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16. Abstract

Under contract No. DOT-RC-92013, Kansas State University completed a phase I final report: "Community Model for Handling Hazardous Materials Emergencies." (October 1981) This report gave an indepth state-of-the-art analysis of risk analysis literature, laws, available data bases, available training courses, and developed a rural risk model. As part of phase I, a users' manual was developed: "Risk Assessment/Vulnerability Users Manual for Small Communities and Rural Areas (October 1981). The need for validation led to the redirection of the original multiyear study and the addition of a phase III which resulted in the phase III final report: "Risk Assessment/Vulnerability Validation Study" (June 1983). This study concluded that the model gave reasonable results and had high credibility among the local officials participating.

As a result of this study the risk assessment users manual was revised to be easier understood and easier to use. (Revised draft, Users Manual, June 1983). After having given the validation study (phaseIII) priority, the study team returned to complete phase II, the development of a simple "how to" manual that small towns could follow in developing a hazardous materials emergency plan to reduce their vulnerability to whatever degree of risk was present. This current manual (with a complete example case study application to Riley Co., Kansas) is the 4th and final report on this contract. This manual and case study guides the small town official through the entire process of writing their hazardous materials contingency plan from the initial decision to write a plan, through the entire process.

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Unclassified	Unclassified		

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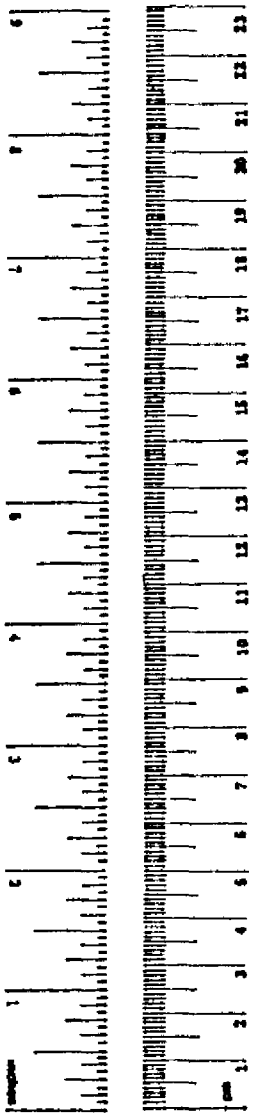
METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

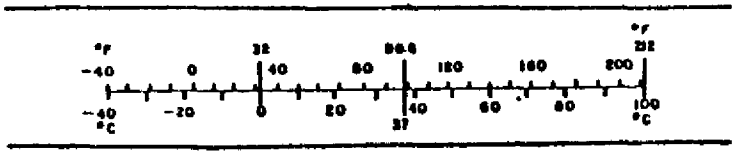
Symbol	When You Know	Multiply by	To Find	Symbol
	LENGTH			
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
	AREA			
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
	MASS (weight)			
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
	VOLUME			
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
	TEMPERATURE (exact)			
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
	LENGTH			
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
	AREA			
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
	MASS (weight)			
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
	VOLUME			
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
	TEMPERATURE (exact)			
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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The authors are indebted to numerous students, both paid and unpaid, for their efforts in the data collection phase of this study. The cooperation and input from officials in all 11 cities is gratefully acknowledged.

E. R. Russell

Principal Investigator

NOTICE

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for the contents or use thereof.

MANUAL FOR SMALL TOWNS AND RURAL AREAS TO DEVELOP A HAZARDOUS MATERIALS EMERGENCY PLAN: WITH AN EXAMPLE APPLICATION OF THE METHODOLOGY IN DEVELOPING A GENERALIZED EMERGENCY PLAN FOR RILEY COUNTY, KANSAS

Executive Summary:

The enclosed manual was developed as a guide to be used for small towns and rural areas in writing their own Hazardous Materials Emergency Plan. The Guide takes a small town official through the entire process from the initial decision to write a plan, to choosing a writer, to writing the plan and updating it. Also enclosed is a list of local organizations that may be included in the plan and the roles that they may play. Suggested detail plan sections are also included.

