Community Resilience Enhancement Intervention User Guide

Communities Advancing Resilience Toolkit (CART)

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Introduction

This user guide is designed for use by community groups interested in learning about and improving their community’s resilience – the community’s ability to deal with disasters and other forms of adversity. The user guide builds around three key concepts: (1) disasters and adversities – the threat, (2) resilience – the ability to deal with the threat, and (3) enhancement – a process to improve resilience. While the user guide focuses on disasters, the concepts apply to many other forms of threats or adversities such as crime, economic stresses, and social/emotional stresses. Each chapter is designed to address the topics that are most relevant for a community group interested in learning about and improving community resilience to disasters.

Chapter 1 provides an overview of the key elements relevant to enhancement of community resilience to disasters. Enhancement builds on concepts drawn from an in-depth understanding of community resilience to disasters, teams, social networks, the difference reduction model of problem solving, strategic impact, and agile planning. The chapter provides the framework for the action-oriented chapters that follow.

Chapter 2 offers guidance on assembling an enhancement team, communicating with team members, creating and using an agile plan for an enhancement project, scheduling project tasks, monitoring progress, and taking corrective action.

Chapter 3 describes the first part of the community resilience enhancement model: defining the current community resilience. The chapter covers both the initial community narrative and a structured assessment of current community resilience.

Chapter 4 addresses two additional aspects of the community resilience enhancement model: developing the objectives that define the desired community resilience and creating actions that move the community toward the objectives. The chapter also addresses the review of each proposed action for feasibility and the selection of the most important or critical set of strategic actions for implementation.

Chapter 5 outlines processes for implementation of the most important or critical strategic actions and also processes for evaluation of progress and revision of the action plan if and as needed.

This enhancement intervention is a part of the Communities Advancing Resilience Toolkit (CART)©, a product of the Terrorism and Disaster Center at the University of Oklahoma Health Sciences Center. More information on CART products is available at the TDC website: http://www.oumedicine.com/psychiatry/research/terrorism-and-disaster-center.
Chapter 1. Introduction to the Enhancement of Community Resilience to Disasters

The chapter begins with a discussion of disasters since dealing with adversity is the focus of the material in this user guide. The ability to deal effectively with adversity is referred to in this user guide as resilience. The chapter sets forth the rationale and basic model for enhancement related specifically to community resilience.

Disasters. A disaster is an adverse event with severe undesirable consequences (e.g., death, major injuries including emotional trauma, extensive property damage) that begins relatively rapidly (e.g., perhaps a second for a terror bombing or an earthquake, minutes for a tornado, minutes to days for a flood) and affects a large number of people. Disasters result from three major causes: (1) natural events including hurricanes, floods, tornadoes, wildfires, earthquakes, tsunamis, volcanism, and meteor impacts; (2) unintentional events including industrial accidents, aircraft or train crashes, and failure of structures such as buildings or bridges; and (3) intentional events including terrorist attacks and mass shootings. One or more disasters of some kind have affected almost everyone either directly (e.g., a person witnessed or experienced death, injury, and/or extensive property damage) or indirectly (e.g., a person learned about a disaster from television and worried about being involved in a similar disaster in the future).

Most people in the U.S. during every year either experience tornadoes, hurricanes, wildfires, floods, or other disasters, or learn about these disasters from the media.

- Between 1980 and 2013, 170 weather/climate disasters (e.g., hurricanes, tornadoes, floods) occurred with overall damages/costs of $1 billion or more per event (inflation adjusted to 2013).
- On September 11, 2001, more than 2,600 people died at the World Trade Center, 125 died at the Pentagon, and 246 died on the four airplanes involved in the disaster.
- More than 150,000 people were killed or missing following the 2004 Indian Ocean tsunami.

Resilience. Resilience in the context of disasters is the degree to which a person or group of people can function effectively (1) when faced with the threat of a disaster and (2) during and after the occurrence of a disaster. Effective functioning with the threat of a disaster consists of maintaining a normal personal and work life while taking reasonable actions to mitigate and/or prepare for disasters. Mitigation might involve taking actions to reduce the likelihood of a disaster – for example, airline security checks; and preparation might involve creating a disaster plan or working with the Red Cross or many other things. Effective functioning during a disaster consists of taking actions to minimize the risks of death, injury, and property damage. Effective functioning in the aftermath of a disaster consists of taking action to return to a normal life as quickly as practical – in the short term, obtain medical care, food, water, and housing; and in the longer term, return to a life as close as possible to, or better than, life before the disaster.

Many resilience discussions focus on personal resilience – the ability of a person to function effectively with respect to disasters. Personal resilience derives from a person’s knowledge, skills, and emotions and from access to disaster relevant resources either directly or from
community or disaster support services. Many factors such as health, education, economic status, and life experiences can contribute to personal resilience.

