analysis	Observation	Focused Interviews	Interview Questions a. Questions asked of Judge Bristol only. b. Questions asked of Mr. Meyers only.
County Responsibilities: First Response Coordination with state and federal officials Know ways to finance program and recovery Develop plans of action	Emergency Operation Plan Budget Grants & Proposals Examining the documents, the research will look to see if each part of the categories is present. This will be used for each category of the conceptual framework.	Local Emergency Planning Committee The observation will be used to see how plans are developed, how relevant information is provided to the planners, and to get a first hand understanding of Navarro's Emergency capabilities.	Emergency Management Coordinator Emergency Management Director	1. How is the county promoting relationships with the state? 2. How does the county include the public in its emergency management program? 3. (a.) What ordinances has the County established in order to provide the emergency program the necessary authority? 3. (b.) Does the county have first response capabilities? If so, how timely are they? How many responders are there? 4. What steps have been taken to ensure that the entire county is covered in the event of an emergency? 5. How is the county prepared for the loss of revenue that can occur after an emergency?

Table 4.1. Continued

Program Stages				
Mitigation Prevention and long term protection Vulnerability Analysis	Emergency Operations Plan Grants & Proposals		Emergency Management Coordinator Emergency Management Director	6. (a.) How does the County assess its vulnerabilities? 6. (b.) Has the county performed a vulnerability assessment? If so how often is it updated? 7. What types of emergencies is the county prone to? 8. How often does the county reevaluate its emergency operations plan?
Preparedness Protection of life and property Exercises and training Warning Systems	Emergency Operations Plan	Training Exercises (if available)	Emergency Management Coordinator Emergency Management Director	9. What steps has the county taken to limit development in hazardous areas? 10. What type of training are those in the emergency program involved in? 11. Does the county conduct emergency exercises? If so how elaborate are they? 12. How much discretion is allowed by those responding to an emergency? 13. What systems does the county use to provide warnings of emergencies?
Response All participants should know their roles Access to relevant current information	Emergency Operations Plan	Local Emergency Planning Committee	Emergency Management Coordinator Emergency Management Director	14. How is the emergency response divided among those responding? What roles do the different agencies perform? 15. How are officials kept up to date on new and relevant information? 16. How quickly can responders provide relief and aid to the victims? 17. (b.) How are supplies and resources ensured during an emergency?
Recovery Financing the recovery Understand and fix mistakes for future emergencies Plan for immediate provision of supplies and long-term rebuilding	Emergency Operation Plan Budget Grants	Local Emergency Planning Committee	Emergency Management Coordinator Emergency Management Director	18. How does the emergency operations plan evolve after an emergency? 19. How has the county provided for the rebuilding process? 20. How are officials and leaders kept up to date on the latest advancements in emergency management?

Interviews

Using interviews, this research was able to uncover the type of leadership and

guidance Navarro County has in its emergency program and what process the county

goes through in the development of a program. The interviews were conducted with Eric Meyers, Navarro County's Emergency Management Coordinator, and Judge Alan Bristol, Navarro County's Emergency Management Director. Eric Meyers and Judge Bristol were chosen to be interviewed because of their involvement with the development of the program. Do to the focus of this research on the program itself, first responders were not interviewed. The questions were designed to provide insight into specific areas of the emergency program. The use of interviews is an important method of inquiry because, "key informants are often critical to the success of a case study," interviews can provide useful information and access to sources that may not be otherwise accessible (Yin 2003, 90). The type of interview utilized in this ARP is the focused interview. Here, Mr. Meyers and Judge Bristol were interviewed individually and asked a series of questions concerning the emergency management program in Navarro County. The interviews were conducted over a short period of time, approximately forty-five minutes to an hour. Mr. Meyers was interviewed face-to-face, but due to scheduling conflicts and time constraints, Judge Bristol's interview was conducted over the telephone. While considered valid, interviews do have a problem with reliability is because the relayed information may have different meanings to different individuals (Babbie 2004, 308). To ensure reliability, interviews were conducted with two different individuals. Both were asked primarily the same questions to ensure the answers provided were reliable. Efforts were taken to ensure that personal bias and beliefs did not make way into the results of the inquiry. To ensure reliability of the researcher, each interview was recorded, allowing the answers to be documented exactly as they were worded.

Document Analysis

Document Analysis, which according to Yin (2003, 85), is "likely to be relevant to every case study topic," was used to analyze the county's Emergency Operation Plan and the program's budget. Document Analysis is useful in case studies because it can "corroborate and augment evidence from other sources" (Yin 2003, 87). Through the examination of Navarro County's emergency plan and budget, this ARP explores how well the emergency program in Navarro County compares to the model emergency program. Using the county's ordinances, plans, and budget, Navarro County's emergency program will be evaluated at each level to see if the requirements listed in the conceptual framework, or Table 2.1, are present in the County's emergency management program. Yin (2003, 87) warns that an over reliance on documents can be harmful to research. Not all documents contain the truth; some are merely ideas and opinions. Due to the fact that some information in the emergency plan may be archaic, other methods of inquiry were used to verify the information contained within it.

