

Step 1

Identify Hazards and Risks

Overview:

This chapter focuses on the beginning stages of the hazard mitigation planning process. Your community has recognized that it is potentially vulnerable to a wide range of hazards and now needs to identify precisely what its problems are. This involves creating a hazard analysis.

“Is a hazard analysis necessary?”

Yes—the hazard analysis will help you to understand what your community's problems are and which ones most urgently need to be addressed by mitigation actions. Even if you feel you know these things already, your knowledge should be written into a document that others can learn from.

The hazard analysis is the foundation upon which all emergency planning efforts in the community are built. In fact, preparing a good hazard analysis and community profile is the first step that the community's emergency planning team should take in building an effective emergency management program. A hazard analysis provides an understanding of the potential threats facing the community. By pinpointing the location, extent and magnitude of past disasters or emergency situations, and by examining knowledge of new or emerging risks, it is possible to determine the probability of such events occurring and the vulnerability of people and property. By viewing this information along with relevant land use, economic, and demographic information from a well prepared “community profile,” emergency managers can make assumptions about those segments of the community that might be impacted by various types of incidents. This, in turn, allows them to set priorities and goals for resource allocation and response, recovery, and mitigation activities prior to an incident occurring. Collectively, these decisions are the cornerstone of the community's emergency management program, and should guide all decisions pertaining to community emergency management activities.

In other words, by putting into written form the collected information that you and others in your community have about local hazards, you will help spread an awareness of what needs to be done, and why. This information will shape the rest of the planning process. As others read the hazard analysis, many of them will agree that actions should be undertaken, and some of them will be motivated to promote local hazard awareness, lobby for political support, find funding sources for mitigation projects and programs, or even get personally involved in mitigation activities.

Suggested steps for developing a community hazard analysis.

The process of creating a good hazard analysis will be broken down into four substeps in this workbook. These will be called (a) the community profile, (b) hazard identification, (c) risk assessment, and (d) vulnerability assessment, and all fall under "step 1" of the overall mitigation planning process. Separate sections (numbered as steps 1a through 1d) are now included in this workbook to more clearly describe each of the hazard analysis substeps.

Where are we now?



- Step 1: Identify hazards and risks**
- Step 2: Define goals and objectives**
- Step 3: Identify alternatives for solving problems**
- Step 4: Select evaluation criteria**
- Step 5: Select feasible mitigation strategies**
- Step 6: Prepare a draft plan**
- Step 7: Prepare final plan**
- Step 8: Implement plan**
- Step 9: Monitor and periodically revise plan**

Step 1a – Community Profile

The first substep - the development of a **community profile** - is accomplished by identifying (and mapping, where appropriate) information that is relevant to hazard mitigation, such as the community's present land use and development patterns, geography and climate, transportation network, demographic information, key industries, major organizations active in the community, the locations and nature of important community facilities, emergency warning system coverage, and other information that is relevant to the community's safety and smooth functioning.

Step 1b – Hazard Identification

The second substep involves the **identification** of those hazards to which the community is susceptible. To do this, the community should review the Michigan Hazard Analysis (EMD Publication 103) and investigate local information sources to determine if the community has experienced (or may be susceptible to) specific hazards. The Michigan Hazard Analysis provides a good start in the investigation, but it has a broad, statewide perspective. Local information sources are critically important because they provide information on those events that may not have been widespread or severe enough to be listed in the Michigan Hazard Analysis, but nonetheless had a significant impact on the community. Communities can also add any local hazards that have not been described in the Michigan Hazard Analysis. In this substep, experienced emergency managers can share their knowledge of local hazards so as to benefit others who do not have this knowledge. Information can also be gained through questionnaires or other contact with local officials, organizations, businesses, and residents.

