



Section 5

Eighteen Tools and Programs for Sustainability

The Sustainability Planner has many resources for implementing sustainability initiatives. This section summarizes 18 particularly relevant and significant tools and programs. Many of these are independent of a disaster declaration, such as ongoing planning, hazard resistant building design, and identification of projects to reduce the effects of future disasters. Several of the tools apply to activities that occur immediately after a disaster, such as evaluation of impacts (to the built environment and the economy) and recommendations for recovery. Each of the tools and programs provides an opportunity for implementing sustainability as part of the disaster recovery effort, and should be used by the Sustainability Planner to help guide communities toward a sustainable future.

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Tool #1 Planning for a Sustainable Future: The Link between Hazard Mitigation and Livability

This document is available from FEMA's distribution center at (800) 480-2520. The booklet, ***Planning for a Sustainable Future: The Link Between Hazard Mitigation and Livability***, (FEMA 364) was developed by FEMA to show how communities can use hazard mitigation planning and disaster recovery planning to implement sustainable development at the local level. It demonstrates methods for incorporating hazard mitigation planning into the broader goals of enhancing a community's environment, economy, and social wellbeing through policies that encourage sustainable development. This document is a key tool for introducing the concept of sustainability to the public, local officials, FEMA managers, and other state and Federal officials.

Planning for a Sustainable Future is a how-to guide that outlines the ingredients of effective hazard mitigation planning and the steps necessary to create a successful mitigation plan. This planning activity allows the community to determine how best to mitigate specific threats and incorporate sustainable redevelopment concepts into the recovery effort. Included within the development of hazard mitigation plans are strategies for improving infrastructure, decreasing sprawl, and taking advantage of infill and redevelopment opportunities. This booklet also describes the key steps for developing a successful mitigation plan, which include public participation, agency coordination, hazard assessment, problem solving, and goal setting.

Case studies highlight various types of hazard resistance measures for floods, hurricanes, fires, and earthquakes, and provide successful examples of sustainable redevelopment initiatives at the local level. The significance and functions of the Robert T. Stafford Act, NFIP, NEHRP, and National Dam Safety Program (NDSP) are discussed in relation to disaster recovery and hazard mitigation.

Tool #2 Planning for Post-Disaster Recovery and Reconstruction

Planning for Post-Disaster Recovery and Reconstruction is the result of a collaborative partnership between FEMA and the APA. It is a Planning Advisory Service (PAS) Report that is a state-of-the-art text on the importance of creating a community post-disaster recovery plan. This report is an invaluable guide to advance planning to increase disaster resistance and improve the disaster recovery process before a disaster strikes. It provides local planners and officials with an understanding of disaster recovery and identifies key players in the post-disaster scenario. The report's theme is that an effective disaster recovery plan mitigates future disasters and that planners have a key role in linking disaster resilience to the full range of local planning issues.

This report also illustrates how the Sustainability Planner can motivate local officials and the community toward sustainable redevelopment. Natural disasters and hazards are taken out of the abstract, and planners are given concrete tools to help them recognize opportunities to implement hazard mitigation measures through concerted planning. Although the report focuses on creating a disaster recovery plan that

integrates hazard mitigation and sustainability concepts prior to a natural hazard event, much of the information can be used in an emergency fashion in circumstances where no post-disaster plan is in place when a disaster strikes.

Planning for Post-Disaster Recovery and Reconstruction provides a step-by-step chronology for creating and implementing a post-disaster recovery plan. With the objective of familiarizing local officials and planners with the process of disaster-recovery prior to the occurrence of an event, this report describes relevant local, state, and Federal entities and their responsibilities. The report presents case studies of how three communities successfully created and implemented post-disaster recovery plans.

The planner's toolkit chapter describes a full range of hazard mitigation and disaster-recovery planning tools. It is divided into two sections—emergency measures and long-term measures. Emergency measures are usually under the direction of other departments or agencies, such as local building departments or public works offices; however, the Sustainability Planner should actively coordinate with these offices. Long-term measures can be used to reduce the community's susceptibility to losses in the event of future natural disasters. These measures include planning, zoning, subdivision, financial, and management tools which can be incorporated into existing plans or into recovery plans.

Planning for Post-Disaster Recovery and Reconstruction includes a model recovery and reconstruction ordinance that provides the fundamental steps for developing a comprehensive post-disaster plan. It is flexible and generic so that it can easily be modified to suit the needs of a specific community. The ordinance establishes a recovery organization and authorizes a variety of pre-disaster and post-disaster planning and regulatory powers for disaster recovery and reconstruction.

The model is designed to be most effective when implemented prior to a disaster event, though it has also been used following a natural disaster. The Sustainability Planner may recommend to an affected community that it adopt a recovery and reconstruction ordinance if local response and recovery efforts seem to lack cohesion and guidance from local authorities.

The core concepts of the ordinance are:

- To identify or establish a recovery organization prior to a disaster.
- To delineate departmental or agency roles and responsibilities in disaster recovery.
- To ensure the creation and adoption of a recovery plan that effectively addresses the community's needs for disaster-resistant reconstruction, while also addressing public safety, sensitive natural resources, and environmental concerns.

This report also includes five detailed case studies on a flood, tornado, hurricane, wildfire, and earthquake. Links to technical agencies are provided throughout the text.

Tool #3 Toward a Sustainable Community

The 1998 text, ***Toward a Sustainable Community: Resources for Citizens and Their Governments***, by Mark Roseland, provides an excellent starting point for local planners and officials who are just being introduced to the concepts of sustainable development. Roseland explains the implications of sustainability for existing

communities and contributing elements, such as transportation, infrastructure, and energy. He also discusses strategies for involving the public in implementing sustainability initiatives and suggests several approaches to assist area planners in achieving their goals. The appendix includes information on Federal, state and nonprofit agencies that can provide technical assistance to local planners interested in sustainable initiatives.

Roseland views communities as their own ecosystem, in which natural resources, human activity, and the economy are all key components. In planning for their future, communities must reconsider the way they use their natural capital. By definition, a truly sustainable community meets its current needs, while also protecting resources for future generations. Sustainability involves the interwoven elements of resource conservation, environmental protection, economic revitalization, and community dialog. The results are a community that protects its natural and social resources – a community with little pollution and waste, recycled and reusable energy sources, minimal exhausted space and urban sprawl, plentiful green areas, a strong economy, and heightened efficiency. Roseland explores governing policies such as regulations, taxes, charges, and other forms of environmental economics to help motivate communities toward sustainable development.

The following are the building blocks of any sustainable community:

- Redevelopment and planning for green spaces.
- Control of land use, density, housing, and sprawl.
- Energy efficiency and renewable energy sources.
- Water resources, including water supplies and quality, and sewer infrastructure.
- Waste reduction and recycling.
- Local air quality, including climate and ozone factors, transportation planning, and reducing automobile dependency.
- Economic development within the realm of environmental responsibility.

Lastly, Roseland focuses on motivating the community's residents and government officials toward shared decision-making and consensus on sustainability issues. This may well mean asking the public to make sacrifices and choices that result in a higher short-term cost to ensure the longevity of their community. Several case studies are presented to assist the Sustainability Planner in introducing and implementing the planning and policy modifications that are required to ensure lasting sustainable changes.