In most disaster situations, people function both as individuals and as part a network of one or more groups or communities. A community can represent many things — a family, a group of friends or colleagues, members of a church or other organization, neighbors or a neighborhood, and cities or towns. A community may exhibit greater resilience than the sum of the members’ personal resilience. The potential additional resilience or synergy that occurs in **community resilience** results from the community groups working as teams. A group is any collection of people assembled in some place or for some purpose — people who: live in a neighborhood, or are attending a concert or athletic event or a church service, or are participating in an on-line chat room. Many dictionaries define a team as people working together toward some common goal. In this user guide, a **community team** consists of a group of community members characterized by the following features:

- Have a task or set of tasks to perform;
- Hold one or more common goals (e.g., personal survival and well-being, concern and caring for the welfare of other community members) related to performing the tasks;
- Share resources such as information, skills, and physical resources that are useful in performing the tasks;
- Communicate to share information and coordinate actions;
- Cooperate - team members help each other perform the tasks; and
- Learn from the experience of working together on the tasks.

Because teams can improve performance, many organizations such as athletics, military, and business ones, often use teams. In disaster situations, many community members instinctively function as team or network members in that they communicate, cooperate, and share to help themselves and others in the community. A community team also can be viewed as a social network in the sense that the people and organizations are connected by communicating, cooperating, sharing, and learning with and from each other.

Another component of resilience comes from the disaster system of care. **The disaster system of care** is a loosely structured social network of organizations that provide disaster-related services. These organizations exist at the national level, for example, the Federal Emergency Management Agency (FEMA), the Substance Abuse and Mental Health Services Administration (SAMHSA), and the American Red Cross (Red Cross); at the state level, for example, the National Guard and the state health department; and at the local level, for example, police, fire, emergency management, medical services, churches, charities, schools, and some businesses. When a major disaster threatens or strikes a community, many of the resources to deal with the disaster will come from the disaster system of care. Thus, the community team can increase community resilience by improving its links with the disaster system of care.

In summary, **community resilience** builds on three components of resilience: (1) the personal resilience of community members; (2) the added resilience of the community team — people pursuing common goals, communicating, cooperating, sharing, and learning; and (3) the support provided by the disaster system of care. The **mission of enhancement** for community
resilience to disasters is to improve community resilience by: (1) reinforcing and strengthening the ability of people in a community to work as teams; (2) enhancing the community’s knowledge about, access to, and use of the disaster system of care; and (3) increasing the personal resilience of community members.

**Enhancement.** The community resilience enhancement process builds on and adapts the concepts of teams, networks, agile management, and strategic impact to communities, and community resilience. The first underlying principle of community resilience enhancement, and of a number of problem-solving approaches, is difference reduction: finding a way to move from a current situation to a more desirable situation. Figure 1.1 illustrates that enhancement is a process that moves an organization from the current community resilience to, or closer to, the desired community resilience.

**Figure 1.1. The Community Resilience Enhancement Process**

![Diagram](current_community_resilience → enhancement → desired_community_resilience)

The diagram suggests the necessary steps for application to community resilience: (1) assess the current community resilience, (2) identify the characteristics of the desired community resilience, (3) determine the differences between the current and desired community resilience, (4) find actions to reduce the differences — that is, to move the current situation closer to the desired situation, and (5) implement these actions. Chapters in this user guide discuss each of these steps in detail.

A second underlying principle of community resilience enhancement is the criticality or strategic impact of differences and actions. Not all differences are equal; some will have much more impact on community resilience than others. Similarly, not all actions have the same impact. Community resilience enhancement tries to focus effort on items that have the most significant strategic impact.

A third underlying principle of community resilience enhancement is agile management. Agile management encourages project teams to consider: (1) having clear goals; (2) focusing on the most important issues; (3) emphasizing action with only summary documentation; (4) minimizing the time to get results by limiting scope, performing activities in parallel when practical, and implementing actions as soon as possible; and (5) being responsive and flexible — for example, taking action when progress slows or new issues arise. In some situations, agile management may suggest dividing a large project into components and working on one component at a time.

To carry out enhancement for community resilience, most communities will rely primarily or entirely on volunteers with limited available time, effort, and experience. The processes and procedures set out in this user guide provide a clear structure and methodology to improve the likelihood of a successful outcome while minimizing demands on the time and effort of
community members. An agile resilience enhancement effort may modify, combine, or leave out some or many of the activities described in the user guide and may add activities not in the user guide. The goal is to make a significant contribution to community resilience. The enhancement team can and should focus its activities on tasks with the best likelihood of making a difference. With disasters, being prepared sooner is better.

Chapter 2. The Community Resilience Enhancement Team and Process

Good community resilience enhancement starts with a plan. This chapter describes how to create the plan for an enhancement project. The first part of the chapter specifies how to assemble the enhancement team and who to include on the team. The second part of the chapter describes how to structure and manage the enhancement project – how to identify who will do what when, how to track progress, and how to take corrective action when needed. A final section of the chapter discusses the use of various electronic communication tools to facilitate team activities and, if desired, to share team progress with the entire community.

Assembling an Enhancement Team. To do enhancement for community resilience, the community needs a group of people or a team to carry out the enhancement activities. Communities will follow different choices for selecting a team. A small community might include every community member on the team. When a community organization, for example a church or a neighborhood association or the Red Cross, leads the enhancement effort, the organization’s representatives may select all or a number of the members of the team. In short, team members may be selected in a wide variety of ways.