Step 1c – Risk Assessment

The third substep, **Risk Assessment**, involves the examination of the community's hazards using measures that evaluate such factors as severity, exposure, frequency of events, types and extent of damage scope of impact, etc. Through this evaluation process, hazards are identified in detail and a community's overall risk from those hazards is assessed (and often mapped, to identify key areas and to tie in with community's decision-making about future land development). Considering hazard-specific "worst-case" disaster scenarios may help to determine what critical issues the community may face—life safety, public health, loss of critical functions, economic impacts, and short/long term recovery issues—and to plan ways to deal with them.

Step 1d – Vulnerability Assessment

The fourth substep is the determination of the community's **vulnerability** to the hazards that were identified and assessed in steps 1b and 1c. Since a good community profile has mapped out the locations of the community's people and important facilities, and a good risk assessment has mapped out its hazards, a **vulnerability assessment** can ensue by comparing areas where the hazards overlap with people and important facilities. An estimate of potential losses (usually expressed in dollar values) will be made, and priorities can be established as to which hazards are the most threatening. The highest-priority hazards will be the ones your community should place more emphasis, effort, and funds toward addressing.

REMINDER: These "substeps" are described as separate for instructional purposes, to make it easier for you to understand and complete the essential elements of a good hazard analysis. As you will see in your own research process, there are many areas where one step overlaps with another—this is a normal part of the analysis and there should be no concern that the analysis will be weakened if some information seems to be collected in a different order than what is suggested here. It is common that new information, once taken into account in the full hazard analysis, will cause some of your initial research to be revised. In many cases, it is appropriate to revise some information as a result of your research and analysis. The result will be a much more useful and valid analysis that has adapted itself to changing conditions and new information as you have learned about it.

******* EXTREMELY IMPORTANT NOTE: *******

Most hazard mitigation plans will now be expected to meet FEMA review requirements described in the Disaster Mitigation Act of 2000 (PL-106-390), and the regulations relating to it (in 44 CFR 201.6). Please see Appendix C for information on how these requirements for mitigation planning are being interpreted. Specific techniques to meet these requirements appear in Appendix B and throughout this book.

Once completed, the hazard analysis should be provided to local officials for review and feedback. A copy should also be provided to the Michigan State Police Emergency Management Division for preliminary review, to ensure that the mitigation plan developed from it will be an appropriate and useful one.

STEP 1a: THE COMMUNITY PROFILE

The community profile should be able to introduce your community to strangers who may be completely unfamiliar with it. These may include:

- Emergency workers from FEMA or the State
- New residents (or new local officials)
- New businesses considering whether to move into the community

The Community Profile section of the hazard analysis will give summary information on general features of the community, plus specific information that is pertinent to emergency management concerns and analyzing hazards. Much of this information may have already been prepared by other community agencies, such as the planning department, chamber of commerce, economic development authority, aging office, community college or university, school district, etc. In many cases, it may only be necessary to find existing documents (such as community plans or soil survey inventories) or web sites (addresses appear later in this section) and use those portions of them that relate to emergency management in your community profile. It is easier and cheaper to use existing information so long as it is valid than it is to research such information from scratch. Some sources of information will also generate support and “buy-in” for the end product from those agencies that have provided or assisting in gathering it.

All these can be used to get information:

- People
- Books
- Documents
- Plans
- Maps
- Studies
- Internet
- Planning Offices (Local, County, and Regional)
- County Agencies (Road Commissioners, Drain Commissioners)
- Watershed Councils
- LEPCs
- NFIP flood maps (FIRMs)
- Studies by the U. S. Army Corps of Engineers

The following list should be reviewed as a memory aid or "idea list" for the types of information that may be useful to include in the community profile section. Some items may be required elements of a local hazard mitigation plan. Appendix C should be consulted for more detailed information about planning standards and specific techniques of hazard analysis.