Observations

Data were collected through direct observations by the researcher of Navarro County's communication centers and a routine meeting of the Local Emergency Planning Committee (LEPC). Also, members of the emergency management program were accompanied by the researcher as they attended the North Texas Regional Exercise Orientation. These observations allowed for an understanding of how planning is conducted, what capabilities the County has, how relationships with other agencies are progressed, and how involved the community is within the emergency program. "Observational evidence is often useful in providing additional information about the

36

topic being studied" (Yin 2003, 93). Through the use of observations, this research develops an understanding of how Navarro County formulates its Emergency Operations Plan.

The research inspects the communication abilities of Navarro County to see how information is gathered and dispensed in an emergency. These observations also gathered information on the type of technology used the effectiveness of the equipment and the communication capabilities during and after an emergency. Observations obtained at the Local Emergency Planning Committee exhibits how Navarro County involves the local community as well as what ideas and standards contribute to the development of Navarro's emerging plans. Michael Lindell (1994, 159-182) provides a list of requirements that should be present at an LEPC meeting in order for the organization to be effective. Lindell mentions that LEPCs should be comprised of a variety of public safety officers, should be highly involved in the development of an area's emergency plan, that the everyday roles of its members should be utilized, and that there should be a broad membership of participants outside the realm of emergency management. While there is still the concern of reliability with observations, the use of documentation collected at the meetings, such as recordings and notes, will verify the evidence gathered.

Human Subjects

Due to the use of interviews as a research method, this research acquired consent from its participants to record the interview and the use of their names in the presentation of the results. Interviewees were informed that they are not required to participate and that there would be no penalty for refusing to participate. After agreeing to participate, interviewees received an advanced copy of the questions and topics that were to be

discussed. The use of human subjects in this research required approval from the

Institutional Review Board (IRB) at Texas State. Approval was granted on an "exempt"

status. The IRB reference number for this research is #05-0361. For more information,

the IRB office at Texas State University-San Marcos can be contacted.

CHAPTER 5

RESULTS

The purpose of this study evaluates how Navarro County's Emergency Management Program compares to the ideal emergency program developed from the relevant literature. In this chapter, the research will be analyzed, and the results will be presented in order to evaluate Navarro's program.

County Responsibilities

The first ideal category presented is County Responsibilities. The model exhibits that county responsibilities are comprised of six elements: first response, state and federal coordination, finance, development of plans of action, establishment of ordinances, and public education.

First Response – *Interviews*

Under the ideal category of County Responsibilities, the initial element is first response. Hardenbrook (2005, 1) states that the burden of response falls at the local level. When interviewing Mr. Meyers, in reference to first response capabilities he stated that first responders would include local fire, police, EMS, and volunteer departments. He further mentioned that they utilize twenty-four (24) volunteer departments within the county. Between the City of Corsicana, Navarro's county seat, and the county itself, there were approximately 500 first responders.

In regard to the timely response capabilities of these responders, Mr. Meyers stated that, the number of responders do allow for a timely response given the size of the population. Mr. Meyers also considers the large number of volunteer fire fighters, one of the greatest assets of the county.

Document Analysis

The use of document analysis verifies and supports the data gathered from the other methodologies used. Navarro County has allowed for first responder capabilities, based on the review of the emergency management plan. Within the plan, Section H, entitled *Action by Phases of Emergency Management*, states "the focus of most of this plan and its annexes is on planning for the response to emergencies" (Basic Plan 2004, 11). The plan also states that the County "will respond to emergency situations effectively and efficiently" (Basic Plan 2004, 11).

Observations

While taking part in the Local Emergency Management Committee meeting, an opportunity to observe the responders in action arose. On February 16, 2006, an accident on Interstate 45 led to a blocked roadway, the spilling of an eighteen wheelers load, and a derailment of a train. While local officials responded to a possible hazardous materials spill, resulting from the train derailment, the responders managed and maintained the incident. This observation provided evidence supporting the interviews and document analysis, which argued, that Navarro County does in fact have first response capabilities. The observation of an emergency response was not planned. That is why this accident was the only actual response observed for this research.

Coordination State and Federal Officials – *Interviews*

Interviews with Mr. Meyers and Judge Bristol revealed that Navarro County maintains close relationships with state and federal officials. Mr. Meyers stated that the relationship with the state and federal agencies is due to Judge Bristol, who has maintained an active role in State Judge's conferences and training programs. This,

according to Mr. Meyers, is the primary link between the state and the county. Judge

Bristol reiterates in his interview the importance of participating in state conferences. He

mentions that Mr. Meyer's role helps to coordinate and run certain state conferences.

Judge Bristol also made mention of his role as a member of the Governor's Advisory

Panel for Emergency Management.

Document Analysis

Within the Basic Plan of Navarro County, the county understands the usefulness

of relations with the state. Section F, entitled *State, Federal, and Other Assistance*,

shows how the county understands that its reliance on supplies and assistance from

outside agencies larger than itself. The plan provides evidence that the county is aware of

state support and understands how important this aid can be.

Observations

Evidence of state relationships was provided at both the LEPC meeting and the

response to the hazardous materials accident. At both occasions, the state's regional

liaison was present and involved. During the response, he was available for information

and guidance. While he attended at the LEPC meeting, he was available to provide

answers to questions concerning the state. Additionally, representatives from the Texas

Center for Environmental Quality and from the Environmental Protection Agency Region

6 attended the LEPC meeting.