In whatever manner the team is selected, the organizers of the team should consider some governing principles. First, the team should be representative of the entire community. One approach is to start by identifying the different geographic, age, gender, religious, economic, ethnic, racial, cultural, and other sub-groups that define the community. Then select members so that all of the major sub-groups are represented. Note that each person on the team may belong to several sub-groups. Members of the different sub-groups may have different concerns and priorities. For example, a person who lives next to a river may worry about floods, while one who lives on a cliff top may be more concerned with landslides. Enhancement of community resilience can fail if one or more of the major socioeconomic, ethnic, cultural, or other sub-groups in the community feel that the plan is insensitive or hostile with respect to their concerns.

A second governing principle for selecting team members is strategic impact. An underlying goal of enhancement is to identify the most critical or important issues related to resilience for the specific community and to bring about changes that can enhance resilience. While all community members can make significant contributions to the enhancement effort, some people may have special skills, knowledge, or influence. For example, a person with emergency preparedness, response, and recovery experience or with in-depth knowledge of the community might be especially helpful. Some community members, possibly a pastor or a community elder, might be respected by many other community members and thus able to secure participation in, and acceptance of, the enhancement effort. If an enhancement effort
will require support from an organization or a government agency to implement its recommendations, then adding representatives from these organizations or agencies to the team can help to bring about success.

Many people when asked to serve on an enhancement team will inquire about, or at least think about, the costs and benefits of participation. The most obvious cost is the time and effort required to participate. Fortunately, participation in an effort to enhance community resilience offers a number of benefits. Team members will learn about community resilience and about disaster mitigation, preparedness, response, and recovery. This information can directly benefit the members and their families in the event of a disaster. In addition, a more resilient community helps all of the community members including the team members.

**Project Management.** Good community resilience enhancement efforts do not happen automatically. To improve prospects for success, the team must invest work into structuring and managing the effort. These activities are called “project management.” The basic ideas of **project management** are simple: (1) identify the jobs or tasks that need to be performed, (2) assign a desired start time and finish time for each task, (3) assign people (and other resources if needed) to work on each task, (4) monitor or compare actual accomplishments against the scheduled ones, and (5) take corrective action when the actual differs from the schedule.