Tool #4 Mitigation Planning How-To Guides

These FEMA guides are a series of documents created to aid states and local communities in developing a comprehensive mitigation program and planning process. The How-to Guides are slated for release during 2001.

The first volume, *Getting Started*, explains the planning process and the organizational steps required for a successful mitigation effort. It describes the types of people, agencies, and partners that are fundamental to mitigation planning; how to identify stakeholders; and how to include citizens throughout the planning process. This volume of the planning guides prepares communities for the political and financial challenges that often accompany initiatives for positive change.

The second volume takes the reader through the process of quantifying the potential impacts of natural hazards. Risk assessment is the driving force behind the natural hazard mitigation planning process because it provides the information necessary for communities to understand their vulnerability to disasters. This volume provides a framework for communities to evaluate their potential losses.

The third volume focuses on how to use the information generated by the risk assessment so that communities can set long-term mitigation goals; identify possible solutions and their economic, social, and environmental costs; and draft a long term strategy.

The fourth volume provides suggestions for ensuring that the community's mitigation plan is successfully implemented, maintained and kept up to date. This volume includes the tools needed to effectively manage projects, evaluate their effectiveness, and establish mitigation as a fundamental element of local administration.

Accompanying these four how-to's is a guide intended to help communities make the most of benefit-cost analysis (BCA) by providing tools to weigh the economic benefits of a mitigation project against its costs. While BCA is to be used primarily at the project implementation phase, this guide helps communities understand that this type of analysis can also be helpful in determining and setting priorities.

Tool #5 Project Impact Toolkit

Project Impact's Building a Disaster Resistant Community Toolkit was prepared as a tool for communities participating in FEMA's Project Impact initiative. **Project Impact: Building a Disaster Resistant Community** is an initiative that challenges and supports communities to become disaster resistant. For the Sustainability Planner operating in a post-disaster environment, it is a valuable tool for understanding the operational framework and goals of sustainability. The toolkit provides methods for prioritizing and implementing hazard resistance measures that are equally valid following a disaster event.

The community toolkit addresses four categorical segments of disaster resistance planning to improve the economy, environment, and community. *Building Partnerships* examines how partnerships can be used to turn the planning process from reactive to proactive damage prevention. *Assessing Risk* outlines step-by-step risk assessment guidelines and should help the Sustainability Planner in determining how a particular community is vulnerable to natural disasters. *Prioritizing Actions* explores formulas for identifying and prioritizing a community's most critical needs, and methods for reaching consensus. *Communicating Success* discusses approaches to gaining public support through the media, educational campaigns, and establishment of a collaborative group of partners, citizens, and volunteers.

Tool #6 Building Performance Assessment Team (BPAT)

The BPAT program is administered by the Program Assessment and Outreach Division of FEMA's Mitigation Directorate. The program uses the combined resources from a Federal, state, local, and private-sector partnership to study building

performance in response to a full range of hazards. A BPAT is typically composed of FEMA professionals; state and local officials; and private sector professionals with backgrounds in engineering, planning, construction, natural hazards, code development, and enforcement.

The objectives of the BPAT are to:

- Inspect buildings and their infrastructure.
- Analyze structures after a disaster to determine why they either survived or failed the event.
- Make recommendations to state and local governments on how to prevent future damages.

BPATs have been used since the early 1990s in response to Hurricanes Andrew, Iniki, Opal, and Fran; flood disasters in California, Georgia, North Dakota, Minnesota, and Texas; and the bombing of the Murrah Federal Building in Oklahoma City. The most recent deployments were in response to Hurricane Georges, which struck Puerto Rico and the Gulf Coast.

From disasters such as these, new and improved hurricane-, earthquake-, flood-, and bomb-resistant construction standards and methods can be developed for new construction and post-disaster repair and recovery. The success of any BPAT is measured in terms of implementation of the team's recommendations. If a BPAT is deployed for a disaster, the Sustainability Planner should coordinate with this effort and keep informed of early findings and recommendations that should be incorporated into the sustainable redevelopment strategy.

Tool #7 Hazards United States (HAZUS)

HAZUS is GIS-based methodology and software designed to estimate the losses related to natural disasters. HAZUS was developed by FEMA, in conjunction with the National Institute of Building Standards (NIBS). Initially, the software was designed to predict earthquake damages, but it has since been expanded into a multihazard methodology tool to also anticipate the losses from flood hazards (which include riverine and coastal hazards, such as storm surge). HAZUS is currently under revision so that it can also simulate the wind effects associated with hurricanes, tornadoes, and tropical storms.

The estimation of earthquake and flood losses is not an exact science. It is a forecast of physical damage and related socioeconomic effects. HAZUS is based on mathematical algorithms that include variables such as local geology, topography, and demography in addition to the prevalent construction materials, structural patterns, and designs of the area's dwellings and facilities. For example, HAZUS can simulate the intensity of ground shaking and the damages sustained in a given area. Loss estimates include number of casualties; level of damage to houses, utilities, and infrastructure; and estimated cost of repairs.

HAZUS can assist planners and engineers in identifying areas of high vulnerability in structures and local infrastructure. The areas estimated to sustain the most severe losses can then be prioritized for loss-reduction planning, hazard awareness, and emergency management and response activities.

Currently, several new initiatives are in progress for HAZUS. These include a hurricane preview model, a flood preview model, a building damage module, a mitigation planning guide, and of special note to sustainability planners, a training course designed to assist mitigation planners in incorporating HAZUS into mitigation efforts.

Tool #8 Community Rating System (CRS)

The CRS was designed to reward communities that do more than meet the minimum NFIP requirements, by providing an incentive to initiate new flood protection activities. The CRS grants reductions in flood insurance rates according to the level of community commitment to flood hazard mitigation measures. The rating system provides points based on the extent of floodplain management activities. For example, communities with higher standards and more comprehensive controls to ensure flood protection accumulate higher CRS points. The higher the number of cumulative points - the higher the CRS classification and associated flood insurance discount. Flood insurance policy holders in participating communities can receive up to a 45 percent discount, though most receive discounts ranging from 5 to 25 percent.

The Sustainability Planner should keep in mind that CRS participation offers many potential long-term benefits. A community committed to implementing long-term flood mitigation measures can enhance public safety, reduce damage to property and public infrastructure, avoid disruptions of service, and protect and restore the environment. Furthermore, the CRS planning process can be used as the basis for conducting broader sustainability and mitigation activities and may lead to the community qualifying for additional Federal mitigation grant funds. Politically savvy government administrators can use the resultant reduction in premiums as confirmation that the local government is attentive not only to citizens' safety, but also to their financial needs and the environment.

The activities suggested by the CRS encourage communities to implement a comprehensive flood mitigation strategy that includes floodplain protections, stormwater management techniques, floodplain management planning, and public education. Most communities will not immediately qualify for CRS under all activities, but they can set a long-term mitigation goal and strive for the maximum points. There are 18 activities under which communities can receive credit; those listed below are of particular relevance to the Sustainability Planner:

- Acquiring homes, especially repetitive loss properties, from within the 100-year floodplain and conversion of the land to open space, green space, wetlands, wildlife refuges, or recreational space.
- Implementing restrictive development regulations to prevent the construction of buildings or the placement of fill or other obstructions on reserved lands.
- Mapping, preserving open space, and regulating new development in areas subject to special hazards.
- Establishing floodplain regulations to prohibit fill within floodplains or flood fringes, or to require new developments to provide compensatory storage at hydraulically equivalent sites.
- Implementing stormwater management practices to regulate the quantity and quality of runoff and minimize erosion.