Historical Overview

- Year of establishment/incorporation
- “Reason for being” (i.e., why was community established?)
- Notable historical events (i.e. what has shaped the area? Why has it grown or changed over time?)
- Notable community citizens, businesses, organizations, economic activities
- Other information that gives a sense of the nature of the community

Geography and Climate

- Physical location of the community in State of Michigan (including its proximity to surrounding counties, major cities, lakes, regions, etc.)
- A map of communities in the county or sectors in the city, with information on each jurisdiction's office locations and contact persons
- Background information on landforms, soils, forest cover, environmentally-sensitive areas, topographic maps, steep slope and erosion areas, and other geographical features; especially areas identified and protected under state law
- Overview of weather patterns, to include average monthly temperatures, precipitation (rain and snowfall), winds (directions and speeds), and major climatic influences (e.g., Great Lakes)
- Other information that gives a sense of the geographical/climatic conditions of the community

Land Use Patterns

- Major land uses in the community (present)
- Anticipated/planned major land uses (future)
- Known hazardous areas in community – brownfields, blight, pollution, erosion areas, floodplains, Section 302 sites
- General development pattern (e.g., along major transportation links/nodes, “sprawl”, clustered around geographic feature such as a lake, etc.) including aerial photo information if available, or USGS maps showing structure locations

- General types/condition of housing stock (including trailers, manufactured home parks)
- Other special residential conditions or considerations (campgrounds, seasonal/resort areas, sheltering areas, retirement communities, dormitories, jails/prisons, health or psychiatric institutions, group quarters, areas with homeless persons, etc.), including isolated populations (rural without cars, phones, etc.) and areas with special needs populations (non-English speaking, children, low-income, disabled, elderly).
- Types of public infrastructure, its general condition and capacity (sewer, water, power, roads, etc.)
- Areas of major land use conflict (i.e., heavy industrial adjacent to high-density residential)
- Current or proposed historic districts or structures within the community
- Current mitigation efforts to lessen the community's vulnerability to hazards (committees, projects, capabilities - including warning systems and a description of the extent of their coverage)
- Other information that gives a sense of the land use patterns (present and future) of the community

Transportation Network

- Interstate highways, state trunklines, and major local connectors serving the community
- General condition of roads, bridges, and other elements of the transportation infrastructure
- Freight rail lines, airports, marine ports, passenger rail service, bus services, and public transit (located in or serving the community)
- Handicapper-accessible transportation available in community.
- Other information that gives a sense of the transportation network in place in the community, or its weaknesses and related hazards (capacity for mass evacuation, traffic counts, high-accident intersections, hazardous materials transportation routes, etc.)

Population Characteristics

- Patterns and trends of population growth and migration
- Total current and future projected population of the community and surrounding region
- Age/sex/racial breakdown of the population
- Percent of population that is non-English speaking
- Special-needs populations within community (elderly, children, disabled, etc.)
http://www.nod.org/cont/dsp_cont_item_view.cfm?viewType=itemView&contentId=623
- Seasonal population fluctuations (campgrounds, resorts, etc.)
- Other information that gives a sense of the population characteristics of the community

Economic Characteristics

- Total current and projected future economic activity with the community – especially kinds that might be interrupted or affected by hazards
- Major financial centers and employers/employment sectors within the community (and region, if appropriate)
- Percent of population unemployed, on public assistance, and/or in poverty
- Identification of areas with blight, concentrated poverty, renaissance zones, or empowerment zones.
- Community tax revenue and sources (i.e., business tax, sales tax, property tax, income tax, etc.)
- Median household income in different areas
- Other information that gives a sense of the economic characteristics of the community

Key Community Facilities/Organizations

- Description of major community services provided (i.e., police, fire, EMS, hospitals, public works, planning/zoning, health, waste management, water/sewer, schools, etc.), and the locations from which those services operate
- Description of electric, gas, telephone and other critical utility services provided (i.e., service areas, capacity, population served, etc.); also commercial and industrial areas with resources useful for sheltering, response & recovery
- Description of key private and/or private-non-profit organizations operating in the community (i.e., Red Cross, Salvation Army and other active churches, United Way, Senior Services, recreation centers, community foundations, etc.), and the locations from which those organizations operate
- Description and locations of institutions of higher learning (colleges, universities, major trade schools, academies, etc.), and their impact on the community
- Other information that gives a sense of community functions; political, social, and economic mechanisms

Other Information?