**Figure 2.1. The CART Enhancement Model for Community Resilience to Disasters**

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Corrective Action

Assemble the Team and the Project Plan

Assess the Current Community Resilience to Disasters

Establish a Vision, Goals, and Objectives for the Desired Community Resilience

Generate and Evaluate Actions to Move Toward the Desired Community Resilience

Review, Select, and Implement Actions

Monitor Progress and Make Changes as Needed
```
Building a Project Plan. To identify tasks, the team can start with the CART Enhancement Model shown in Figure 2.1. Each of the boxes in the model shows a major task in the process for enhancing community resilience to disasters. Each major task may consist of a number of sub-tasks. The double headed arrows connected to the Corrective Action box illustrate that with agile planning, the team can take corrective action at any point which may involve changing some of the decisions made earlier.

With an agile approach, the team should not include every possible task that anyone can think of in the plan. The time and effort available from team members is limited. A focus on the tasks most likely to improve community resilience can reduce the workload for team members and can improve the likelihood of a successful outcome. The team may wish to keep the initial plan comprehensive but relatively short and simple. The enhancement team can add more tasks, if appropriate, as the work progresses. Words like small, simple, understandable, important, and fast often are adjectives that describe a good agile plan. Once the team identifies a set of tasks, the team can assign start and end times for each task. A final step is to assign people to work on each task.

Figures 2.2 shows a sample project schedule. The schedule in Figure 2.2 suggests developing initial versions of the current situation, the vision, and the actions in parallel and using one or more subsequent meetings to compare and refine the initial version of the plan. To use the parallel approach, the team normally divides into three sub-teams: one to look at the current community resilience situation, another to describe the desired situation, and the third to explore actions for enhancement. After reconvening, each sub-team refines its work based on ideas presented by the other sub-teams. Many teams like the parallel plan because the team has a broad overview of what the plan looks like by the second meeting. Many variations of schedules can work; each community team can select the plan that feels most comfortable or stimulating.

Figure 2.2. A Sample Project Schedule

<table>
<thead>
<tr>
<th>Begin</th>
<th>End</th>
<th>Activities</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb 25</td>
<td>Feb 25</td>
<td>First team meeting. Discuss definitions. Present and discuss survey results. Assign roles. Prepare the initial community narrative. Create sub-teams. Assignments: Sub-team 1. Assess current resilience, Sub-team 2. Define desired resilience, Sub-team 3. Identify actions. Set or confirm date for the next meeting.</td>
<td>All team members</td>
</tr>
<tr>
<td>Mar 16</td>
<td>Mar 16</td>
<td>Second team meeting. Review input from each sub-team and consolidate into a consistent plan. Identify additional work needed and assign tasks to sub-teams. If practical, select some actions for immediate implementation. Set or confirm date for the next meeting.</td>
<td>All team members</td>
</tr>
<tr>
<td>Apr 3</td>
<td>Apr 3</td>
<td>Third team meeting. Review progress. Refine, modify, and add to the plan as appropriate. Add more actions to the implementation plan. Set or confirm date for the next meeting.</td>
<td>All team members</td>
</tr>
<tr>
<td>......</td>
<td>......</td>
<td>Additional meetings as needed.</td>
<td></td>
</tr>
</tbody>
</table>
Monitoring the Project Plan and Taking Corrective Action. Developing a project plan is the beginning, not the end, of project management. The plan is much more useful when the team sets up a mechanism to monitor progress against the plan, to note differences between planned progress and actual progress, and to initiate corrective action as needed. Often, a team will realize that there is a difference, but do nothing to correct for it. Project management can work when, and only when, the team takes corrective action. Actions might include changing the schedule, working harder, adding or eliminating activities, getting more help, and so forth.

Team Organization. Team organization addresses three areas: (1) assigning roles to team members, (2) using sub-teams, and (3) dealing with work issues. Often enhancement teams for community resilience are self-organizing – the members decide how to organize and who should do what. Sometimes the sponsoring organization, when one exists, may suggest specific roles for people. Some examples of roles that team members might undertake include:

- **Coordinator** – sets meeting times, notifies members, arranges for a meeting place, and so forth;
- **Recorder** – keeps a record of what happens at each meeting with emphasis on key points, decisions, actions, and assignments;
- **Records manager** – keeps track of all documents and reports in use by the team and makes them available to team members. If the team has a website, the records manager may keep the website up to date; and
- **Project monitor** – tracks progress against the project schedule and facilitates discussions of corrective actions as needed.

After discussing what needs to be done, a team may wish to add and/or combine roles and to rearrange responsibilities. Forming **sub-teams** often can improve progress and provide each member with a better opportunity to contribute. A good organization for a team is one that the members feel comfortable with and that works.

Team Communication Plan. The **team communication plan** specifies how the team members will communicate with each other. If many team members have access to the Internet, the team may wish to set up a **team website**, either a stand-alone website or a team page on a social media site. The team records manager and other team members can post progress reports and documents on the website. Other team members can comment as desired. In this way, any team member who wishes can follow all of the ongoing work. Members who do not have access to the Internet may wish to get together periodically with a member who does have access to review progress and comment. Activities that bring the members together and encourage communication help the team to make progress and equally important, can increase community resilience.

Other electronic communication modes also can help. Many people read email or texts, and many have a cellphone. Sending emails and texts to the team or the community is fast and
simple (if an email and/or text list exists). Text messages may work as well as, or better than, email for meeting reminders or notices for other events. If some team members do not have email or a cellphone with text capability, the team communications plan can designate specific members to talk with them either periodically or when a significant event happens. If electronic communication appears infeasible, communication may consist of handing out progress reports at meetings and mailing reports to members who are unable to attend.

Chapter 3. Assessing the Current Community Resilience

As noted in Chapter 1, the enhancement process strives to move the community from the current community resilience to a more desirable situation. Thus understanding the current situation is a good starting point for identifying actions to improve community resilience. In many communities, the members of the enhancement team already will hold a number of thoughts and observations about the current community resilience when they arrive at the first meeting. Once discussion starts, the members often can use the joint knowledge of the team to construct a good view of the current situation.