The North Central Texas Regional Exercise Orientation provided additional

evidence of ongoing relationships with the State and other agencies. At this meeting,

members of the Navarro Emergency Program communicate and make plans with officials

from the state's Office of Emergency Management as well as with officials from neighboring areas.

Finance – *Interviews*

Mr. Meyers stated in his interview that when losses have occurred in an emergency, there are immediate assistance programs the County is able to participate in, both at the State and Federal levels. Judge Bristol reiterated this particular point stating that after Navarro's resources had been expanded, assistance from either the state or federal governments would be required to provide for the county. Judge Bristol also added that it usually takes up to twenty-four to forty-eight (24 to 48) hours to receive that necessary assistance. In the meantime, the county would use its own resources.

Document Analysis

The Emergency Management Budget for Navarro County outlines the financial strength provided to the county's program. The official budget for 2005 amounted to $38,110. This amount applied to insurance, dues and subscriptions, and travel for both conference and training. Accordingly, $26,400 received in the form of the Hazardous Materials Emergency Preparedness (HMEP) Grant was included in the budget for 2005. At the time of the research, the projected amount spent by the Emergency Program was $31,810. The major difference occurred in the funds received from the HMEP grant, in which only $21,600 was spent.

The total projected budget for 2006 is estimated at $19,500. Major differences between this projection for the 2006 and 2005 budget include an added $1,000 for office supplies, an expenditure not included in the 2005 budget. Also, the 2006 budget does not include money provided by the HMEP Grant.

Observations

Local reimbursement to volunteer fire departments was an issue discussed at the LEPC meeting. Mr. Meyers, in his role of presiding over the meeting, informed the representatives of the volunteer departments that in order to be reimbursed, they would need to file their requests through the Texas Interagency Coordination Center (TICC) website. The issue was raised because the volunteer departments would usually make requests through the Navarro County Program. Agencies were asked by Mr. Meyers to specify "wild land fire" in their requests, or the requests would not be approved.

Plan Development – *Interviews*

In the interview with Mr. Meyers, he stated that the Emergency Operations Plan (EOP) has been developed as an all hazards plan, one that covers all aspects of all emergencies. Mr. Meyers also stated that over the past five (5), years the plan has included all of the surrounding municipalities in the county. The EOP in Navarro County is formally evaluated every four (4) years; however, Mr. Meyers pointed out that the plan is informally evaluated after each use. Revisions to the plan are made in the county's after action reports which are developed after each emergency. At this time, areas of improvement are reevaluated and strengthened based on their level of performance.

Judge Bristol supported those statements made by Mr. Meyers, also stating that the evaluation of the plan is an ongoing event. Judge Bristol also stated that at any time Mr. Meyers would be making adjustments in order to strengthen the emergency operations plan. Judge Bristol also mentioned that the plan included appendices that pertained to certain emergencies that the county could face. The appendices coincide with the basic emergency plan used in all emergencies.

Document Analysis

The EOP for Navarro County is made up of many parts. This plan includes the Basic Plan which outlines the structure of the program and the attachments and appendices which provide information on all parts of the plan from Warning Systems to Legal issues. The Basic Plan (2000, 29) states that it is the County Judge's responsibility for the approval of the plan. The assignments and the agencies responsible for them are also outlined in the EOP. The EOP shows what specific agency is responsible for the individual parts of the EOP. According to the Basic Plan (2000, 6), the plan "is not a collection of plans for specific types of incidents," instead it is one plan that can be used in any emergency. The Basic Plan (2000, 6) also points out that development is around routine functions and personnel used by the agencies that would be involved in the response.

Observations

While observing the LEPC meeting, it was shown how the county brings those participants active in the emergency program together. Lindell (1994, 159) states that the purpose of LEPC's is to plan for the response to emergencies. Members of local response agencies, including fire, law enforcement, members of local industry, and state officials were all present at the meeting.

A suggestion to bring in more participants from outside industries was made. Mr. Meyers wanted to bring in more local industries from the outside to increase involvement in the planning process.

Authority – *Interviews*

Judge Bristol stated that to ensure authority for the emergency program, the county has adopted the new federal regulations. These regulations, according to Judge Bristol, were adopted to allow both the county and the municipalities within it to be under the same guidelines and protocol.

Document Analysis

In the beginning of the Basic Plan (2000, 1) for Navarro County, the authority provided to the county is outlined. The *Robert T. Stafford Disaster and Emergency Assistance Act* encourages local authorities to develop plans provides authority to Navarro County at the federal level. At the state level, Texas Government Code, Chapter 418 provides the necessary authority. This Texas code states that all counties should maintain an emergency program. Local ordinances also have been established granting authority to the program to act in the event of a disaster. Transcripts of the Commissioners Court dated January 24, 2000 reveal that the Commissioners Court passed the motion to appoint Eric Meyers to the position of Emergency Management Coordinator. The minutes also show that the court provided authorization for Meyers to proceed with acquiring grants for the county program.

Observations

There were no observations made that would lend themselves to the further understanding of the authority and ordinances utilized by Navarro County.