- Major activities or events that occur on a regular basis (i.e., festivals, entertainment shows, demonstrations or other gatherings, business/trade events, etc.) that could in some way impact the community's vulnerability to hazards
- Patterns and trends of serious crime/civil disturbance within the community
- Historical "trends" in the community (i.e., strong environmental orientation, strong support of historic preservation, etc.) that could, in some way, impact community vulnerability to hazards, or coordination on hazard mitigation goals

Community profile information should be recorded on a map or maps to show where the community's people, property, and other resources are located. In substep 1c of the hazard analysis, a map of a community's hazards will be made, and a comparison of where hazards seem to overlap with people and property on the community profile map will suggest areas of vulnerability (substep 1d), where mitigation measures should be focused and prioritized.

Where to Find Information for Community Profiles

The internet contains many web sites that are extremely useful information sources. If your jurisdiction is a county, <http://www.miaco.org/counties.html> provides information on each county in Michigan, and links to web pages produced by the counties. Detailed information with which to create a hazard analysis can sometimes be found a county's web page, or more generally, can be obtained at <http://medc.michigan.org/miinfo/places/> and <http://www.state.mi.us/dmb/mic/>. Information that needs to be found for sectors within a county, or individual municipalities can be researched at the Michigan Municipal League at <http://www.mml.org/>, the Michigan Townships Association at <http://www.mta-townships.org/>, the U.S. Census Bureau at <http://factfinder.census.gov/servlet/BasicFactsServlet> and <http://venus.census.gov/cdrom/lookup>. Those whose communities are located in Southeastern Michigan can benefit from the Southeast Michigan Council of Governments (SEMCOG) web site at <http://www.semco.org/index.html>. Specific economic information for counties can be found by using County Business Patterns data available at <http://www.census.gov/epcd/cbp/view/cbpview.html>. Other information may be available at <http://www.fedstats.gov/>.

Most of this information can also be found at research libraries throughout the state. Information should not merely be copied blindly – that would merely overload your analysis and make the resulting document harder for readers to understand and use. Instead, focus on information that is pertinent to emergency management in some way, and include it in your document in an organized manner with some explanation of how it is useful. Local sources of information (county or municipal departments, local directories, phone book listings, local officials, etc.) are very important to ensure that your document is customized and useful on the local level.

Much vital information about the locations of schools, fire departments, other critical facilities, government offices, warning sirens, and so on, can only be obtained through these local sources. Contact with local officials, local or regional planning offices, Local Emergency Planning Committees (LEPCs), conservation groups, chambers of commerce, among many others, will often reveal that much needed information has already been researched and is present in existing documents. Information on land use, traffic, people, businesses, and the environment is most easily obtained if local, county, or regional planners (or their documents) can be found. In some cases, historic structures may be identified as being at risk, and local historic preservation bodies can be gained as partners for the hazard mitigation process. For registered historic sites in Michigan, refer to <http://www.sos.state.mi.us/history/preserve/michsite/index.html>.

Hazard mitigation plans submitted for FEMA grant eligibility will now be reviewed under new standards that require spatial hazards and community features to be mapped and analyzed spatially. If your office does not have capacity for or familiarity in using Geographic Information Systems or other map-producing software, it may be necessary to partner with one that does in order to meet planning requirements. A standard map with hand-drawn markings on it can serve quite well for many purposes, so long as locations are identified accurately on it, but in the long run it is probably easier and more efficient and productive to digitize such information. Until this can be done, however, excellent and useful maps can be found or produced on internet sites. In some cases, these sites will produce customized maps that identify hazard-specific areas of concern in your community. The Project Impact site is one useful site for this, at <http://www.esri.com/hazards/makemap.html>. Other useful mapping sites include:

- The Department of Transportation: go to <http://www.michigan.gov/mdot/> and then run a search for "Average Daily Traffic Map" to obtain traffic count information;
- The Census Bureau: <http://tiger.census.gov/cgi-bin/mapbrowse-tbl>
- Topozone (highly recommended, but requires a good computer system!): <http://www.topozone.com>
- U.S. Geological Survey: <http://mapping.usgs.gov>

For those who do have GIS capabilities available to them (in their office or through coordination with another office), there are many excellent resources available at the web site <http://www.state.mi.us/webapp/cgi/mgdl/>. Those in Southeast Michigan can also find information at the SEMCOG web site at

<http://www.semcog.org/index.html>. Those who are interested in contacting their regional planning office to coordinate with them or request data can refer to the information on these offices, located on the web page for the Michigan Association of Regions at <http://www.miregions.org/index.htm>. Maps needed to interpret census data can be found at the American Factfinder page at <http://factfinder.census.gov/servlet/BasicFactsServlet>.

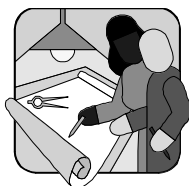
General Guidelines for a Community Profile

It is important to be aware of your community's various features so that when areas susceptible to different hazards have been identified, it is possible to identify areas that are at greatest risk. There will ultimately be some way to decide how to weigh harm to one aspect of community life against other aspect that may also be at risk. Typically, there are concerns with residential safety, transportation/evacuation concerns, concerns about infrastructural failure, economic concerns, concerns about property damage, and concerns about environmental harm. There may also be concerns related to politics, community image, and general quality of life. This is why the community profile tries to assess so many features of a community—there are so many ways in which known hazards may potentially disrupt people's lives. Some hazards may seem relatively trivial until their effects on some specific, vulnerable part of the community are recognized, and then this awareness may inspire action that prevents a future tragedy or disaster from occurring there.

To be included in the hazard analysis is information about planned land uses (development patterns) in the future. This is an aspect of hazard mitigation in which community planners will need to be involved to ensure proper effectiveness. In many cases, structures and people are found to be at risk because hazard vulnerabilities had not been adequately considered when land developers first invested in the site. There are many cases in which a "buildout" analysis (studying the effects of current zoning arrangements) has surprised planners with its implications for storm sewer capacity, road expansions, and so on. It is far safer and more efficient to have things developed safely to begin with, than to have to go back and try to improve it *after* a disaster occurs. Therefore, hazard mitigation must become an element in a community's planning and development decisions, and grant programs that subsidized hazard mitigation plan development have been set up to encourage partnerships between community planners and emergency managers.

Because there are so many local jurisdictions in Michigan, a hazard mitigation plan will often be made at a county level. Since most counties in Michigan do not have authority over land use decisions within their boundaries, FEMA usually considers county plans to be multi-jurisdictional in nature. In many ways, developing a multi-jurisdictional plan is easier than having each municipality independently develop their own plans. Also, in most cases, a multi-jurisdictional approach to planning is more appropriate for hazard mitigation. Flooding in one community, for example, may be found to have worsened because of increased runoff from developments in upstream communities. Some of the best solutions to these sorts of problems may only be possible through the use of multi-jurisdictional planning that is coordinated with hazard mitigation concerns and strategies.

The down-side of the multi-jurisdictional approach is that it may be difficult to build awareness and obtain local cooperation for a county-level document. To collect information for community profiles and hazard identification in the mitigation plan, it is often necessary to contact officials from local municipalities (townships, cities, and villages) to obtain information, feedback, and approval for things in the county plan that relate to their municipalities. Although much information may be available from government sources, directories, and maps, it will often be necessary to have this information verified firsthand and supplemented with details that only a long-time community resident probably knows. Also, communities within a county (and the types and effects of hazards in them) may be quite different from each other. It will frequently be necessary to analyze a county in terms of multiple sectors or its component jurisdictions, in cases where one community markedly differs from another, or where mitigation projects have been identified that will need local awareness and support to implement. Most readers will recognize that these conditions are present in most areas of the state, and that it should be assumed that at least some sectoring and local coordination will be required for each county plan to reach its final stages of development and adoption.