Using the CART Assessment Survey. The CART Assessment Survey is a questionnaire for the team members or other community members. The survey attempts to obtain and describe community members’ perceptions on aspects of community resilience. The purposes of the survey include introducing people to the concepts of community resilience, involving and interesting people in the enhancement process, and generating data to define and refine the current community resilience. Community members with access to the Internet can complete the survey online and others can respond to a telephone survey or fill out and submit paper versions of the questionnaire. When the survey is used, the team may wish to discuss survey results to help understand the current community resilience.

Preparing the Initial Community Resilience Narrative. Once the team has discussed the ideas of resilience and community resilience to disasters, the team may wish to generate an initial version of the community resilience narrative. This activity offers an opportunity to obtain and record the members’ views on important and relevant issues and features in the community with respect to resilience to disasters. The open format of the initial narrative discussion can help to identify many of the points relevant to the various steps or parts of the enhancement process. However, a team might wish to skip the initial community resilience narrative and proceed to other tasks.

Analyzing Community Resilience. The team can perform a more structured analysis of the current community resilience. In this context, structured means that the team follows a set of steps or guidelines. In this chapter, the structured analysis of the current community resilience situation focuses on three steps: (1) Threat Analysis, (2) Resource Analysis, and (3) Opportunity Analysis.

Threat analysis consists of identifying threats that might cause a disaster, assigning a likelihood measure to each threat, and describing the possible consequences of the disaster that can result from the threat. Community resilience relates to potential or actual disasters, and disasters result from threats. Because threats are the catalysts for disasters, threat analysis
offers a good starting point for analysis of the current community resilience. Some examples of threats include:

- Natural causes such as earthquakes, floods, hurricanes, tornadoes, and wildfires;
- Unintentional causes such as bridge and building collapses, industrial explosions, train wrecks, gas leaks, and fires in residential units – houses, apartment buildings, and so forth;
- Intentional, terror-related causes such as biological and chemical weapons, explosive devices, dirty bombs, and mass shootings; and
- Non-disaster threats such as poverty, crime, poor housing, lack of jobs, lack of job skills, and economic disruptions.

Some or many of these threats will not relate to every community. The community resilience enhancement team can identify the threats that are most relevant for its community and might prepare a threat analysis table similar to the one shown in Figure 3.1.

**Figure 3.1 Threat Table for a Sample Community in the U.S. Southern Plains**

<table>
<thead>
<tr>
<th>Threat</th>
<th>Risk</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tornadoes</td>
<td>High</td>
<td>Can affect any member of the community</td>
</tr>
<tr>
<td>Ice storms</td>
<td>High</td>
<td>Loss of electrical power in freezing weather can be serious</td>
</tr>
<tr>
<td>Strong winds</td>
<td>High</td>
<td>Mainly causes property damage</td>
</tr>
<tr>
<td>Residential fires</td>
<td>High</td>
<td>Can cause death, property damage, displacement, and trauma</td>
</tr>
<tr>
<td>Flooding</td>
<td>Varies</td>
<td>Can affect homes in lower areas</td>
</tr>
<tr>
<td>Earthquakes</td>
<td>Medium</td>
<td>Small ones occur regularly; no data on risk of a major one</td>
</tr>
<tr>
<td>School shootings</td>
<td>Low</td>
<td>Unlikely but might happen</td>
</tr>
<tr>
<td>Wildfires</td>
<td>Low</td>
<td>Urban area, good fire protection, damage possible but unlikely</td>
</tr>
<tr>
<td>Unintentional</td>
<td>Low</td>
<td>No railroads, highways, bridges, or industrial plants nearby</td>
</tr>
<tr>
<td>Terrorism</td>
<td>Low</td>
<td>Terrorism acts unlikely but better to be prepared</td>
</tr>
</tbody>
</table>

In addition to identifying specific threats, the team can consider **common elements of disasters**, elements that occur often in many disaster situations. Common elements of disasters include:

1. **Evacuation and displacement** – some disasters make it necessary or highly desirable for people to leave their residences and their neighborhoods to avoid the threat. After a disaster occurs, circumstances may require displacing people from their residences for anywhere from a few hours to months.
2. **Rescue** – many disasters result in the need to rescue people from unsafe circumstances (e.g., collapsed buildings, high water). Police, fire, and other emergency workers are trained for rescue work. In the immediate aftermath of a disaster, community members may be the only people available to help. Going into a burning building may make things worse. Knocking on a neighbor’s door to warn of a fire may be a safe way to help.
3. **Life essentials: medical care, shelter, food, and water** – the Red Cross, FEMA, local churches, and other organizations respond to these needs, but sometimes, especially when roads are impassable, the only available immediate help comes from neighbors.
4. **Emotional stress** – the anticipation of, experience of, and recovery from any disaster can cause some emotional stress in many people and a high level of stress in some people.
A community plan to help members deal with emotional stress can improve community resilience.

**Resource analysis** looks at the resources, both human and physical, that are available to deal with threats and disasters. Some of these resources exist within the community; some may reside in organizations such as churches or the Red Cross while others may come from government agencies such as local police and fire departments, state National Guard units, or FEMA. Human resources are people’s skills, caring, cooperation, communication, and learning relevant to resilience to disasters. Physical resources consist of a broad range of items within the community such as money, food, water, shelters, and transportation, and communications.

Resources are needed to deal with different aspects of disasters. FEMA defines four phases of disaster management:

1. **Mitigation** – resources and actions taken to prevent or reduce the seriousness of disasters;
2. **Preparedness** – resources and actions taken to prepare for possible disasters;
3. **Response** – resources and actions taken to help people once a disaster occurs; and
4. **Recovery** – resources and actions taken to help the community return to “normal” after a disaster.

The team might start by looking at the most significant threats and asking what resources exist or could exist to deal with each of the four phases of disaster management associated with the threat. The team can identify community **strengths** – the areas where good or adequate levels of physical and/or human resources currently exist and also note areas where helpful or important resources to deal with the threat are either not available or are limited.