The CRS program recommends the following resources for additional information:

- The NFIP Community Rating System Coordinator's Manual is organized based on the activities for which communities may receive CRS credit. It includes sample hazard mitigation plans that may be used as a template for mitigation planning initiatives.
- The Emergency Management Institute offers free NFIP and CRS courses.
- The article, "Flood Mitigation Planning," from the July 1999 Natural Hazards Informer, provides guidance on creating a flood mitigation plan in line with the CRS planning process.
- The Association of State Floodplain Managers has produced a short video on the mitigation planning process.

Tool #9 Economic Impact Assessments

If the potential economic impact from a natural disaster is perceived to be significant, FEMA may task EDA to undertake a rapid assessment of the economic effects on businesses or agricultural activity. The objective of assessment reports is to:

- Determine the direct and indirect economic impacts of the disaster through surveys of affected businesses.
- Develop conclusions and wide-ranging recommendations to accelerate business recovery and support the creation of sustainable, disaster-resistant business enterprises.

The results of these studies may be available within a few weeks of the disaster event and can prove invaluable in decision making for all levels of government involved in the response and recovery process. As the Sustainability Planner, you should make sure that the findings of this study—especially recommendations that promote a more sustainable local economy—are integrated into immediate and long-term priorities. This is important because long-term community recovery and mitigation efforts can not be successful if key economic sectors cannot be replaced, restored, or protected.

The Sustainability Planner must understand the differences and relationships between direct and collateral economic impacts:

- Direct impacts to local economies include lost wages for workers at affected establishments and decreased revenues for business owners and farm operators.
- Collateral losses include broad-based decreases in local business activity because of declining consumer spending and decreased tax revenues for local and state governments due to lower sale volumes and property values. Many communities find it necessary to offer affected businesses sales and property tax rebates during the time they may be out of business, which increases the strain on potentially limited financial resources.

The Sustainability Planner must also understand that local economies may be affected by a loss of "lifeline" connections and customer base even if businesses are not directly damaged. These indirect causes include:

- **Loss of important "lifeline" connections to a community that can hamper or eliminate business activity and recovery** Typical scenarios include the prolonged loss of major utility services—such as electricity, water, or sewage disposal—or the loss of a key transportation route that carried raw materials and

goods to and from businesses and industries. Communication plays an important role in many information-age businesses, and even a short interruption in vital connections can be critical. Repair and restoration of business activity under these conditions may not be under the control or influence of the affected businesses and communities.

- **Loss of customer base due to extensive damage and destruction of residential areas** Where damage to housing is severe and rebuilding is not an immediate option (e.g., areas where recurrent flooding or landslides are possible), relocating significant numbers of residents and their consumer dollars to another sector of town or to other communities and regions may permanently change the market share of the commercial and service establishments they leave behind.

It is important to recognize trends in economic activity prior to a disaster. In communities and regions where economic activity was steadily increasing and the contributing factors are still in place or easily restored, economic recovery should be attainable. Where flat growth or downturns existed prior to a disaster, even a temporary loss of business revenues can be irreversibly detrimental. Difficult decisions may be required in cases where recovery efforts do not address the root cause of previous declines in business activity or farm productivity.

For examples of recent Economic Impact Assessment reports prepared for widespread flooding and damages caused by Hurricane Floyd in late summer 1999, see www.fema.gov/library/lib06d.htm. These particular reports to FEMA, the U.S. Congress, and the Executive Branch were used extensively in evaluating requests for supplemental appropriations for disaster relief from Virginia, North Carolina, and New Jersey.

Tool #10 Coastal Construction Manual

The **Coastal Construction Manual** was initially produced by FEMA in 1985 and was recently revised. The three-volume manual is designed to assist engineering professionals, builders, and state and local officials in mitigating hazards to coastal dwellings. Its content is largely based on findings of BPAT investigations conducted in U.S. coastal areas. The manual presents engineering and design techniques to combat hurricanes, nor easters, and coastal storm hazards. The techniques are specifically designed to address the multiple hazards that typically occur during such events, such as high winds, high water, storm surge, debris impact, and storm-induced scour and erosion. The manual discusses storm-resistant building materials and building foundations for coastal areas that are also subject to seismic activity.

The first volume covers the history of coastal disasters and evaluates post-disaster structures that have succeeded or failed due to their design and materials. Background information on coastal geology, geomorphology, and water and wave elevations according to FEMA Flood Insurance Studies is included. This volume describes suitable sites for coastal construction, along with the long- and short-term costs associated with hazard-resistant design, construction, insurance, and alternative locations in coastal hazard zones.

Engineering topics in the second volume of the **Coastal Construction Manual** include calculating the loads produced by high-velocity winds or waves, seismic events, and tsunamis. Structural failure modes, load paths, building systems, application of loads, structural connections, the building envelope, and utilities are examined in detail. This volume also addresses the hazards associated with existing development and maintenance and retrofitting for hazard mitigation.

The 12 appendices of the third volume list additional agency resources, such as regional FEMA offices and other state and regional offices that provide technical and regulatory guidance in coastal construction. Internet links are provided to coastal hazard studies and maps, along with technical bulletins on construction in coastal environments.

The revised **Coastal Construction Manual** will be published and distributed in late 2000. It will also be available in an interactive CD ROM format, to be used with the Acrobat PDF format. FEMA plans to offer a coastal construction training course at the Emergency Management Institute (EMI).

Tool #11 Sustainable Redevelopment PowerPoint Presentation

Note

This presentation is complete in itself, but can be customized for the particular region, state, or community audience.

Audience:

To be given at the community level to local officials and local agencies whose communities are recovering from repetitive natural disasters. Citizens, businesses, civic groups might also benefit from a public presentation, should they request it.

Introductions before the slide show starts:

Introduce yourself and those representing FEMA. Introduce participants (guest speaker, if any) Also have other agencies and guests in attendance introduce themselves and their titles. Outline the meeting and time estimation. Also tell them that at the conclusion of the slides, there will be time for discussion. (At a more formal meeting, you may want to have an agenda prepared but at the small community meetings, we recommend keeping it as informal as possible.)

We are here today to talk about Sustainable Development- a new strategy being used by communities nationwide to make themselves healthier, stronger and more disaster resistant. We are seeking ways to change the way communities deal with all natural disasters. Project Impact is one of these ways and is a participant in Sustainable Development. We hope to change what might be a meaningless term to you and advance it into a logical thought process with understanding and substance.

At this point in your disaster recovery, we can only imagine what it is that might be meaningful to each of you: --- probably actions with immediate results like, fixing the road or bridge into town or helping the local businesses so they don't leave town, and possibly elevating the row of homes that has been flooded 3 times in the last 10 years.

Each of those concerns are all related to sustainable activities. But today, through our slide presentation, we are taking it a step or two further. Sustainable Development gives thought that our *actions today* affect tomorrow. We need to look at the entire recovery process: boosting economic recovery, working in harmony with the natural environment and enhancing social and cultural considerations.