As part of this report, a thorough review of several existing manuals that supposedly serve the same purpose (i.e., guide local officials in writing an emergency response plan) are reviewed. Their strengths and weaknesses are reviewed in context with this project staff's extensive contact with local officials during Phases I, II and III of this project. Incorporation of their concerns and comments was accomplished in this project's final manual.

The guide itself contains an introduction and overview that explains its importance and use so that it sets the stage for even a novice local official with no hazardous materials expertise to feel assured about what needs to be done and how to do it. The guide is followed by an example case study in which the authors updated information and rewrote an outdated Riley Co., Kansas hazardous materials plan in accordance with the guide.

The manual was used by the authors to write a Hazardous Materials Emergency Plan for Riley County, Kansas. This served to test the manual and subsequent revisions were incorporated into this final version. Subsequent to this, the Hazardous Materials Emergency Plan was incorporated into the Riley County/Municipal/University Emergency Operations Plan. This was written as part of the requirements Contract No. DOT-RC-92013. This involved a major re-writing of the Riley County plan which was inoperable. The principles that were used in writing the Hazardous Materials Emergency Plan were adopted for use in the Emergency Operations Plan which covers all types of emergencies that could be expected in Riley County, Kansas.

The authors made a presentation on integrating hazardous materials emergency planning into the small town planning process at a recent international conference.* The paper summarized our findings on this subject over the entire span of the project. This paper gives more extensive background and depth in regard to the backgound and reasoning that led to our development of the guide. Because of this, and also the limited audience reached by the conference, this paper is presented as part of this report as Appendix A.

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*Conference on Recent Advances in Hazardous Materials Transportation Research: An International Exchange, Lake Beuna Vista, FL, Nov. 10-13, 1985.

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INTRODUCTION

Under DOT Contract RC92013 Kansas State University completed a "Community Model for Handling Hazardous Materials Emergencies," an empirical model developed as a practical methodology using data and techniques within the grasp of small town and rural officials. This model was then tested in the "Risk Assessment/Vulnerability Validation Study" under Phase II of the project. In the validation phase the risks associated with the transportation of hazardous materials in small cities were assessed. Out of this grew Phase III of the project.

In Phase III a model was developed for small cities to write their own plan to be used in the event of a hazardous materials incident. This model was then used to write a Hazardous Materials Emergency Plan for Riley County, Kansas which was incorporated into a general disaster plan for Riley County, Kansas. Out of this testing phase, generalized guidelines, "A Guide to Writing Your City's Hazardous Materials Emergency Plan" were developed. This last guide was the major thrust of this last phase and is Chapter 3 of this report.

Riley County, Kansas was chosen as the test site for a variety of reasons. One of the main reasons is that Kansas State University is located in Manhattan which is the county seat of Riley County, Kansas. Another reason is the variety of transportation modes that cross Riley County. Riley County also contains a variety of land

uses and a population that is concentrated in one city--Manhattan. Finally, Riley County had a published emergency plan, albeit outdated, that would serve as a starting point.

The project staff acted as the planners for the Riley County/Municipal/University Emergency Operations Plan. Using information gleaned from the Hazards Analysis, the hazards that affect Riley County were included. These range from fire, to flood, to tornadoes to hazardous materials transportation emergencies. In order to include all of the affected agencies an outline was developed starting with the offices of Public Safety. These offices were then questioned to determine what other agencies they deal with on both a daily basis and on an emergency basis. This started a network of agencies. Each named agency was then questioned as to other agencies they dealt with. Eventually the agencies named are repeated and the process concluded.

The first draft of the plan was sent to all of the agencies named in the plan. A follow-up interview was then conducted. Many of those charged in the plan had constructive comments that were incorporated in the second draft. The second draft was also presented to the affected agencies. Their comments were then included. From this point on, all revisions were made by the staff for clarity and continuity. The final draft was reviewed by the public officials that would be major characters in

a disaster. After they gave final approval, the emergency plan was then considered operational. Telephone call lists, which would be part of an actual plan, would be added to make the plan operational when adopted by Riley County, Kansas.

REVIEW OF MANUALS

In order to develop a model to be used by cities to write their own Hazardous Materials Emergency Plan, various manuals were reviewed.