**Opportunity Analysis** examines potential resources outside the direct control and/or the geographical boundaries of the community that the team members may explore for inclusion in their enhancement plan for community resilience. Many of these resources can come from the disaster system of care. Some opportunities represent resources within the community that are controlled by others such as businesses or not-for-profit organizations. For example, the community may contain churches and religious facilities that might agree to play important roles in a disaster. Some commercial buildings and establishments may be made available to serve as shelters or to provide other resources. Local television stations may make telephone calls warning of tornadoes to community members who sign up and most stations will broadcast warnings about threats that might cause disasters. Community clinics or medical facilities may agree to open and provide medical services in the event of a disaster.

Local governments provide police and fire services including first responders to disasters and may have specialized equipment and services for disasters. For example, some cities have equipment for detecting biological, chemical, and radiation hazards. Local governments also may operate emergency management centers or functions. State governments may provide National Guard support and other assistance in time of disasters. FEMA, the Red Cross, Catholic Charities, and similar national organizations will provide a wide range of assistance for all phases of disaster management.
A major job of the enhancement team during the analysis of the current community resilience is to identify the resources within the community and opportunities outside the community. Note that using these opportunities and, indeed, all resources involves answering two questions: (1) when or under what circumstances are the resources available to community members and (2) do community members know how to access the resources?

Figure 3.2 illustrates an example of resources and opportunities related to tornadoes. Most community plans will consider multiple threats, perhaps the ones in Figure 3.1, not just the one considered in this example. FEMA uses an all hazards approach which seems reasonable for an organization with a national mission.

**Figure 3.2 Resource and Opportunity Analysis for Tornadoes**

Tornadoes occur when and where weather conditions are right for their formation. At present, no one knows how to prevent them or lessen their intensity. Shelters can prevent injury and death.

**Mitigation. Resources.** Our community of about 200 people has seven underground shelters (all privately owned) with a capacity to hold up to 45 people. The city has said that schools in the community are not suitable as public tornado shelters and will not be open in the event of a tornado. The community has sirens that sound when a tornado is nearby and all residents can hear the sirens. However, in the middle of the night some people may not wake up when the sirens sound. **Opportunities.** When tornadoes threaten, several local TV stations will make automated telephone calls to warn households that sign up and most people will wake up when called. Some of the businesses and churches in the community may have areas that could serve as shelters.

**Preparedness. Resources.** Most of the families in the community have not taken steps to prepare for a tornado. However, many families are interested in developing a plan for what to do and where to go in the event of a tornado. Evacuation is not a recommended preparation option because tornadoes are unpredictable – a family might leave a safe place and go directly into the path of the tornado. Many families in the community know each other and are willing to warn and help each other. **Opportunities.** Representatives of the fire department, the local emergency management office, and the Red Cross are willing to work with the community to help plan and prepare for a tornado.

**Response. Resources.** Some residents in the community have invited neighbors to join them in their shelter when a tornado approaches. Most people know to go to the safest place in the house, but many do not know how to identify the safest place. In the past, following a tornado, many residents go out to check on their neighbors and in some cases have helped rescue. Many people have friends or relatives who they can stay with for a while if their home is damaged or destroyed. **Opportunities.** Police and fire can respond and help almost immediately if a tornado hits our community. But the community at present has no plan to help the police and fire responders find the people or areas with the most critical needs. The fire department encourages people to register their shelters so the fire department can check them for survivors, but we found only one family that had registered their shelter. A number of hospitals and clinics around our community are available to help injured people. With significant damage, the Red Cross and other agencies probably would show up within hours to provide food, water,
living spaces, and trauma counseling, but the community knows little about what to expect and how to take advantage of these opportunities.

Recovery. Resources. Many of the people who live in this community have lived here for years and identify strongly with the community. In the aftermath of a disaster, most families will wish to remain and rebuild. Many have insurance. People are concerned about how to find contractors in the event of widespread damage and destruction of houses. Opportunities. The team believes that FEMA and perhaps some state and local agencies and local foundations might assist with recovery, but the team has no information on what kinds of assistance might be available and how to access it.

If desired, the team can generate a structured Community Resilience Narrative using the results of the analysis of threats, resources, and opportunities across the four phases of disaster management — mitigation, preparedness, response, and recovery. By reading this summary, a community member can learn about the key aspects of the current community resilience. This structured narrative can contain the following sections:

- Introduction to the current community resilience;
- Specific threats considered for the community;
- Resources and opportunities for the community’s threats related to: a) mitigation, b) preparedness, c) response, and d) recovery; and
- Concluding remarks.

Chapter 4. Moving Toward the Desired Community Resilience

The core of an enhancement plan for community resilience comes from two activities: (1) defining the desired community resilience and (2) finding actions to move from the current resilience to as close to the desired community resilience as practical. This chapter recommends developing goals and objectives as an approach to defining the desired resilience. Once the desired situation is defined, the team can compare the desired situation to the current situation to identify differences. The team then can develop a set of actions that attempt to move the community closer to the desired community resilience.

Defining the Desired Community Resilience. Typically, the goal of enhancement for community resilience is straightforward: improve community resilience for the community. But community resilience represents a broad concept that, while very important to deal with disasters, is difficult to measure or change directly. Instead, the team can define and focus on a set of community sub-goals and objectives: targets that are consistent with the goal but are more specific and measureable. Sub-goals and objectives look at what is desired; actions look at how to achieve objectives. For example, a team might have an objective to provide shelter for every community member in the event of a tornado – the “what” that is desired. The team can then talk about actions that improve shelter options – the “how” to move closer to the objective. The community objectives can address any weaknesses noted during the current situation analysis and specify desired levels or features for human resources, physical resources, and opportunities.