Public Education - *Interviews*

In regard to questions on public involvements, Meyers mentioned that the county educates the public through warning systems such as the Reverse 911 system. This

system calls and provides information to the public in the event of an emergency. Meyers also stated that information is provided to the public through the use of media outlets which includes newspapers, television, and radio broadcasts.

Judge Bristol re-emphasized the use of the County's Reverse 911 system and its use of the media outlets. He stated that a good relationship with these outlets has helped involve the public. While Judge Bristol does not believe the public is directly involved, he maintains that volunteer organizations and civic organizations do play a role with the involvement of the public.

Document Analysis

From Annex I, entitled *Emergency Public Information*, the county believes an effective program includes the use of public education. Annex I points out the County's belief that "a special effort should be made to keep the public informed of the general progress of events," and that "reporting positive information regarding emergency response will help to reassure the community that the situation is under control" (Annex I 2000, I-2). This Annex also appoints the Public Information Officer to preside as the County's official spokesperson and provide information to the public when appropriate.

Observations

Members of local industry and people from various media outlets were observed at the LEPC meeting. Media presence at the meeting provides evidence that the county tries to involve public participation in the Emergency Program. Meyers also urged those present to pursue those local industries to get involved.

Mitigation

Mitigation is the first stage of an emergency management program. This stage is made up of three elements: prevention and long-term protection, vulnerability analysis, and planning.

Prevention and Long Term Protection – *Interviews*

Meyers stated that the County utilizes mitigation projects to prevent disasters. In regards to flooding, Meyers stated that the county had no real flood mitigation plans, but the City of Corsicana is currently developing plans to prevent problems of flooding. Meyers mentioned that the main mitigation plans conducted by the county were public outreach programs to warn the citizens about possible emergencies. Public outreach, which primarily lets residents know where hazardous areas are located, is the main mitigation plan utilized to protect the people and properties.

Document Analysis

The Basic Plan (2000, 5) states that "proper mitigation actions, such as floodplain management and fire inspections, can prevent or reduce disaster related losses." The plan (2000, 10) also states that mitigation is intended to eliminate hazards and should be conducted as a pre-disaster measure. Once again, the complete hazard mitigation outline, Annex P, which would provide detail of actual plans made, was not provided for review.

Observations

One prevention and protection measure taken by the county is the involvement of county officials and first responders in Dig Tess training. Over seven hundred companies whose pipelines run through the State of Texas provide this specific training exercise, which was observed following the LEPC meeting. Dig Tess, a non-profit organization,

conducted the meeting to discuss the dangers of local pipelines. The meeting emphasized

the awareness of areas in which pipelines run to officials and to the pubic. This

awareness could prevent a major accident from occurring, which could cause both

destruction and loss of life.

Vulnerability Analysis – *Interviews*

Meyers stated that the county did perform what he called "hazard analysis

assessments." These assessments were first conducted in 2001, and according to Mr.

Meyers, have been conducted every other year since then.

Judge Bristol stated that the County has had numerous "risk assessments

conducted," which took into account the highways running throughout the county and

local industry when determining the county's vulnerabilities. These assessments,

according to Judge Bristol, allow the county to know what could go wrong and where.

This knowledge allows the program to plan accordingly.

Both Meyers and Judge Bristol pointed out that natural disasters such as fire,

flooding, and tornadoes are the emergencies most likely to occur in Navarro County.

Meyers also mentioned the risk of hazardous material spilling could be a concern due to

the numerous oil and gas industries located throughout the county.

Document Analysis

In Navarro's Basic Plan (2000, 4), a chart has been developed to show what

hazards the county is likely to be exposed. Categories in this chart include Natural,

Technological, and Security. Also outlined in the chart is the likelihood that each hazard

would occur. The plan does make mention of a hazard analysis document, but access to

this document was not allowed due to security reasons. However, both Meyers and Judge Bristol verified the use of a hazard analysis.

The task of maintaining the hazard analysis falls under the responsibility of the Emergency Management Coordinator, Eric Meyers. This analysis is a utilized in the mitigation stage. From this analysis the Hazard mitigation Plan can be developed. This plan is outlined in Annex P of the EOP. Also due to security reasons, this Annex was not provided by the county for review.

Observation

There were no observations made that would lend themselves to the further understanding of Navarro conducting a vulnerability analysis.

Planning – *Interviews*

As stated previously, both Meyers and Judge Bristol emphasized that the county's plan is based on an all hazards approach. The development of this plan is based partly on the use of the information gathered from the hazard analysis performed.

Document Analysis

The Basic Plan (2000, 30) states that the plan should be updated when changes in hazardous threats occur. This updating of information reiterates the importance of the hazard analysis and the role it plays in the development of the plan.

Observations

No observations were conducted that would provide insight into the use of mitigation in the planning stage of the program for Navarro County.

Preparedness

The second stage in the Emergency Program is Preparedness. This stage includes the elements of protection of life and property, exercises and training, and warning systems.

Protection of life and Property – *Interviews*

Interviews with both Meyers and Judge Bristol made mention of the review of building plans and projects in order to limit the development in areas that could be dangerous or prone to emergencies. Judge Bristol also pointed out that the role of the county's volunteer fire departments plays a major role in the protection of the county's residents and properties. The size of the volunteer base provides the county and its residents with trained and capable groups to serve them in the event of an emergency.