The State of Kansas publishes its own manual, "Guidelines for Development: Hazardous Material Contingency Plan." (1) This manual was written by the Division of Emergency Preparedness of The Adjutant General's Department. The Introduction to the Guidelines states,

> "The purpose of this document is to give an example of the items necessary to develop a useful contingency plan for handling hazardous materials incidents/accidents." (Division of Emergency Preparedness, 1980, Introduction)

This document is basically a fill-in-the-blanks approach to writing a plan. It even goes as far as stating that the word "Model" on the cover should be replaced with the name of the local governmental unit.

If this guide was followed by placing the proper names in the proper spaces the result would be a Hazardous Materials Contingency Plan for City/County "X." This guide's deficiency is that it is too easy to fill-in-the blanks without really looking at the planning process and the unique needs of the city affected. The introduction states, "Your plan should reflect the unique capabilities and needs of your own particular community." The guide

does give some direction in writing a plan but the result will probably not reflect the unique needs and capabilities of the city. This is dangerous because in the event of an actual Hazardous Materials Emergency it may not be possible for the plan to be operational. The resulting document may be totally useless.

Another guide that was reviewed is "Preparing for Environmental Emergencies, A Planning Guide and Checklist" written by Rockwell International. (2) This guide uses an approach opposite of the State of Kansas guide. The introduction clearly states that this is not a "fill-in-the blanks" model plan. It also states clearly, "Your finished plan, by itself, does not assure that you can cope with spills." (Rockwell, 1979, p. 1-2) This approach is much more realistic and is more likely to result in a plan that is operational. The Rockwell guide revolves around a series of "Decision Points." Decision points

> "allow the user to decide what parts of this guide he needs or wants to use, as well as clarify and organize his own assignment, goals, and objectives within the planning framework." (Rockwell, 1979, p. 1-4)

The guide poses a series of questions which will guide the writer in producing a plan which is unique to their needs. The deficiency in this guide is that it may not give enough guidance to some local officials. One of the premises that is used in this project is that the guide should be useable by officials in small cities and rural

areas. Many of these officials have no formal training in planning and thus may need more guidance than this guide may give. This guide was subsequently published by FEMA as, "Planning Guide and Checklist for Hazardous Materials Contingency Plans" in July 1981. It is commonly referred to as "FEMA 10" (3).

Out of these two approaches a third approach was developed. This guide or manual is not a "fill-in-the-blanks" approach. The guide poses a series of questions to be answered by knowledgeable persons from the community. They are intended to spark discussion among those writing the plan and thus the resulting document will accurately reflect the needs and capabilities of the affected community. While we cannot guarantee that following the guide will result in a Hazardous Materials Emergency Plan that is perfect, following this guide should result in a plan that is suited to the unique needs and capabilities of the particular city or county. In order to meet the guidelines of the Federal Emergency Management Agency (FEMA) an integrated approach is required. The IEMS approach is discussed in the next chapter in this report. It was utilized in developing the manual so that the guide would meet the guidelines.

The first draft of the guide was mailed to city officials in the 11 cities that were surveyed in the earlier Phase of this report. They were then mailed a questionnaire that asked if the guide was easy to follow and would it be useful in a city the size of theirs.

Mail returns were minimal and so follow-up telephone interviews were conducted. These conversations illuminated areas of misinterpretation and areas that city officials felt were confusing. A second draft was then prepared incorporating comments from the earlier interviews. This draft was then mailed to the same people plus a few others that had been suggested by the first groups of respondents. In-person follow-up interviews were conducted. These interviews usually lasted from 30-60 minutes and resulted in many productive comments. These comments were then incorporated into the final draft which was used in developing a Hazardous Materials Contingency Plan for Riley County, Kansas.

REFERENCES

1. Division of Emergency Preparedness. The Adjutant General's Department, Guidelines for Development: Hazardous Materials Contingency Plan, State of Kansas, Topeka, KS. October, 1980.

2. Rockwell International, "Preparing for Environmental Emergencies, A Planning Guide and Checklist (Draft)" Prepared for: Oil and Hazardous Materials Spells Branch. Industrial Environmental Research Laboratory - Cincinnati, U.S. Environmental Management Agency, Newburg Park, CA, August, 1979.