Chapter 1 noted that **community resilience** builds on three components of resilience: (1) the personal resilience of community members, (2) the added resilience of the community team, and (3) the support provided by the disaster system of care. These three components of community resilience suggest the following three sub-goals: 1. Help the community to function as a more effective team; 2. Improve knowledge about and access to the disaster system of care; and 3. Reinforce personal resilience.

As noted, a team is a group of people with shared goals who share resources such as information, skills, and physical resources; communicate; cooperate or help each other; and learn from the experience of working together on the tasks. The team might come up with objectives that (a) improve community members’ understanding of disaster preparedness, (b) facilitate resource sharing in the event of a disaster, or (c) improve communication with and among community members in preparing for, surviving, and recovering from disasters. The enhancement process may reveal other objectives to make better use of human resources in disaster settings.

For physical resources, objectives can focus on identifying and/or procuring the physical resources needed for disaster mitigation, preparedness, response, and recovery. For example, the team might decide to identify all tornado shelters or safe rooms available to, and easily reachable by, members of the community. Another example might relate to sources of shelter, food, and water in the event of a disaster. The objective might involve increasing supplies of these resources and/or sharing more effectively the resources already in the community. Another objective might be to, whenever possible, provide warning of an impending disaster to every community member.

Once the team identifies a set of objectives, the team can review them to arrive at the critical set. Critical objectives are understandable, measureable, relevant to the community, and reasonably likely to improve community resilience.

As part of the desired community resilience narrative, the team may wish to prepare a **vision statement** for the community – a summary of how the community will look and feel if and when the objectives selected to improve community resilience are achieved. The vision statement is a way for the team to communicate its vision of the desired community resilience to the community.

**Finding Actions to Move Toward Objectives.** **Actions** to increase community resilience can cover a broad range of activities from sending informative emails to holding training meetings to purchasing physical resources to strengthening a relationship with an outside organization such as the Red Cross that responds to disasters. The team might proceed by looking at each objective in turn. For each objective, the team might ask if they can move the community closer to the objective by:

- Further strengthening or making better use of one or more of the community’s strengths;
- Making better use of one or more external opportunities; or
- Correcting one or more of the community’s problems.
The lists below give a few examples of actions that might address objectives related to community resilience. Of course, the actions the team actually selects for its enhancement plan should depend on the community objectives as discussed above.

Examples of Human Resource Actions:
- Form a neighborhood association to encourage communication, caring, cooperation, and sharing in preparation for disasters;
- Prepare and disseminate a community directory with names, street addresses, telephone numbers, and email addresses to facilitate communication about disasters;
- Hold neighborhood seminars on disaster mitigation, preparedness, response, and recovery;
- Hold neighborhood seminars on psychological first aid – a relatively simple, straightforward approach to help neighbors help each other deal with disaster stress; and
- Arrange for community members to participate in exercises that increase coping and resilience skills and decrease stress.

Examples of Physical Resource Actions:
- Develop and disseminate a list of tornado shelters and safe areas in the community and in nearby areas; and
- Develop and disseminate an evacuation transportation plan that uses personal vehicles, church busses, and other vehicles to safely evacuate every community resident in the event that evacuation is required or highly desirable.

Examples of External Opportunity Actions:
- Contact organizations such as the local chapter of the Red Cross to learn about the Red Cross and arrange for help with a number of disaster-related services;
- Work with local churches, schools, and other community organizations to see how they can help with disaster services;
- Contact the city and local television stations to see if a service is available to warn community members of impending disasters by way of automated telephone calls; and
- Meet with city or county police, fire, and emergency managers to understand the services available related to disasters and how best to obtain the services.

As noted, each team may find many other and/or different actions to address the specific objectives for its community.

**Reviewing Actions for Feasibility.** Most of us can think of a large number of actions that might offer great help for disasters. Unfortunately many of our best ideas may not be feasible. For example, providing a very safe, comfortable in-residence tornado shelter for every community member is a great action idea, but alas, many families have more urgent uses for their own money and so do governments. As a result, many people have no shelter in their residence against a very strong tornado. Actions should pass multiple feasibility tests including economic, technical, and political. In selecting actions to improve community resilience, as in most things
in life, doing the best we can within the limits of what is feasible may take us a long way toward the goal and greatly benefit the community.

**Selecting the Critical Set of Actions.** Teams and communities have limited amounts of time and energy. In general, a team that tries to implement 1,000 actions probably will accomplish less than a team that selects 10 really important actions to implement. The strategic importance or **criticality** of an action represents a measure of the likely impact that the action will have on long-term community resilience. A critical action should have a high likelihood of making a long-term, meaningful improvement to community resilience and a high likelihood of successful implementation. Every community situation is different, but some general guidelines to think about include:

- **Timely long-term impact.** Actions that will improve long-term community resilience in the near future may be more critical than actions that take many years to have an effect. Most people in the community will get little comfort in knowing that they may be better off in 10 years. Moreover, 10 years from now, changes in threats, resources, opportunities, costs, and feasibility may suggest a different set of critical actions;

- **Cost-effective impact.** Among actions that can have a major impact on improving community resilience, the ones that cost the least and can be done the soonest may be the most critical. Actions that cost little or nothing and are easy and fast to implement may make the critical list if they provide at least some improvement to community resilience; and