Document Analysis

Navarro's Basic Plan outlines mitigation strategies and preparedness activities such as maintaining the emergency plan and conducting the needed emergency training for officials and responders. The plan also states that emergency equipment and facilities will be provided to aid in the protection of the county's residents and property Basic Plan (2004, 11)

Observation

While observing the accident that occurred on February 16, 2006, local and state officials came together to protect the public during a disaster. Roads were blocked to prevent further danger to individuals while the local Fire Department responded quickly to the possible treatment of a hazardous material spill.

Exercise and Training – *Interviews*

Meyers indicated that those in the emergency program provided training in a wide array of areas. Training for those involved in the program, according to Meyers, includes operational training, public information training, incident command training, and training for all stages of the program. The training, Meyers stated comes at both the State and Federal levels. It is mentioned in the interview that different agencies in the program will attend training geared toward that particular agency's field. For example, Mr. Meyers states that the Fire Department may attend training centered on search and rescue.

Judge Bristol stated that his training has been more on the policy and decision-making side, while Meyers has taken training on both policy and first responder training. Judge Bristol also mentioned that training for the volunteer departments is more practical in nature and a more hands on approach to emergency management.

Judge Bristol also mentioned the county's involvement in exercises. While having conducted a Table Top Exercise, the county also has been preparing for a full-scale exercise as well. Participants in these exercises include local, state, and federal officials.

Document Analysis

The Basic Plan (2000, 11) calls for the county as part of the preparedness stage to "conduct and arrange appropriate training for emergency responders, emergency management personnel, other local officials, and volunteer groups who will assist during emergencies." It is also stated in the Basic Plan (2000, 5) that it is the local government's responsibility to train emergency responders.

Observations

While observing Navarro County's involvement in the North Central Texas Regional Exercise Orientation, it was revealed how the county involves exercises through the state. This orientation included members from the Governor's Division of Emergency Management and participants from the region. This meeting provided an insight into the exercises the county was soon to participate. The meeting itself was an orientation, the expectation and a timeline for the county to follow was provided.

Warning Systems – *Interviews*

Meyers mentioned that the county makes use of a number of warning systems. Included in these systems is NOAA Weather Radio, which can provide information on approaching weather emergencies, the Reverse 911 System, which can call and inform residents in the event of an emergency, and the newly adopted portable AM radio station.

Judge Bristol makes mention of the use of sirens situated through out the county. These sirens provide warning to residents in the event of weather emergencies. Judge Bristol also mentioned that the County can make use of a National Weather Service frequency that is specifically configured for Navarro County and the City of Corsicana. The reverse 911 system also was mentioned by Judge Bristol as an important warning system utilized by the county.

Document Analysis

In Annex A (2000, A-2) of Navarro's EOP, it states that "timely warnings to the public of impending emergencies, or those which have occurred, may save lives, decrease injuries, and reduce some types of property damage." Navarro County also makes use of a Local Warning Point (LWP), which is located at the Sheriff's Department and operates

24 hours a day receiving information on possible emergency situations (Annex A 2000, A-2). County officials also receive warnings from the National Warning System. To ensure the reliability of the warning systems, Navarro has also outlined a testing schedule to test that the systems are working properly.

Observations

There were no observations made in regard to the warning capabilities of Navarro County.

Response

The third stage of the emergency program is the Response stage. This stage involves the knowledge about participants of their role, the access to relevant and current information, and services provided to the victims.

Participants Roles – *Interviews*

In the interview with Meyers, he pointed out that participant's role often depends on the situation and area. Meyers mentioned that jurisdiction plays a role in some emergencies, because certain areas are under the supervision of certain agencies. The type of emergency also can determine participant's roles. In an emergency, the relevant agencies will respond to the part of the emergency for which they are specifically trained. Eric Meyers pointed out that responsibilities are divided among responders based on an instant-by-instant basis.

Judge Bristol also stated that location plays an important role in determining responsibility. If the incident falls within the city limits of Corsicana, then Fire Chief McMullin is in charge, serving as the Incident Commander (IC), and Meyers is his second in command. If the incident is out in the county, then the roles are reversed and

Meyers is in charge and would take the role of the IC. It is also mentioned by Judge

Bristol that the local fire department serves as the county's Haz Mat Team and is in

charge of the local ambulance service.

Document Analysis

Navarro's Basic Plan requires that certain departments are responsible for certain

parts of the emergency program. For example, it is the duty of the fire department to

develop the primary plan for firefighting and hazardous material spills. The county's

sheriff's department and police departments would be responsible for warnings,

communication, evacuation, law enforcement, and terrorist attack response. The

development of the EOP is completed by all of the agencies involved. They are

responsible for maintaining and updating their parts of the EOP and seeing that each

agency is provided with the updates. Outlined in the Basic Plan (2000, 12-22) are the

responsibilities in the EOP, the agency responsible for them, and the duties of those

agencies.

Observation

The emergency that occurred on February 16, 2006 provided evidence of how

each individual agency responded according to their roles. The local police served to

block roadways, while the fire department responded to the Haz Mat spill. The combined

effort of the local agencies allowed for the emergency to be quickly resolved. The

incident also allowed for the observation of how the county and city officials worked

together in response to the emergency. The Chief of Police served as the Information

Officer to the news media, while the Fire Chief presided as the Incident Commander.