3. Federal Emergency Management Agency and U.S. Environmental Protection Agency, "Planning Guide and Checklist for Hazardous Materials Contingency Plans", Washington, D.C., 1981.

INTEGRATED EMERGENCY MANAGEMENT SYSTEM

The Integrated Emergency Management System (IEMS) was created by the Federal Emergency Management Agency (FEMA) because an integrated approach is the most effective way to accomplish FEMA's emergency management missions (FEMA, Sept. '83, pg. 3) (1). The goal of the system is:

> "develop and maintain a credible emergency management capability nationwide by integrating activities along functional lines at all levels of government and to the fullest extent possible, across all hazards" (FEMA, Sept. '83, pg. 4).

This is an attempt to reduce the number of response plans needed. This will be done by increasing emphasis on developing the common and unique capabilities required to perform specific functions common to all hazards. This is opposite of the philosophy wherein responses are developed for each specific hazard. This is based on the premise that different hazards all have common characteristics and thus the need for common responses.

In order for State and local governments to utilize the IEMS process, three steps must be followed:

1) determine the hazards and magnitude of risk;
2) assess the existing and required capability with respect to these hazards; and
3) establish realistic local and State plans that outline actions for closing the gap between existing and required levels of capability.

(FEMA, Sept. '83, pg. 5). These steps must be followed sequentially in order to be effective. These steps will lead you to the capability shortfall or capability gap. This is the gap between the actions required and the existing capability to supply these actions. This shortfall leads to the preparation of a multi-year development plan. This process is the means of improving capability and not an end in itself.

FEMA designed the IEMS process so that it could be used by jurisdictions that do not have the same hazards or capabilities. FEMA claims that the process is

> logical and applicable to all jurisdictions regardless of their size, level of sophistication, potential hazards, or current capabilities. (FEMA, Sept. '83, pg. 7).

In developing the manual it was recognized that various hazards have common responses. For example, both a tornado and a hazardous materials transportations emergency may require disposal of debris. Recognizing this, it is much more efficient and streamlined to write an emergency plan that recognizes these similarities. If these capabilities are present for us in a tornado they should also be available for use in another circumstance. To the contrary, if this capability is not present the community can easily see how many times this capability will be lacking. Also if the standard operating procedure changes for a necessary response it will change in all hazards without re-writing the plan.

REFERENCES

(1) Federal Emergency Management Agency, CPG 1-100, Process Overview, September, 1983.

A GUIDE TO WRITING

YOUR CITY'S

HAZARDOUS MATERIALS EMERGENCY PLAN

INTRODUCTION

This guide is designed to aid you in writing a Hazardous Materials Emergency Plan. It is not a "fill-in-the-blanks" type of guide. The Plan will be tailored to the needs of your individual community. How will this be accomplished? It will be accomplished by using input from members of the community. The plan will not be formulated by a team of experts who "know what is best for you." While you may refer to experts for information and possibly contract with someone to do the actual writing, ultimately the contents will be what is needed in your community. The plan manual will ask questions and it is up to you to formulate answers based on your knowledge and the capabilities of your community. If you find many times that you do not have adequate information to answer the questions you may want to slow down and bring in some help. Don't just scrap the whole process--it is important. Keep in mind also that just the exercise of going through the process (and reviewing it periodically) is an extremely important exercise that in itself has numerous benefits to a community that has never thought through the problem. You may find that someone else should be in charge and delegate responsibilities to them. You may find that you need a consultant.

If you are not now planning on writing a plan to combat Hazardous Materials Emergencies this guide may still be helpful. It may help you to realize that such a guide is necessary to ensure the safety of the inhabitants of your community. If you feel that you do not need such a plan, spend a few minutes reading through this guide. It may reinforce this idea or it may nudge you to look at your situation more closely. If you presently have a plan review it after you have studied the guide. You may find that it needs major re-working or perhaps only minor alterations.