We are here today to talk about the Sustainability concept and *assist, advise, and encourage dialogue* with you and provide a favorable environment for pursuing sustainability. There is not a defined process with a road map to follow, guaranteeing success. We must mention what FEMA's limitations are regarding Sustainable Development. We do not bring funding to the table but can assist in identifying potential sources for funding. We do not bring the internal drive and strong desire that is needed by a united group of citizens. But it is our desire and hope to see that notion surface.

Start The Slide Presentation

SLIDE 1

Sustainability in Disaster Recovery

The concerns of the present do not have to be the problems of the future

Today in the United States, we spend tens of billions of dollars each year to rebuild communities after natural disasters. And the frequency and severity of these disasters is growing. A community living in the path of flooding or whose buildings are vulnerable to being blown down by hurricanes is fundamentally NOT sustainable. Disaster-prone communities are excellent candidates for sustainable development.

SLIDE 2

POINT OF VIEW

Sustainable Development is...

- ≠ Realistic and effective
- ≠ Being adopted nationwide
- ≠ Beneficial in multiple ways
- ≠ "Wave of the Future" (NOT JUST A FAD)

I want to make several key points during this talk. First, sustainable development is not an abstract concept. It is a realistic, effective new way for communities to build their future. Second, sustainable development is being adopted nationwide. Third, much of sustainable development's appeal is that it brings many different types of benefits to those who practice it. And finally, sustainable development is not this year's fad. It is not only the wave of the future but is here now, in the present, as witnessed by conferences and town meetings all over the country promoting the idea and identifying the need for it. Let's call it whatever we want, but this new strategy is how communities can and must develop in the future.

SLIDE 3

LOOK FOR PARTICIPATION FROM...

Local Government	School Districts
Private Industry	Environmental Professionals
State Government	Neighborhood Groups
Public/Professional	Coalitions
Financial Institutions	Local Religious Groups
Trade Shows	Special Organizations
Developmental Studies	Businesses
Disasters	Churches
Advocacy and Service Organizations	Colleges/Universities
	TECHNICALS

Everyone is getting on the band wagon and there are groups at all levels that want and must be involved to make it a successful partnership.

SLIDE 4

REBUILD A BETTER COMMUNITY

- ≠ Disaster recovery can be used to benefit the entire community by using it for mitigation and development projects.
- ≠ Avoid rebuilding damaged areas that will continue to create problems and expose the community to further disaster. This is not sustainable!
 - Disasters can be avoided
 - Use the past experience as the motivation for sustainable developmental projects.

There is a big challenge before you recover from [yet another] this disaster. In an effort to look on the positive side, we encourage you to look at this time as an opportunity to re-build your community with thoughts of enrichment, improvement, vitality and hope for the future.

SLIDE 5

Natural Disaster Statistics

441 Federally declared disasters in the last ten years... an increase of 50% from the decade before.

\$24 Billion - FEMA dollars paid out in declared disasters over the past decade

\$9.3 Billion - Flood insurance claims paid out since 1999

[ADD DAMAGES WITHIN REGION OR STATE]

Property losses reach the multi-million dollar range during flooding events and other disasters [adjust these comments to the type of disaster that has occurred]. But that is only part of the story. Also consider, emergency response dollars, clean-up costs, environmental damage... what about the economic loss businesses and individuals experience during the disaster and post-disaster recovery periods. And the list goes on.

SLIDE 6

DISASTERS & SUSTAINABILITY

"Federal agencies... should incorporate sustainable redevelopment principles into the Federal disaster relief system."

- President's Council on Sustainable Development

Why should FEMA be involved in educating communities in sustainable development? Federal, state and local governments have spent a disproportionate amount of time, money and resources recovering from repetitive disasters. Citizens in disaster areas that have experienced loss of life, loss of property and loss of jobs are no longer living in viable and healthy communities. Repetitive loss and deterioration diminish our ability to effectively mitigate the risk in these disaster-prone areas. If a community has the willingness to improve their circumstances and become sustainable we want to encourage them to take that step.

SLIDE 7

FEDERAL APPROACH TO SUSTAINABILITY

White House Task Force on Livable Communities
 Department of Justice
 Office of Environmental Programs and Communities (OSEC)
 U.S. Department of Energy
 Community Development
 Council on Sustainable Development
 Office of Recovery for States of Disasters and Wildlife
 National Institute of Environmental Health
 U.S. Environmental Protection Agency
 U.S. Department of Agriculture

Read the federal agencies involved. [These agencies can be further defined, if desired, by notes below]

- **President's Council of Sustainable Development (PCSD)**
 - 25 leaders from government, industry, environmental, labor, and civil rights organizations
 - develop strategy that fosters economic vitality
 - recognize outstanding achievements in Sustainable Development
 - raise public awareness
 - replaced in Summer 2000 by the Task Force on Livable Communities
- **White House Task Force on Livable Communities**
 - coordinates Federal agencies efforts to assist communities to grow in ways that ensure a high quality of life and strong, sustainable economic growth.
- **Environmental Protection Agency (EPA)**
 - charged with new thought process to approach environmental regulation with a more holistic, ecosystem-oriented approach
 - created Office of Sustainable Ecosystems and Communities (OSEC) to advocate and support community-based environmental protection
 - initiating a more integrative, cooperative approach to regulation that considers quality-of-life concerns
- **U. S. Department of Energy (DOE)**
 - implements new strategies to enhance local economies, environments, and quality of life
 - provides the Center of Excellence for Sustainable Development Website to educate communities in approaches and techniques for sustainable development
 - Operation Fresh Start - an initiative to help individuals and communities incorporate sustainable principles and technologies into their recovery from disaster
- **Federal Emergency Management Agency (FEMA)**
 - introduces the concept and approach of Sustainable Development within the framework of Disaster Recovery activities
 - directs communities toward materials and resources in their efforts toward sustainable development

- influences local officials, citizens, civic groups and businesses to consider the long term value of pursuing sustainable development for the present and for future generations
- identifies potential resources for technical assistance and possible funding

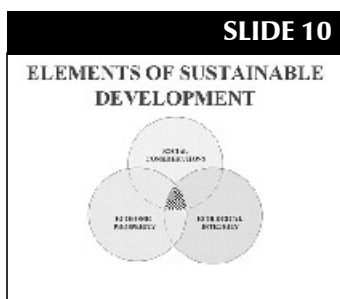


Today we will discuss the 5 topics of Sustainable Development. To clarify what we mean by Sustainable Development we will first talk about definitions. The second topic will present you with evidence of its benefits. Third, we will show you how sustainable development is being applied around the country and talk about a few success stories. Getting Started is the fourth topic, with pointers that other communities have used. Lastly, we will discuss those agencies that can help you focus on sustainable development issues and that you can build partnerships with.

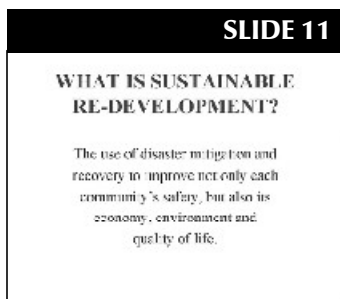


President's Council definition (read slide)

See www.livablecommunities.gov for new livability initiative.