Analyzing Large or Diverse Areas Using Sectoring

“Sectoring” involves dividing the community into sub-parts for the purpose of developing a more detailed, targeted hazard analysis. Sectors often must be developed around existing geo-political boundaries (i.e., by township, around natural geographic features such as rivers, etc.), or they may be artificially-created (i.e., dividing the community into halves or quadrants). Sectoring is generally necessary for very large areas in which maps and studies of the entire area will not provide enough detail to allow an analysis.

Sectoring is also necessary when there are significant differences in different parts of a community, or between multiple communities that are being addressed by a multi-jurisdictional plan. For example, if a small portion of a community is particularly vulnerable to riverine flooding, it makes sense to analyze that particular part of the community in greater detail, separately from the rest. Also, if day vs. night populations are radically different in parts of a community (i.e., a downtown area that is heavily populated during working hours, but lightly populated at night), it may make sense to sector that particular area and include analyses for both day and night situations in your document. In most cases, different political jurisdictions must each be addressed in separate sections, since those who are in charge of that community will need an analysis customized to their particular conditions, political and economic situation in order to meaningfully advise upon and participate in plan development. Most communities in a home-rule state such as Michigan do not wish to have their communities being analyzed and planned by others unless they authorize and participate in the process. Early awareness-building, an understanding of the benefits of hazard mitigation, and the encouragement of local input and approval will be necessary in most cases for the plan to successfully cover cities, townships, and villages and ultimately to receive their approval and to be officially adopted.

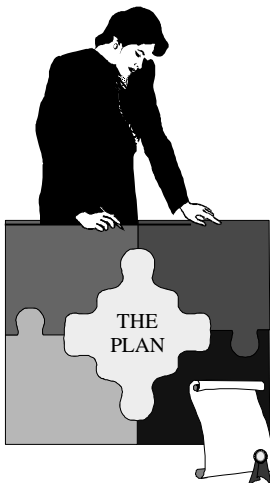
Creating Multi-Jurisdictional Plans at the County or Regional Level

Sectoring will be an important part of plans that are being made at the county or regional level, and which therefore are covering many local jurisdictions such as townships, cities, and villages. A great deal of excellent and detailed information can be presented at the county or regional level in such plans, but there will usually be notable differences in each community that will also need to be identified. Because future hazard mitigation funding will require communities to engage in a hazard mitigation planning process, it is important to allow larger-scale plans to accommodate the planning needs of a county or region's component communities.

It is strongly recommended that separate subsections of the plan be developed in each case that a community differs markedly from the county or region as a whole—either in terms of its hazards, the nature of its lands, environment, and community, or in the nature of its political style, trajectory, and relationships with its surrounding communities. The way to successfully accommodate minor civil divisions that are very independent-minded is to provide a separate section in the plan that describes their distinctive features and concerns. This workbook will call these the **community subsections** of the plan. Communities can customize their subsection of the plan so that they are sure that it reflects their concerns and is politically acceptable within their jurisdictions.

For communities to be eligible to receive hazard mitigation project funds, they must either develop their own local hazard mitigation plan, or meet three requirements when being represented by a larger-scale plan at the county or regional level. The three requirements for retaining mitigation grant eligibility through a multi-jurisdictional plan are:

- 1. To participate in the planning process** – This involves providing information, encouraging the participation of local stakeholders and the public, evaluating the draft plan, and making efforts to ensure that the plan will be an effective one for the community.
- 2. To include specific projects or mitigation strategies in the plan** – This is part of making the plan effective, for a document is only a true plan if it leads to follow-up actions. At least some of the actions in a plan should be those that are eligible for funding under federal hazard mitigation grant programs.
- 3. To officially adopt the hazard mitigation plan** – In a multi-jurisdictional plan, it should not just be a county that adopts the document. It should also be adopted by as many minor civil divisions as possible. A plan must be officially adopted by any community that wishes to be eligible to receive federal hazard mitigation project funds. (For the sample text of an adoption resolution, see Appendix A.)