So that the plan works for your community this guide will cover the following which will be adapted to fit the needs of your community:

This guide will cover the following:

1. Why are we writing the plan?
2. Who will write and put the plan together?
3. What area will the plan cover?
4. What hazards exist?
5. What are our capabilities?
6. What should be included in the plan?
7. What other plans exist?
8. Who will up-date the plan?

Now you are ready to begin. Proceed to Part I.

Part I--WHY ARE WE WRITING A PLAN?

This part will help you to decide why you are writing a Hazardous Materials Emergency Plan and thus the scope of the plan.

A. Has there recently been an accident/incident in your community which stirred people up and prompted the writing of the plan?

B. Is it an official mandate from the State or Federal level to write a plan?

C. Is this part of the over-all long-range planning process in the community?

D. Is this part of the emergency planning process in the community?

These questions should help you to form in your mind the reason you are writing the plan. You may not be the one actually writing the plan. You may be in charge of seeing that the task is accomplished by someone else. This is all the more reason for knowing why you are doing this planning--this will make it easier to communicate with another party and explain what is to be accomplished.

These questions should also get you thinking about the scope of the plan and how it fits in with the other planning functions. If a previous incident is the instigation of this plan you may be able to apply knowledge gained in combatting the previous incident. This

may have pointed out your strong and weak points. If you are writing the plan because of an official mandate you may not feel that the need is really there and the planning effort may struggle due to lack of support. If this is part of a long-range planning process in the community such as transportation and land use planning you may find that the skill is available for writing the plan but again the push may not be present. The plan may evolve into a nice book which collects dust. If the planning effort is part of the emergency planning process the plan may be successful because it means that there is experience in writing emergency plans such as those for floods or tornadoes. While these plans differ, the process is the same and the author may be familiar with the responses needed to mitigate the emergency.

Now that you have examined why you are writing a Hazardous Materials Emergency Plan it is time to get writing. Proceed to Part II.

PART II--WHO WILL WRITE AND PUT THE PLAN TOGETHER?

This part will help you to decide who shall be assigned the task of actually writing the plan or coordinating the writing of the plan.

A. Have you been assigned the task? If so, by whom?

B. Does this person have the legal authority to direct you to do this task? Persons that may have this authority include:

Police Chief/Sheriff

Fire Chief

City Manager

Mayor

County Civil Preparedness Coordinator

County Commissioners

C. Has someone in the emergency services recently written an emergency plan such as a Standard Operating Manual for emergency services (including fires, tornadoes, etc.)?

D. Does your city or county have a professional planning staff? These people will probably be involved in land use planning. Have they written a transportation or comprehensive plan?

While you may not see this as emergency planning it is related because the planning process is the same.

E. Contact the State Department of Emergency Preparedness or the State Civil Defense Department to see if they have persons available to aid your community in writing your plan. The County Emergency Preparedness Coordinator may already be in contact with the State office. This would serve as a good way to find proper person at the State level.

F. The State Department of Transportation may also have resource persons that can aid you in writing the plan.

G. Read your State Disaster Manual. This will point out which State office has been charged with emergency planning in your state.

H. Is there a group or an individual that is a leader and willing to write the plan?

I. Will you hire a consultant to write the plan?

These questions are aimed to get you to thinking about who is actually qualified to write the plan. If you have been assigned the task based upon your qualifications you are probably ready to go to work and may not need this manual. If you have been assigned to

write the plan and don't feel that you are qualified you may need to do some research to prepare yourself for the task.

If you are in charge of seeing that someone else writes the plan these questions should prompt you to think of likely persons or groups. While we usually speak in terms of one person writing the plan, a group may be just as good or even better. As the saying goes, "Two heads are better than one." But this group cannot get so big that it is unworkable. If a group is to be used, it is best that one person is designated as a Chairman so that there is a contact person and one who is ultimately responsible for decisions concerning the plan.

You may look at present city or county employees who are experienced in planning and are familiar with the community. This may be your best source but you must also look at their other work responsibilities. Will they be able to put in enough time to make the plan successful? Will their other work commitments suffer because of the added load? Can their work be reassigned so that no one person is overloaded?

If you will be using resources from the State level: determine what their aid entails. Will they really examine your community or will they use a prepared plan and just change the name on the cover. The State level may turn out to be a good source of resources rather than a good source of an author. Contact the various State agencies that you have considered earlier.