Elements Graphic - This multi-level balanced approach will help insulate the community from economic fluctuations and give a sense of resiliency to the community. This balance of the social, economic and environmental concerns benefits all sectors of the community.



Sometimes we hear the term Sustainable Redevelopment. It refers to using disaster recovery dollars while considering the balanced concerns of a healthy community - not just re-building damaged areas that will exacerbate existing problems and expose the community to further crisis.

Section 5.0
Eighteen Tools and Programs for Sustainability

SLIDE 12

“The world will not evolve past its current state of crisis by using the same thinking that created the situation.”

—Albert Einstein

Albert Einstein, in his day, was quoted as saying....

SLIDE 13

SUSTAINABLE DEVELOPMENT IS...

“... DEVELOPMENT THAT MEETS THE NEEDS OF THE PRESENT WITHOUT COMPROMISING THE ABILITY OF FUTURE GENERATIONS TO MEET THEIR OWN NEEDS.”

—World Commission on Environment and Development (1987)

The standard and most widely circulated definition of sustainable development is this one developed by the United Nations World Commission on Environment and Development in 1987. It is that sustainable development is the practice of meeting our needs today without jeopardizing the ability of our children to meet their needs. In other words, we act not only in the interest of the short term, but also the long term.

SLIDE 14

SUSTAINABLE DEVELOPMENT IS...

“Then I say the earth belongs to each ... generation . . . fully and in its own right . . . no generation can contract debts greater than may be paid during the course of its own existence.”

—Thomas Jefferson, September 6, 1789

Although the first definition was written in 1987, the concept of sustainable development is not new. Here is a quote by Thomas Jefferson in 1789. He says that no generation has the right to impose a debt on future generations - and every generation should have the right to inherit the world debt-free. We understand from historians that Jefferson was talking not only about economic debt, but also environmental burdens.

SLIDE 15

SUSTAINABLE DEVELOPMENT IS...

“Sustainability refers to a very old and simple concept—the ability to keep going over the long haul. Think of it as extending the Golden Rule through time, so that you do unto future generations as you would have them do unto you.”

—Robert Gilman

This very clear definition comes from Robert Gilman of the Context Institute, which has been studying and communicating about the concept for many years. It says that sustainable development is the ability to keep going, to sustain one's economy, environment, and community. Think of it as the Golden Rule, extended through time. We do unto our children as we would have our children do unto us.

SLIDE 16

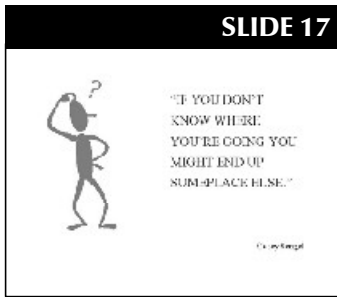
WHAT IS COMMUNITY?

It can be...

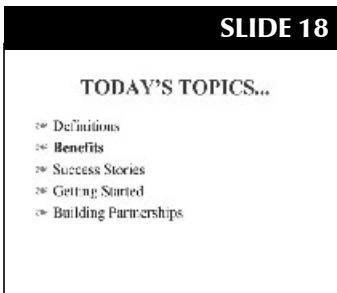
- a village, town or city
- a neighborhood
- the local school district
- county
- valley
- watershed area
- twin cities area

Participants, in pursuing Sustainable Development, should feel “connected” to each other and share a feeling of “being in the same boat.”

Frequently we are asked, what do you consider a community? Involvement can be pursued by a number of different customers. Customers can be cities, villages, towns and neighborhoods and also communities of interest, like national parks and industrial parks. One thing that must be held in common is the commitment and the shared feeling that something needs to change.



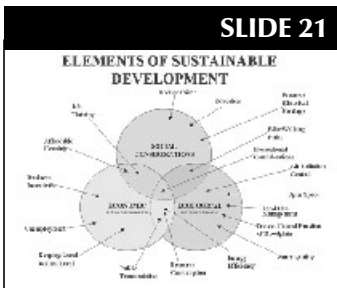
Casey Stengel very aptly put it by saying, if you don't know where you are going, you might end up some place else. Define where you want to go. Look down the road and create a vision statement.



Let's talk a minute about the Benefits involved in pursuing Sustainable Development.



The kinds of benefits that you can expect from developing a long-term recovery plan are many. Each community with different concerns and ideas will benefit in various ways. (GO OVER THE THREE SLIDES) But the key is that the collaborative approach used by the groups involved will result in the benefit of many - not just a few.



Section 5.0
Eighteen Tools and Programs for Sustainability

SLIDE 22

SHOULD WE CARE?

- | | |
|--|--|
| <p>FEDERAL BENEFITS ...</p> <ul style="list-style-type: none"> ➤ Dollars spent in line with highest national goals ➤ Biggest bang for the taxpayer buck ➤ Needs minimized for future Federal funds | <p>LOCAL BENEFITS ...</p> <ul style="list-style-type: none"> ➤ Multi-purpose improvements ➤ Move grant per Federal dollar ➤ Enhances local appeal as a business and residential location |
|--|--|

We are here today because the federal government can reap the benefits from this approach. It is prudent for the government to spend taxpayer dollars to the best possible benefit. You are here today because your community is recovering from a disaster, and over the long term, this approach can help you reap benefits. Most importantly, we all benefit when we help individuals to a better, safer, more secure future.

SLIDE 23

You are right on track, when your solution for our problem... addresses other. You decide to minimize carbonable use to conserve food miles... realize that this will reduce noise... enhance bike and pedestrian travel... conserve land by minimizing streets and parking... multiply opportunities for local artists... beautify the neighborhood and make it safer for children.

-Michael Corbett

The benefits can be multi-dimensional. The solution to one problem may solve many others-- Michael Corbett explains by saying [READ THE SLIDE]

SLIDE 24

TODAY'S TOPICS...

- Definitions
- Benefits
- Success Stories
- Getting Started
- Building Partnerships

The third topic this morning [afternoon] will briefly outline a few communities that have chosen to recover from disasters in a more sustainable way.

SLIDE 25

APPLICATION
Cases in Sustainable Development

➤ A private builder demonstrates that sustainability is not just a buzzword for green buildings, it is a holistic approach to creating affordable, resilient structures. The builder achieves a number of goals: local employment and growth, economic and environmental advantages of straw bale construction, and an improved quality of life for the community.

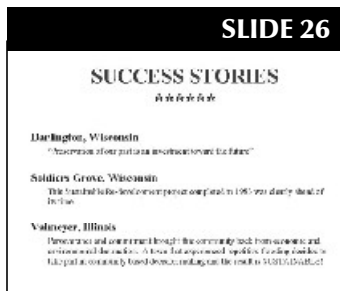
➤ A nonprofit organization helps build a sustainable community for people who are homeless and looking for ways to make and maintain a sustainable living. This group provides a safe and secure place to live and work, and a place where they can learn and grow.

➤ A city and county are collaborating to help residents deal with issues of hazardous waste, such as household hazardous waste, and to provide a safe and secure place to live and work. The program is designed to help the community deal with hazardous waste and to provide a safe and secure place to live and work.

-Beverly Greenfield

Before we talk about specific communities, we can answer that question of How can I, as one business, or one person be of any assistance in the pursuit of sustainability. 1) Read 1st paragraph: This private builder, by using straw bale construction, has benefited the environment and his business. 2) Read 2nd paragraph: Employment opportunities in commercial organic farming assist the homeless population. 3) Read 3rd paragraph: This city's recycling effort is keeping hazardous materials out of landfills.