Also, Meyers maintained communication between the Regional Liaison Office from the Division of Emergency Management and the local officials involved.

Information Access – *Interviews*

In order to keep officials and those involved in the emergency program updated, Meyers stated that he issued weekly memos concerning threats, action taken, and other relevant information. Meyers mention that during an emergency, key officials are present at the Emergency Operations Center (EOC), and it is at the EOC where they are kept up to date on how the emergency is being handled.

Judge Bristol mentioned that in the event of an emergency that the Command Center would be set up either in its permanent location or in the Mobile Command Center. It was also mentioned that these centers have interoperability capabilities. This communication ability allows information to flow from the command center to all agencies involved. If an agency is not equipped to receive information from the EOC, then the county can provide radios, tuned to their frequency. Judge Bristol also mentioned that in the event that all communication capabilities are lost, the mobile command center has the capabilities of setting up its own phone system using satellite technology. Possessing this technology allows information to flow from the EOC to those responding.

Document Analysis

Annex B of the EOP for Navarro County outlines the communication capabilities available to the county. The communication network for the county is operated out of he Sheriff's Department. The Sheriff and or Police Chief ensure that communication capabilities are available during an emergency. The procedure for ensuring the

availability of communication is also found in Annex B. The outline of the extensive communication network illustrates how the County is ensuring that this necessity is provided and maintained during an emergency.

Observations

During the county's response to the emergency on February 16, 2006 and after the LEPC meeting, it was observed how the county has made use of its mobile command center. The Recreational Vehicle (RV), which serves as the mobile command center, is equipped with a satellite radio, television, and phone service and is capable of utilizing its own radio station in the event of an emergency. The state-of-the-art technology has given Navarro County a mobile center capable of maintaining communication with responders in almost any situation.

Victim's Services – *Interviews*

Meyers emphasizes that the size of the emergency determines the speed to which responders can provide services to the victims. If the resources are maxed to the capacity during an emergency, then it is a matter of how quickly outside agencies can react to the victims and the situation at hand.

Document Analysis

Annex H of the EOP provides an outline of health services available within the county in the event of an emergency. Annex H (2001, H-3) states that, "there is an adequate local capability to meet most emergency situations." The county also maintains that in the event of an emergency, private organizations are able to provide assistance to the victims.

Annex C of the EOP deals with the provision of shelter and mass care in the event of an emergency. The Basic Plan (2000, 22) states that the Corsicana Chapter of the American Red Cross has agreed to provide shelter, food, and first aid to victims. Also, The Salvation Army and the Southern Baptist Convention Disaster Relief are available to provide mass feeding and other necessary aid to victims.

Observations

No observations were made in regard to the provision of victim's services.

Recovery

The fourth and final stage of an emergency program is Recovery. In this stage, financing, post-disaster mitigation, supplies for rebuilding and leadership should be provided.

Finance – *Interviews*

During the recovery stage of the emergency program, relationships with potential financial capabilities and agreements would be utilized. Both Meyers and Judge Bristol emphasized the importance of mutual-aid agreements and financial support from the state and federal governments.

Document Analysis

Annex J outlines the recovery stage of the EOP for Navarro County. In this annex (2001, J-2), it is stated that the county must be able to maintain support until aid from outside agencies can be provided. Once the situation has been resolved, the county will conduct a damage assessment to determine the necessary assistance needed from outside agencies. If the county is unable to financially provide for recovery, then the County Judge will request assistance from the State.

Observation

An observation was made in reference to state support in the event of an emergency. As referenced before at the LEPC meeting, Meyers provided information to the local responders on how to receive reimbursement for service in response to wild fires. Instructions were provided to ensure that the requests were submitted in the proper fashion to ensure their acceptance.

Mitigation – *Interviews*

Mr. Meyers stated that during the aftermath of a disaster, it is the After Action Review (AAR) which provides the necessary amendments to the plan. Plans evolve through observations. These reviews show where changes need to be made, how responders acted, and where problems arose during the emergency.

Judge Bristol mentioned that the AAR involves all officials. After an emergency, everyone discusses and reviews the programs response. At this meeting, suggestions are made, and opinions from professionals involved are provided. Afterwards, the necessary changes would be amended to the program before the next disaster occurred.

Document Analysis

Navarro's Basic Plan (2000, 20), requires that mitigation strategies should be utilized. Officials should coordinate and carry out a post disaster mitigation program. This assessment of the program after an emergency allows the county to redevelop its plan in regard to weaknesses uncovered in the emergency. These mitigation strategies are once again present in Annex P.

Observations

There were no observations made in regard to post-disaster mitigation.

Supplies – *Interviews*

To provide supplies during the recovery for both the victims and rebuilding purposes, Meyers emphasized the Tier I and Tier II agreements that the county has entered into with other jurisdictions. Tier I agreements are between the jurisdictions within the boundaries of Navarro County. These agreements, according to Mr. Meyers, provide assistance during the recovery phase of the program. Tier II agreements are between counties in the region and provide the same assistance. These Tier agreements and the county's constant communication with the state is what will ensure the flow of resources into the county.