- **Consensus impact.** Useful, feasible actions that enjoy widespread support in the community may make the critical list because they are more likely to be implemented successfully.

**Chapter 5. Implementing Actions to Enhance Community Resilience**

Many actions and experiences can contribute to community resilience. The enhancement activities by themselves tend to improve community resilience because the team members learn about resilience; about disaster mitigation, preparedness, response, and recovery; and about working together as a team. But the main purpose of enhancement for community resilience is to implement the set of critical actions selected by the team to improve community resilience. Implementation consists of four tasks: (1) disseminating information about the plan and building support for the actions, (2) taking action, (3) monitoring and evaluating progress, and (4) taking corrective action if and as needed.

**Disseminating Information and Building Support.** Once the team identifies the objectives and action tasks of an enhancement plan for community resilience, a good next task is to share the plan with as many members of the community as practical. The community members themselves and their abilities to work together as a team in a disaster situation will influence to a large extent the level of community resilience. Sharing the plan with community members can bring four benefits:

1. **Learning** – all members of the community who participate in the review will learn more about community resilience and about disaster mitigation, preparedness, response, and recovery;
2. **Improvement** – community members may offer good suggestions for improving the plan and may identify topics or wording that might offend or antagonize some members of the community;
3. **Support** – members who learn about the plan and have the opportunity to contribute to it are more likely to support implementation of the plan; and
4. **Teamwork** – the process of participating in a review of the plan helps to build the foundation for the community to function as a team.

The team has many options for sharing the plan. Meeting with groups of community members probably is the best approach. When other people and groups, for example, community agencies or police, fire, or other city, state, or federal officials, hold important roles in implementing actions, the team can include their representatives in the community meetings or hold separate meetings with them. These people and groups also are more likely to support implementation when they have an opportunity to participate in reviews of the plan.

**Taking Action.** In many cases, the enhancement team members can directly implement actions to encourage teamwork in the community and to build closer relationships with external organizations. The team also can recruit other volunteers to help implement the actions. The Red Cross and a number of other organizations interested in disaster issues may be willing to provide substantial time and skill to support implementation. Actions that involve acquiring new physical resources may pose the most difficult implementation issues because they require finding a funding source. Hopefully during feasibility screening, actions with large funding needs and no identifiable sources of funds were eliminated from the critical action set.

Each action can benefit from its own mini-plan for implementation. The plan can address the following issues:

- Describe the action and what the action is intended to do or accomplish;
- Identify the key stakeholders for implementing the action. Who will the action affect if implemented and who needs to agree or cooperate for implementation to occur? For many actions, the community members are key stakeholders since they are affected by the action and often need to help in some way for the implementation to succeed. For some actions, organizations and governments also may be key stakeholders;
- Find ways to get the needed participation from the key stakeholders. For example, contact people who have access to, and influence with, key stakeholders and ask these people to help obtain participation;
- Develop a list of steps to implement the action and assign start and end times for each step;
- Decide who is responsible for and who will perform the work needed at each step;
- Identify obstacles to implementation and develop ways to overcome the obstacles;
- Devise a plan for communicating about progress and problems with the stakeholders; and
- Monitor progress and revise plans as needed.

**Example:** Implement an action to have all community members receive warning via automated telephone calls from a local television station about severe weather threats. The obvious
stakeholders are community members and the television station. The television station presents no obstacles. The warning service is provided for free to anyone who signs up. Obstacles for community members may include (1) lack of information about the service, (2) inertia due to having many other things to do and not placing a high priority on the service, and (3) lack of a telephone for some people. The implementation plan might include holding community meetings and discussing the service as part of the meeting agenda. An alternative approach might be to set up an action group to call each person in the community, explain the service and its benefits, and request permission to add their phone number to the service. The action requires a community phone directory – a possible obstacle and perhaps another action item. The action group also may need to get an agreement from the television station to sign up other people – another possible obstacle. The team agreed to establish the action group and succeeded in getting most residents signed up. This approach offers the additional benefit of monitoring the implementation progress. The action group kept records of how many people it signed up for the service (71%), how many said they already were signed up (23%), and how many declined or were unable to sign up (6%).

In the example, the team prepares an implementation plan for their selected action and the plan works. Teams probably will encounter a number of different implementation situations. Some will work the first time, others will work after revision, and some will never work. A team that addresses each of the suggested implementation issues in their mini-plans for each action should have the best chance for success.

**Monitoring, Evaluation, and Corrective Action.** For an agile plan to work correctly, the team or a sub-team meets regularly in person and/or electronically to review progress. As part of the review, the team can discuss a number of possible decisions and new actions including:

- Drop any further activity on actions that prove infeasible to implement;
- Hold an action for a later time when implementation looks more promising;
- Revise an action to make it more feasible to implement;
- Identify new actions to better address existing objectives; and
- Change objectives to reflect changes in the community, threats, or the team’s understanding of the issues and generate new actions to address the new objectives.

The team also can prepare an evaluation of progress that describes how well, or to what extent, the community achieved progress in moving toward the desired community resilience. One option is to re-administer the CART Assessment Survey. If possible, the progress report should be shared with all community members and with external people and organizations involved with creating the plan.