[READ BLURB ON EACH COMMUNITY]



DARLINGTON

The preservation of our past is an investment in our future. The City's priorities were and are: economic development, historic preservation, tourism and flood mitigation. The City of Darlington is a small community in southwestern Wisconsin located along the Pecatonica River. After repetitive flooding in 1950, 1959, 1969, 1990 and the Great Flood of 1993, the citizens and local officials said "enough was enough." A comprehensive flood hazard mitigation plan that detailed a downtown rehabilitation and flood mitigation project outlined a multi-year project combining historic rehabilitation with innovative floodproofing techniques. The plan called for floodproofing 35 downtown buildings and relocating 15 businesses, which involved developing an alternative site on a 35-acre parcel south of Darlington. This not only ensured that businesses were safe from harm's way, but also protected the City's valuable tax and economic base, and its historic heritage. Darlington has also prevented future development near the river by acquiring this land and converting it to recreational space. This Darlington project has been completed in stages, beginning in 1994.

SOLDIER S GROVE

Twenty years ago, Soldier's Grove was a town of 600 people on the banks of Kickapoo River in southwest Wisconsin. With the repeated occurrence of flooding, the residents finally decided to build a new town center on higher ground. The new Soldier's Grove was officially completed in 1983. This example of Sustainable Re-Development was the pioneer effort, and ahead of its time. Villagers chose to work with the river rather than attempt to control it. They chose to take the opportunity to build a better community and not race to repair damaged property and infrastructure as quickly as possible. Ordinances were passed requiring structures to be rebuilt with solar heating and other energy efficient technologies.

VALMEYER

In 1993, the Great Midwest Flood overflowed the banks of the Mississippi and inundated Valmeyer. The flood gutted the village of about 900 people. In a referendum after the flood, the people of Valmeyer decided they would not try to rebuild back in the same path of flooding. They voted to relocate to higher ground. In January 1994, the mayor of Valmeyer attended a conference sponsored by the U.S. Dept. of Energy on sustainable redevelopment. A month later, he asked DOE to help Valmeyer design its new town. The Dept. of Energy helped assemble a team with the American Institute of Architects, creating a design team made up of nearly two dozen national experts. Over a 4-month period, they held intensive weekend sessions in which architects, legal experts, design professionals, and others worked with townspeople to build models and drawings to work out the details of the new village. The result of all this input was the beginning of a new town. One of the most important sustainable measures that Valmeyer incorporated into their new town was, obviously, removing themselves from the floodplain. Other actions were taken in the design of the new City Hall building, including installing a passive solar heating system in which sunlight is used to help heat the interior. Along with other energy efficient measures, this building will perform 75% more efficiently than the national model building codes. Other measures incorporated are: recycled content, geothermal heat and low-E windows. Rebates from the Illinois Department of Energy encouraged families to use similar building techniques for rebuilding their homes.

OTHER SUSTAINABLE DEVELOPMENT COMMUNITIES:

Pattonburg, Missouri, Rhineland, Missouri, City of Eau Claire, Wisconsin, East Forks, Minnesota, Chattanooga, TN, Burlington, VT. The list goes on and on ...

Section 5.0
Eighteen Tools and Programs for Sustainability

SLIDE 27

TODAY'S TOPICS...

- ☛ Definitions
- ☛ Benefits
- ☛ Success Stories
- ☛ Getting Started
- ☛ Building Partnerships

So you ask yourselves, this all sounds well and good, but how on earth can we get started down the road to Sustainable Re-Development?

SLIDE 28

"Given the right circumstances, from no more than dreams, determination and the liberty to try, quite ordinary people consistently do extraordinary things."

—Dr. W. Hark
The Cherokee Alliance

[READ QUOTE ON SLIDE] Many of us may think that the challenge is totally overwhelming, but in order to make it more reachable, take on the challenge with other people who want to create a vision for your community. When working together, the challenges don't seem so great.

SLIDE 29

SUSTAINABLE DEVELOPMENT PRINCIPLES

- ☛ USE CONSENSUS-BASED, LOCALLY DRIVEN PROCESS
- ☛ INVEST DISASTER RESOURCES IN SUSTAINABILITY
- ☛ CREATE BROAD PARTNERSHIPS
- ☛ EVOLVE FROM COOPERATION AND FLEXIBILITY BETWEEN INDIVIDUALS, VILLAGES, NEIGHBORHOODS, ETC.

The basic principles of Sustainable Development are

- Involvement of citizens so they can direct their own path
- Develop a long-term strategic plan so when the money becomes available, you can stay on track with your plan objectives
- Use the available resources out there and commit agencies and businesses to building partnerships
- Embrace and encourage differing perspectives build a community together

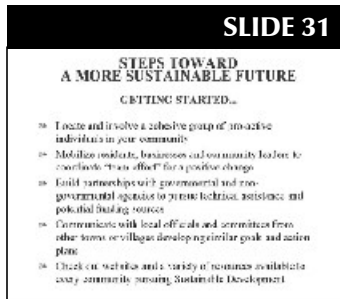
SLIDE 30

CONSENSUS...
isn't unanimous agreement...

It's a decision
that about everyone
can live with

— Unknown

REMEMBER That there is rarely 100% agreement when discussing viewpoints from a diverse-interest group. You can still move forward based on decision making for the mutual benefit of all.



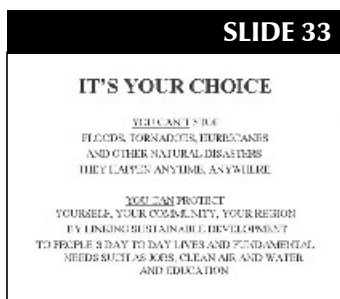
Steps toward a more sustainable community are

- 1) Read first bullet: Dedicated people who share a commitment to work together will keep the movement alive
- 2) Read second bullet: Develop a core committee designed to bring diversity to problem-solving (some people are good organizers and coordinators, some are good speakers, some are good doers) This group helps the community to develop its own solutions. One way to accomplish this is through town meetings and surveys. Find individuals who exhibit organization, commitment, patience, and a willingness to get things moving and hold respect within the community. Use available resources - don't re-invent the wheel. Capitalize on others successes.
- 3) Read third bullet: Do your research and make phone calls. Involve contacts from the state and community to solicit help.
- 4) Read 4th bullet: This is referred to as a peer-to-peer exchange or sometimes a mentoring program ; locate areas also working on Sustainable Development.
- 5) Read 5th bullet: Local non-profit groups, government agencies and the library have excellent resources. Spend a few minutes today at our resource table.



Once you get the core group together, you can look at the various options on how to begin. The EPA Website outlines one avenue of action. [Their reference to a Green Community is a sustainable one] Read the definition and the slide.

There are many guidebooks and references that get very detailed in the planning stages. See our resource table and look in the Internet.



[READ SLIDE] OR...You can go along with the typical traditional mode which leaves independent, unbalanced decision-making roles to a few people, making Sustainable Development remote and theoretical.

The movement toward becoming a prosperous and healthy community is here. Strong community leadership and involved citizens will be the catalyst for change. It's up to you.