Look closely at the volunteer groups in your community Often, these groups with their vast memberships possess talents and skills that go unrecognized.

If you have decided to use a consultant, be aware of what services you are contracting. Will the consultant use a prepackaged plan and change the names and phone numbers where appropriate, or will you get a plan tailored for your community? This guide should help you decide if you need a consultant. If so, it is recommended that you get together a committee of your key people and require that the consultant have close contact with this committee. If the plan is prepared by a consultant, who will keep it up to date? Remember that planning is an ongoing process. A plan that just sits on a shelf and collects dust is more dangerous than no plan at all. Proceed to Part III.

PART III--WHAT AREA WILL THE PLAN COVER?

This part will help you to delineate the scope of the plan. This is important because without the scope being clearly defined you are likely not to cover your area adequately.

A. Is your community one that relies on the county for many functions such as Police and Fire protection?

B. Is the majority of the population of the county in one city?

C. Does one city cover (geographically) most of the county?

D. Is your community on the edge of the county and/or state?

E. Do capabilities exist in your community to mitigate a hazardous materials incident without going outside of the city for aid? (If your answer is affirmative, you may not need this manual. You obviously have researched your community or you may be dangerously over-estimating your capabilities.)

In most cases, a Hazardous Materials Emergency Plan that is being written for a small community will need to cover more than the actual town or city. Often, the resources needed are not available in the city and you

must look outside. The county may be the source of many resources and thus a county-wide plan may be indicated. The State may also be a source of resources that will be needed as part of your local plan.

If the community is on a border of two or more counties and/or states, the plan should reflect these jurisdictions. While this will make writing the plan more difficult, now is the time to iron out these difficulties rather than waiting for an emergency. Emergencies do not automatically stop at city/county limits; your plan should not either.

Now that you've got your area delineated and your writers ready to write, it is time to determine what hazards exist. Proceed to Part IV.

PART IV--WHAT HAZARDS EXIST?

Now that you've decided who will write the plan and what area it will cover, you need to determine what hazards exist in your community.

A. Has a hazards analysis been done for your area recently?

B. Has an incident pointed out a hazard or possible hazard?

C. Does the Police or Fire Department have an inventory of sites that store or use hazardous materials?

If a hazards analysis has been completed this should point out what hazards exist and what parts of your planning area could be affected. If no hazards analysis has been completed it is a good idea to do one now. There are various guides available. Look for one that is designed for small cities and rural areas such as "A Community Model for Handling Hazardous Materials Transportation Emergencies" by E. R. Russell et al. (1)

If an incident is prompting this planning effort look at the records of the incident. This will show the causes of the incident which can be translated into hazards. Look at other similar hazards that exist. In order to get a comprehensive view of hazards in your community you may want to do a hazards analysis.

If the Police or Fire Department keep an up-to-date list of those storing and using hazardous materials this will be a good start. From this list you can analyze the movement of these substances within your planning area. This should also be supplemented with a hazards analysis.

Now that the hazards which exist are inventoried it is time to document your capabilities. Proceed to Part V.

PART V--WHAT ARE OUR CAPABILITIES?

Now that the scope of the plan has been determined and the hazards that exist in the community have been inventoried, it is time to determine how to mitigate the effects of a hazardous materials incident. This involves finding out what capabilities exist and what capabilities are missing in our community.

Steps to determine what capabilities exist and what capabilities are missing in your community.

1. Examine the history of previous incidents. This is important because these reports will point out what types of emergencies your community has been involved in and how they were handled. Do not rely on just the knowledge of the members of the group writing the plan. You may not be familiar with all incidents and your recollections may not be accurate. Contact as many sources as possible such as:

   Newspaper files

   Local governmental reports

   Weather Bureau

   Corps of Engineers

   Police/Sheriff Departments

   American Red Cross

   Other volunteer disaster agencies

   Knowledgeable persons

2. As these groups are contacted, ask the following:

   A. What are your day-to-day responsibilities?

   B. What additional tasks do you take on in an emergency?

   C. How are you called into action in an emergency?

   D. What other groups do you work with on a daily and/or emergency basis?

   E. What incidents have you been involved with in the last 10 years?

   F. What was your role?

   G. How were you called to help?

   H. Are you an official group, mandated by law to aid in the event of an emergency?

   I. What other groups did you interact with at the time of the emergency?

   J. What equipment did you use at the time of the incident?

   K. Did you have all of the equipment available that you needed?

   L. If your group borrowed equipment, was it obtained through a pre-incident agreement or was it an informal arrangement?

   M. Are there other groups in the community that should have been involved and were not?

N. Did the incident require that State or Federal aid be called? If so, how were they activated and what role did they fill?

In reviewing the answers from the various groups, you may find some information conflicting or confusing. This may be due to different perspectives on the events that transpired. In order to clarify the information that has been collected, it needs to be organized in some way. Separate the information by incidents. Each incident will then have information relating how the various groups interrelated and how the incident was handled. Look for the following information:

A. What type of incident was involved?

B. Was it successfully mitigated?

C. Brief synopsis of events leading up to the incident.

D. Which agency was called in first?

E. Other agencies involved?

F. In what capacities did they operate?

G. Who was in charge?

H. Was equipment available that was needed?

I. Was there a post-incident meeting to discuss the incident? If so, what were the conclusions?

These answers should not be judgmental, pointing to any group that may not have operated efficiently. They are to gather the facts.

Analyzing the responses should point out deficiencies. Often these deficiencies can be met at the State or Federal level. If you are writing a plan for a rural county you may have to look outside of the county for many of the needed capabilities. This should not be considered as a weakness. Instead, it should be recognized and arrangements made to deal with the deficiency. It may not be cost effective to invest in all of the equipment needed if your hazards index has shown only a slight hazard exists. Proceed to Part VI.

PART VI--WHAT SHOULD BE INCLUDED IN THE PLAN?

This part is slightly different in approach from the other parts. Instead of being made up totally of questions to prompt you, it will contain a list of suggested sections for the Hazardous Materials Emergency Plan. It is up to you and your knowledge of the community to pick which sections are applicable and add other sections that may apply to your area. For example, if your area contains an endangered species that lives in its waterways you may want to expand that part pertaining to spill containment so that the chance of pollution is minimized.

A. Do you have a firm outline of what needs to be contained in your plan?

B. Do you feel that you have a fairly good idea what to include but think the list might jog you to think of other possibilities? If so, use the list for reference.

C. Do you feel that you are somewhat lost in the process? If this is your situation, you may need to redefine your goals or reassign the task of writing the plan. If you feel that you are getting by fairly well, use the list as a reference.

No matter how experienced you are, the list may suggest something that you've overlooked. It is a suggested list of actions to be included and should be modified to fit your individual needs.

SUGGESTED DETAILED PLAN SECTIONS

Emergency Response Notification

Record of Changes or Amendments

Letter of Promulgation

Foreward/Preface

Acknowledgements

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Adapted from: Preparing for Environmental Emergencies, A Planning Guide and Checklist (Draft) by Rockwell International, August 1979.

PART VII--WHAT OTHER PLANS EXIST?

This is important because the plan you are writing may need to interface with these other plans.

A. What emergency plans exist for surrounding cities and counties?

B. What statewide plans exist?

C. What Federal plans exist?

D. What other plans at the local level use some of the same capabilities?

If no one involved in writing your plan is familiar with these other plans search them out. You might be able to get assistance from the Federal Emergency Management Agency (FEMA) or your State Department of Emergency Preparedness. Once it is determined that another plan covers your area determine if you are overlapping or leaving gaps. The State may have a statewide emergency plan but it usually does not get into specifics at the local level. This is where your local plan fits in. Your plan will tell those at the local level how to respond in a hazardous materials emergency.

PART VIII--WHO WILL UPDATE THE PLAN?

Planning is not a static process, it is a continuing process. A plan may be written that covers all of the possible emergencies, is clear and concise, but is worthless unless it is kept up to date. This may include checking phone numbers and personnel at regular intervals all the way up to drills. Either way, it is important to designate an agency to keep the plan up to date.