Community subsections will start with profile information that is too specific or unusual to cover in a county or regional overview. Local officials should be able to submit community profile information (or revise and advise upon previously collected information) to make it more accurate and complete, for analysis and planning purposes.

As the hazard analysis proceeds, communities will find that their vulnerability and ability to respond to different hazards will vary. The community subsections will provide a space where such information can be presented and used by such communities. As vulnerabilities are found to be different, so also may mitigation priorities.

As vulnerabilities are considered, mitigation strategies will need to be brainstormed and evaluated so that actual actions and projects can be undertaken as a result of the plan. Although it may not be feasible for every minor civil division to gain complete participation in the planning process, at a minimum, they should have the opportunity to review the county or regional plan and comment about any items or sections that pertain to them. Each community subsection may contain a smaller version of a hazard mitigation action plan. In most cases, the contents of that smaller action plan should be provided by the community itself, to ensure that it is locally feasible and politically acceptable, rather than considered an imposition by another level of government, or an outside agency. Community subsections can then include documentation of local adoption, to fulfill the last requirement that allows them to remain eligible to apply to FEMA for hazard mitigation project funds.

More information about all of these parts of hazard mitigation planning will be given in later sections of this workbook, and in Appendices B and C, but a brief overview of them is included here so as to make the multi-jurisdictional aspects of planning clearer, and to suggest a format in which these needs can be met while still keeping the plan of a manageable size.

Use of Pre-Formatted Worksheets for Hazard Analysis

You may find it easier to begin a hazard analysis by filling in a pre-formatted worksheet about the features in your community and/or sectors within your community. The worksheets on the following pages are provided as an example of a format you can use to develop a profile of your community, and one or more sectors within it. As an example, it is designed to be convenient to use, but is much less detailed and comprehensive than you may need to really assess your community. Use it as a starting point, and feel free to revise it by adding new information or removing some, so as to better describe your community. It can also be distributed to others to obtain information from various sectors or communities in your planning area, as part of the local input and participation process of the plan. The bullet-style lists on previous pages in this section can be used to provide more ideas about the kind of information that may be important to add to your community profile. The final goal is to identify all important infrastructure and facilities in your planning area, and to note where people and property are located so that you will eventually be able to assess what hazards they may be vulnerable to. (Notice that many elements of the community profile overlap with substep 2, Hazard Identification, because some important features of a community are themselves potential hazards. This means you already have a head start on completing the remaining substeps in the hazard analysis.)



After reviewing the community profile worksheet example on the following 3 pages, please turn to page 35 to continue reading about the hazard analysis process.

Community Profile Worksheet Example – pg. 1

Record the following information for the community or sector:

1. Major geographic features:

2. Population concentrations: (including special facilities)

a. group homes:

b. large apartment buildings:

c. schools:

d. large office buildings:

e. other, such as stadiums, concert halls, amusement parks, fairgrounds, correctional facilities, nursing homes, other special populations or large crowd assembly areas (describe):

3. Population shifts: (location; time, date or season of shift; extent of shift)

a. daily:

b. weekly:

c. seasonal:

Community Profile Worksheet Example – pg. 2

Record the following information for the community or sector:

4. Important or critical public and private facilities:

- a. police precincts:

- b. fire stations:

- c. public works yards:

- d. pumping stations:

- e. community shelters:

- f. community medical facilities, hospitals:

- g. other (describe - i.e., government buildings, record center, major construction companies, warehouses, demolition companies, heavy equipment rental, emergency equipment and vehicle storage areas, etc.):

5. Vital or critical infrastructure:

- a. Roads, railroads, and bridges

- b. Dams, power stations, water treatment plants, sanitary lift stations, etc.

- c. Other: (describe – i.e. airports, pipelines, bus terminals, train stations, military bases, marine passenger ferry services, etc.)