[READ QUOTE] Never doubt that a small group of thoughtful committed citizens can change the world. Indeed, it's the only thing that ever has.

Section 5.0
Eighteen Tools and Programs for Sustainability

SLIDE 35

TODAY'S TOPICS...

- 2nd Definitions
- 3rd Benefits
- 2nd Success Stories
- 2nd Getting Started
- 4th Building Partnerships

Building Partnerships is one key step in moving forward. In creating partnerships with Federal, state and local government, business and private citizens, we can save lives, lower vulnerability to, and reduce the impact of, future disasters.

SLIDE 36

PARTNERS IN SUSTAINABILITY

<ul style="list-style-type: none"> • FEMA (Flood Recovery) • FEMA (Disaster Recovery) • FEMA (Disaster Preparedness) • FEMA (Disaster Mitigation) • FEMA (Disaster Prevention) • FEMA (Disaster Response) • FEMA (Disaster Recovery) • FEMA (Disaster Preparedness) • FEMA (Disaster Mitigation) • FEMA (Disaster Prevention) • FEMA (Disaster Response) • FEMA (Disaster Recovery) 	<ul style="list-style-type: none"> • FEMA (Flood Recovery) • FEMA (Disaster Recovery) • FEMA (Disaster Preparedness) • FEMA (Disaster Mitigation) • FEMA (Disaster Prevention) • FEMA (Disaster Response) • FEMA (Disaster Recovery) • FEMA (Disaster Preparedness) • FEMA (Disaster Mitigation) • FEMA (Disaster Prevention) • FEMA (Disaster Response) • FEMA (Disaster Recovery)
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It is increasingly common for businesses, government, citizens and non-governmental organization to find themselves participating in a collaborative effort to solve environmental, social and economic problems. They are doing so because collaborative approaches lead to more comprehensive and acceptable outcomes.

SLIDE 37

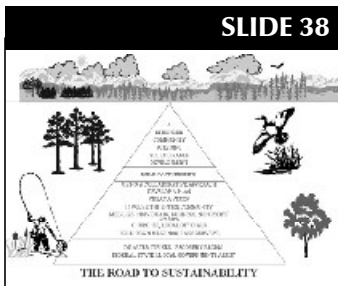
THE CHALLENGE

Local government **must** play a key role in creating stronger, healthier communities.

- Plan and facilitate development
- Create community partnerships
- Provide strong leadership

While the federal government bears responsibility for establishing national goals, standards, and priorities, these national interests may not always represent specific local interests. FEMA seeks to expand the roles played by states, counties and local communities in the sustainability process by encouraging inter-governmental partnerships, information sharing and multi-level coordination among all involved entities.

SLIDE 38



THE ROAD TO SUSTAINABILITY PICTURE This graphic indicates that the Federal government's involvement in Sustainable Redevelopment begins at the very onset of disaster recovery. While we assist in disaster recovery work, and attempt to get the communities working toward a healthier, more prosperous quality of life, we can only give you a nudge. With community drive and strong local leadership the road to becoming sustainable is within reach. And it's the road that you, the community -- not someone else -- has chosen.

SLIDE 39

KEY CONCLUSIONS

- ☞ All Communities are at risk from disasters
- ☞ Improved sustainability an important goal
- ☞ Mitigation and pre-disaster planning are crucial
- ☞ Locals should lead. Feds should help

Key Conclusion-Sustainable Development is a viable strategy for ensuring your community's future. Because it deals with your community as a system, rather than a series of unrelated problems and issues, sustainable development achieves multiple benefits.

By saving resources and by going after these multiple benefits, sustainable development gives you a bigger bang for your local buck. It is the most resourceful way for your local government and your private businesses to invest their development dollars.

Finally, sustainable development is a way to build bridges between your local economy, the quality of your environment, and your community's quality of life. We should no longer assume that we can only create jobs at the expense of the environment, or that we can only preserve the environment by sacrificing jobs. Because of new ways of thinking, and new approaches to community development, we can implement sustainable initiatives that ensure environmental quality, a strong economy, and a high quality of life.

SLIDE 40

Heroes
 They are not
 heroes. They
 are ordinary
 people who
 are doing
 what is right
 at the right
 time. They
 are not
 heroes. They
 are ordinary
 people who
 are doing
 what is right
 at the right
 time. They
 are not
 heroes. They
 are ordinary
 people who
 are doing
 what is right
 at the right
 time.

FINAL NOTE
 It is impossible to provide a blueprint to
 develop a sustainable community due to the
 unique needs and desires of each community.

Let us emphasize the importance of making
 phone calls, left and to lists of people,
 reaching out to other communities and
 researching the facts. Each phone call you
 make will generate 2 or 3 more. The people
 you talk with will advise you of other
 contacts. Each agency that gives you
 guidance can also direct you to other agencies.

Final Note

When you start with a mindset that we control our own destiny, success will follow. Take baby steps and move forward. When setbacks happen, persevere and keep plugging along. You are not alone. There is a lot of support. Read Heroes quote.

SLIDE 41

**FOR FURTHER INFORMATION,
 PLEASE CONTACT**

[PROVIDE CONTACTS IN REGION]

SLIDE 42

IN SEARCH OF

Forward thinking individuals who nurture and support the idea that a long-term strategy, blended with planning and mitigation activities in disaster-prone communities will secure the future for themselves and their children.

[Leave up for the rest of the meeting]

Tool #12 Hazard Mitigation Grant Program Desk Reference

FEMA's Hazard Mitigation Grant Program (HMGP) assists states and communities to implement long-term hazard mitigation measures following a Presidential Disaster Declaration. Up to fifteen percent of the actual disaster response and recovery expenditures is allocated for these grants, and is provided to states with a cost-sharing provision of 75 percent Federal / 25 percent non-Federal funding. This program provides funding that can be used to implement sustainable redevelopment activities, which meet the eligibility requirements of reducing future disaster recovery costs. The HMGP project application process is as follows:

- Local communities identify and develop proposed mitigation projects, such as property acquisition, elevation of floodprone properties, seismic retrofitting, wildfire mitigation activities, etc.
- Local communities then submit the project applications to the state, which is responsible for administering the HMGP and for prioritizing the submitted project applications.
- The state then submits to FEMA for final review and approval those projects that are consistent with state mitigation planning objectives, cost-effective and environmentally sound, and for which there is available funding.

FEMA's **HMGP Desk Reference** is designed to assist state and local governments in reducing the loss of life and property as a result of natural disasters and in implementing mitigation measures during disaster recovery. The Desk Reference provides eligibility guidelines for hazard mitigation grants, which are administered through the states, with the goal of implementing long-term hazard mitigation measures after a major disaster declaration. Eligible applicants include state and local governments, selected nonprofit organizations, and Indian tribes or authorized tribal organizations and Alaska Native tribes and organizations.

The Desk Reference can assist planners in understanding the mechanics of the grant program and use it to help find ways to identify projects and obtain funding. The states administer the program and prioritize project funding. Each state is required to develop a Hazard Mitigation Administrative Plan that explains all pertinent hazard mitigation grants procedures.