A. Is the agency designated to update the plan a regular city or county office?

B. Was this office in on writing the plan?

C. Does that office have personnel that can keep the plan up to date?

D. Is it willing to accept the task?

If an agency or department is tasked with keeping the plan up to date, it must be capable of this task. It must have personnel that can do the updating and it must be a permanent department or agency. Updating should be made part of its standard operations. Otherwise, it will be difficult to keep the plan up to date and this could prove to be dangerous in an emergency when the plan is needed.

APPENDIX A--GROUPS TO BE INCLUDED IN THE PLAN AND THE ROLES THEY MAY PLAY

POLICE

Communications

Establish On-Scene Command Post

Evacuation--determine when and extent

Notify citizens through news media of evacuation, when needed

Collect weather information

Crowd control

Traffic control and rerouting, as necessary

Notify resources i.e. equipment operators

Notify Red Cross when mass care is needed

Notify Red Cross of the number of persons to be placed in shelters

Secure evacuated areas

FIRE

Communications

Evacuation Assistance

Fire Control

Coordinate containment of spills

Fire suppression

EMERGENCY PREPAREDNESS

Communications

Evacuation

Notify citizen of evacuation

monitor NOAA weather radio

Relay weather information to on-scene command post

PUBLIC OFFICIALS--MAYOR, CITY AND COUNTY COMMISSIONERS

Declare state of emergency

Authorize expenditures of city/county funds

HIGHWAY PATROL

Secure Site

Serve as temporary command post

AMBULANCE

Communications between hospital and police

Triage

Emergency Care

Coordinate removal of victims to hospitals

Evacuation of nursing homes, hospitals, and patient records and medicines

Assist in rescue in search and rescue

HOSPITALS

Emergency Care

Morgue Facilities

PUBLIC WORKS

Provide information on roads and equipment available

Transport water if needed

Assist in crowd control--barricades and traffic signs

Contain spill through use of heavy equipment

Maintain list of equipment operators

AMATEUR RADIO CLUBS

Provide communications

RED CROSS

Coordinate triage with Ambulance

Provide emergency medical supplies

Set up shelters for displaced persons

Assist in search and rescue

Run shelters for displaced persons

Provide aid for displaced persons

Make arrangements for use of temporary shelters

Determine, with Police Dept., when shelters will ceas operation

SCHOOLS

Provide buses for evacuation

Notify schools of evacuation

Provide schools for shelters

WEATHER BUREAU

Provide up-to-the-minute weather information

DEPARTMENT OF HEALTH AND ENVIRONMENT

Provide and man equipment for radiological monitoring

Relay results to Police

CITY AND COUNTY HEALTH DEPARTMENTS

Monitor long range effects on population and site

Provide information on materials

CHEMTREC

Provide information on chemicals on an emergency basis through toll free telephone number

FOUR WHEEL DRIVE CLUBS

Provide vehicles and manpower in search and rescue

HUMANE SOCIETY

Provide food and water to animals left in evacuated areas

NOXIOUS WEEDS DEPARTMENT

Provide information on pesticides

NEWS MEDIA

Evacuation information

Weather information

Notify public of location of shelters

OHMTADS-EPA OIL AND HAZARDOUS MATERIALS TECHNICAL ASSISTANCE DATA SYSTEMS

Provide information on identity, hazards, or action to be taken

On-line computer available

CHLOREP-CHLORINE EMERGENCY PLAN

Respond to scene with trained personnel if required

Provide information on identity, hazards, or action to be taken

Refer to knowledgeable contact

CHRIS--COAST GUARD CHEMICAL HAZARDS RESPONSE INFORMATION SYSTEM

Provide information on identity, hazards, or action to be taken

On-line computer available

EPA ERT-ENVIRONMENTAL RESPONSE TEAM

Respond to scene with trained personnel if required

Provide information on identity, hazards, or action to be taken

CHECK YOUR LOCAL PHONE BOOK FOR OTHER GROUPS

REFERENCES

1. E. R. Russell, et al., "A Community Model for Handling Hazardous Materials Transportation Emergencies," U. S. Department of Transportation, Prepared for: Office of Uiversity Research, October 1981.