Judge Bristol stated that in the event of a major emergency, the county would have to depend on outside assistance from both state and federal government. In this instance, the county more than likely would utilize all of its resources. Judge Bristol also mentioned that the rebuilding process required a higher agency's capabilities, and county government capabilities would not suffice.

Document Analysis

Annex J of the EOP provides an outline for the recovery stage of the emergency program. This annex (2001, J-5) states that assistance should be requested within ten (10) days of an emergency. This is because the responding agencies would need adequate time to assess and fill the requests. The annex also outlines how the County Judge should approach the Governor when requesting aid. Federal aid, according to the annex (2001, J-2), would be provided under the Stafford Act.

Observations

In regard to observations on supplies and recovery, Meyers once again referenced the Tier agreements referred to at the LEPC meeting. He mentioned that the County is currently trying to finalize these agreements with the jurisdictions within the County. Meyers emphasized the importance of the agreements because officials are provided with descriptions of all of the agreements found within the county and its local jurisdictions.

Leadership – *Interviews*

In regard to leadership, Meyers mentioned that key officials are kept up to date by attending state and national conferences concerning emergency management and homeland security. Also, leaders attend statewide LEPC conferences and keep up to date on the advancements made in emergency management. Also emphasized by Meyers was the network he had developed with other leaders in the emergency management field. This network has allowed him to stay current on ideas and advancements in other counties, ensuring that he is most knowledgeable on the subject.

To ensure that Navarro County's leaders are kept up to date, Judge Bristol stated that he maintains communication with the State Office of Emergency Management. He also is updated on Federal activities concerning Emergency Management. Judge Bristol also emphasized an open door policy which allows for the open flow of information and ideas between leaders and officials in the program.

Document Analysis

Navarro's Basic Plan outlines the leadership in the emergency program. Starting with Judge Bristol, the plan shows who is in charge of what section of the plan and the agencies involved. The Basic Plan (2000, 24) also outlines the line of succession for the

emergency program. The plan has provided each leader with their responsibilities and the goals to which they are to work.

Observations

When observing the response to the emergency on February 16 and the LEPC meeting, it was revealed that the leaders of Navarro County's emergency program are involved in all aspects of the program. They have ensured the program's capabilities by maintaining and updating the EOP while keeping up to date with advancement. The leaders close relationships with the state and federal official also has provided assurance that the County is provided for in the event of an emergency. The involvement of leaders throughout the County also has ensured the effectiveness of the program.

CHAPTER 6

RECOMMENDATIONS AND CONCLUSION

The purpose of this research is to first develop an ideal emergency management program, and second to study the emergency program of Navarro County and compare it to the model, and third to make recommendations that would allow the Navarro program to run more effectively.

In Chapter 2, an ideal model of an emergency program was developed using the relevant literature. Based on this model, a conceptual framework was developed allowing a comparison of the Navarro program to the model. The results from this comparison can be found in Chapter 5. The methods used for collecting data included interviews, document analysis, and observations.

This chapter will examine the results and meet the final objective of this research. Based on the findings, this chapter will make recommendations that will allow the emergency program in Navarro County to run more effectively.

Recommendations

As stated previously, Chapter 2 developed a conceptual framework which evaluated the emergency program in Navarro County. Based on this framework, the research concurs that the program in Navarro County does meet the standard developed by the framework. Table 6.1 below shows how the program meets the standards outlined in the framework.

Table 6.1. Recommendations

Ideal Type Categories	Supported By Evidence	Recommendations
County Responsibilities:		
- First Response	Yes	- Greater financial ability is needed. The County needs to increase the budget from the emergency program and limit the dependency on grants.
- Coordination with state and federal officials	Yes	
- Know ways to finance program and recovery	Somewhat	
- Develop plans of action	Yes	
- Establishing Ordinances	Yes	
- Public Education	Yes	
Program Stages:		
Mitigation	Somewhat	- More needs to be done in regard to pre-disaster mitigation. Like the City, the County needs to develop mitigation to deal with flooding and other disasters.
- Prevention and long term protection	Yes	
- Vulnerability Analysis	Yes	
- Planning		
Preparedness		
- Protection of life and property	Yes	- More training is recommended at the responder's level.
- Exercises and training	Somewhat	
- Warning Systems	Yes	
Response		
- All participants should know their roles	Yes	
- Access to relevant current information	Yes	
- Victim's Services	Yes	
Recovery		
- Financing the recovery	Somewhat	- The county needs to develop a stronger plan for financing the recovery stage of the program.
- Understand and fix mistakes for future emergencies	Yes	
- Plan for immediate provision of supplies and long-term rebuilding	Yes	

County Responsibility Recommendations

Although Navarro County has entered into a number of mutual-aid agreements, it

still lacks funding. Upon reviewing the budget for the Emergency Program, it was

obvious that the majority of the funding comes from grant money and not from the

county. Basic funding is a vital part of the county's responsibilities when developing an

emergency program. The program should not be dependent on grants. Unfortunately for Navarro County, the budget is cut in half when grant money is not available. Due to this scenario, Navarro County should develop additional sources of funding for its emergency program. Additional funding would reduce the dependency of emergency programs on grants and maintains consistency in the annual budgets.

Training and Exercise Recommendations

The county has devoted a program for the proper training of its officials and management, but, on the other hand, responders lack this intensity in their training and exercise programs. From the evidence gathered, it appears that the majority of Navarro's training is for management and officials. This research recommends that Navarro develop a more inclusive training program for all participants. In the field, responders and volunteer agencies should be provided with more training.

Mitigation Recommendations

Meyers mentioned that the county's primary mitigation tactics deal with public education. Mitigation efforts can be referenced in Annex P, which was not accessible for this research. The emphasis on education illustrates how the mitigation efforts conducted by the county are more centered on protection rather than prevention. Meyers did mention that the City of Corsicana was taking mitigation steps to deal with flooding problems, but these steps would only apply to the city plan. Based on this research's findings, it is suggested that the county take steps toward the development of preventative mitigation while maintaining its protective mitigation.

Conclusion

The unpredictable nature of emergencies requires emergency management program to be capable of handling whatever may occur. Disasters, natural and otherwise, cannot always be prevented. It is necessary to have a program in place that can effectively manage any emergency that occurs. The protection of life and property is the main goal of any program. The capabilities of an emergency program must be reliable in the event of an emergency.

The elements of the conceptual framework presented in Chapter 2 outline an ideal emergency program. The emergency program in Navarro County, based on the research, has met the requirements of the ideal model with only a few areas where improvement is needed. With regard to financing and mitigation efforts, there are ways in which these areas of the program can be strengthened. Therefore, while this ideal model is intended to measure the emergency program in Navarro County, it can be utilized in measuring any emergency program.

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APPENDIX 1
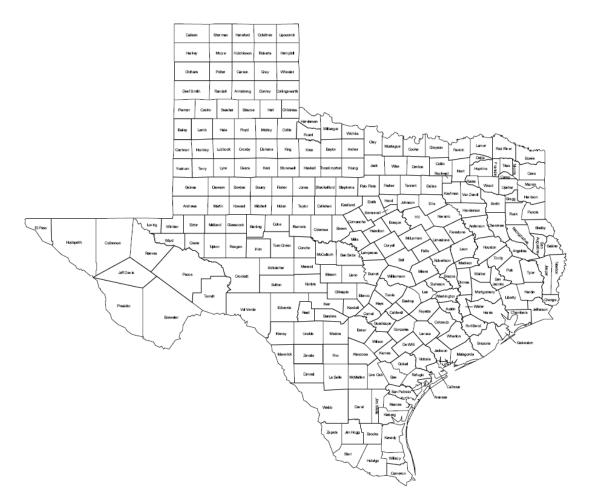**Interview Questions: Eric Meyers**
February 17, 2006

1. How is the county promoting relationships with the state?

2. How does the county include the public in its emergency management program?

3. Does the county have first response capabilities? If so, how timely are they? How many responders are there?

4. What steps have been taken to ensure that the entire county is covered in the event of an emergency?

5. How is the county prepared for the loss of revenue that can occur after an emergency?

6. Has the county performed a vulnerability assessment? If so how often is it updated?

7. What types of emergencies is the county prone to?

8. How often does the county reevaluate its emergency operations plan?

9. What steps has the county taken to limit development in hazardous areas?

10. What other steps have been taken to protect life and property of the residents?

11. What type of training are those in the emergency program involved in?

12. Does the county conduct emergency exercises? If so how elaborate are they?

13. How much discretion is allowed by those responding to an emergency?

14. What systems does the county use to provide warnings of emergencies?

15. How is the emergency response divided among those responding? What roles do the different agencies perform?

16. How are officials kept up to date on new and relevant information?

17. How quickly can responders provide relief and aid to the victims?

18. How are supplies and resources ensured during an emergency?

19. How does the emergency operations plan evolve after an emergency?

20. How has the county provided for the rebuilding process?

21. How are officials and leaders kept up to date on the latest advancements in emergency management?

APPENDIX 2
Interview Questions: Alan Bristol
March 12, 2006

1. How is the county promoting relationships with the state?

2. How does the county include the public in its emergency management program?

3. What ordinances has the County established in order to provide the Emergency Program the necessary authority?

4. What steps have been taken to ensure that the entire county is covered in the event of an emergency?

5. How is the county prepared for the loss of revenue that can occur after an emergency?

6. How does the county assess its vulnerabilities?

7. What types of emergencies is the county prone to?

8. How often does the county reevaluate its emergency operations plan?

9. What steps has the county taken to limit development in hazardous areas?

10. What other steps have been taken to protect life and property of the residents?

11. What type of training are those in the emergency program involved in?

12. Does the county conduct emergency exercises? If so, who is involved?

13. How much discretion is allowed by those responding to an emergency?

14. What systems does the county use to provide warnings of emergencies?

15. How is the emergency response divided among those responding? What roles do the different agencies perform?

16. How are officials kept up to date on new and relevant information?

17. How are supplies and resources ensured during an emergency?

18. How does the emergency operations plan evolve after an emergency?

19. How has the county provided for the rebuilding process?

20. How are officials and leaders kept up to date on the latest advancements in emergency management?

MAP OF TEXAS COUNTIES

71