Tool #13 Unified National Program for Floodplain Management

The **Unified National Program for Floodplain Management** (1994) is the Federal government's means of focusing the competing interests in floodplain management toward the national good. The 1994 report defines four goals for national floodplain management through state and local involvement:

- Formalize a national goal-setting and monitoring system.
- Reduce by at least 50 percent the risk to life and property in the nation's floodplains.
- Develop and implement a process to communicate a positive attitude toward floodplain management.
- Institute floodplain management in communities nationwide.

The Unified National Program for Floodplain Management works to achieve these goals through promoting strategies that alter development patterns within floodplains, and building codes, change people's attitudes concerning floods, and maximizes the natural and beneficial functions of floodplains.

Tool #14 Natural and Beneficial Functions of Floodplains Report to Congress

This is a report of an interagency task force established by Congress as a result of the National Flood Insurance Reform Act of 1994. The task force was formed to:

- Identify the role of natural and beneficial functions of floodplains in reducing flood losses.
- Recommend how the nation can further reduce flood losses through the protection and restoration of the natural and beneficial functions of floodplains.

The report examines how to lessen flood impacts through multi-objective management practices, resulting in the restoration, enhancement, and preservation of the nation's floodplains. Relevant topics for the Sustainability Planners include how to incorporate floodplain management into government programs, and how to increase public interest in sustainable land use practices within floodplains. The benefits of pristine or restored floodplains include increased water storage capacity during flood events, a healthy ecosystem, and a greatly reduced risk of losses and property damages from floods. **Natural and Beneficial Functions of Floodplains** is a valuable tool for Sustainability Planners in seeking to reduce flood risks while also initiating sustainable development practices related to floodplain environs.

Tool #15 Flood Mitigation Assistance Program (FMA)

The Flood Mitigation Assistance Program is a predisaster grant program designed to assist states and local communities in implementing measures to assess flood risk and identify actions to reduce or eliminate the long-term risk of flood damage to buildings, homes, and other structures that are insurable under NFIP.

Activities such as structure elevation, demolition, or property acquisition are eligible for funding under this program. Projects must be cost effective, cost beneficial to the National Flood Insurance Fund, technically feasible, and either physically located in a participating NFIP community or located so as to reduce flooding in an NFIP community. FEMA may contribute up to 75 percent of the total eligible costs; the remaining 25 percent must be provided by a nonfederal source. The broad objective of this program is to provide funding and mitigation planning assistance to strengthen communities against flood hazards, thus incorporating a significant component of sustainability. FMA program guidance is provided in **FEMA Publication 299**.

Tool #16 Capability Assessment for Readiness (CAR)

An essential characteristic of a sustainable community is its resilience to natural disasters. The post-disaster environment present a unique opportunity to implement sustainability initiatives and to increase the quality of the built environment while, at

the same time, instituting preparedness planning processes that can protect the community more effectively in the event of a subsequent disaster. As FEMA's mitigation program functions to reduce the impact of disasters, FEMA's preparedness program has, as its primary mission, the goal of ensuring that state, local, and tribal emergency managers can save lives and protect property by ensuring that they have appropriate plans, procedures, communications and systems in place before a disaster occurs.

One of the primary methods that FEMA uses to accomplish this is the **Capability Assessment for Readiness**. FEMA has been working with the National Emergency Management Association since 1996 on the development of the state CAR process based on recommended practices in emergency management. This initiative strengthens the current partnership and the negotiation of the annual Emergency Management Performance Grant (EMPG) process between the states, territories, and insular areas. The CAR answers two of the most basic questions: (1) *Are we ready for a disaster that could affect our community?* and (2) *Have we developed effective preparedness policies, exercised appropriate mitigation practices, and are we ready to respond and recover following a disaster?*

What is the CAR?

Prior to 1996, emergency management officials in the United States lacked a nationally accepted process and criteria by which states, territories, tribes, and insular areas could judge their emergency management readiness and capabilities. This inability to assess readiness capabilities left many communities vulnerable to the impact of a disaster because they were unprepared for the wide variety of activities that are necessary before, during and after a disaster strikes.

The state CAR is a self-assessment process focusing on 13 core Emergency Management Functions. These Functions were identified by emergency managers from across the country and address the preparedness, response, and recovery functions associated with disasters. The 13 Functions are:

- Laws and Authorities
- Hazard ID and Risk Assessment
- Hazard Mitigation
- Resource Management
- Planning
- Direction, Control, and Coordination
- Communications and Warning
- Operations and Procedures
- Logistics and Facilities
- Training
- Exercises, Evaluations & Corrective Action
- Crisis Communications, Public Education, and Information
- Finance and Administration

Each Emergency Management Function is subdivided into Attributes and further divided into Characteristics. Attributes are composed of broad criteria by which the Function can be assessed. Characteristics are more detailed criteria that clarify each of the attributes. A scoring scale of 1-5, NA is provided for a quantitative rating. The

process not only involves the state emergency management offices, but includes key departments and agencies throughout state government that have responsibilities for disaster response.

CAR Assessment Process

The first Capability Assessment for Readiness review was conducted in 1996 with participation from all 56 states, territories, and insular areas. A national report was prepared and provided to the President and the United States Congress. Following the assessment, Customer Feedback Workshops indicated that improvements to the assessment instrument were required. The second state CAR assessment was conducted in 2000 and again was completed by all states, territories, and insular areas. It included enhanced software, a CD ROM Tool Box that provides expanded explanations of questions as well as other background material. A User's Guide and a Facilitator's Guide were also developed. The CAR software also includes a Tool Box that provides expanded explanations as well as background materials. FEMA plans to develop a report to the President and the U.S. Congress by December 2000. It is intended that the states will complete the CAR on a biennial basis.

Benefits to the States

The benefit to completing the CAR is that a self-profile is developed of the strengths and weaknesses in the emergency management program. This profile enables the states to effectively target their program resources to those areas of greatest need. In addition, the states have the information they need for strategic planning and for justifying program resource requirements or new initiatives to state legislatures.

CAR and the NPFA Standards and Accreditation

Imbedded in the CAR are those important ingredients developed by the Fire Protection Association Emergency Management Standards (NPFA 1600). CAR is also being used as the foundation for the Emergency Management Accreditation Program, which is currently under development by the National Emergency Management Association.

Local and Tribal CAR

A draft local CAR was recently developed by FEMA at the request of the National Emergency Management Association. It will enable local jurisdictions throughout the states to conduct their own emergency management self-assessment. It is currently under review by the National Emergency Management Association, the states, and organizations such as the International Association of Emergency Management, the U.S. Conference of Mayors, the League of Cities, the National Association of Counties, and the International City/County Management Association. It was also field tested by six counties in the State of Iowa. A feedback session indicated that local Emergency Management Directors were very positive as to its potential in advancing the readiness in communities across the nation. Initial steps are underway to develop a tribal CAR assessment tool.

Tool #17 HAZMAT Response/Capability Assessment Program

Originally developed in FEMA Region VI, the Comprehensive HAZMAT Emergency Response/Capability Assessment Program (CHER-CAP) assists state and local communities in improving their response capabilities to hazardous materials incident. This is of critical importance to most communities since hazardous materials incidents are rated as their number one threat. The addition of the CHER-CAP program to assist in improved preparedness against hazardous materials incidents enhances the work that is being done to build Disaster Resistant Communities in *Project Impact* by adding the technological hazards component that many communities face.

CHER-CAP uses the skills and resources of local, state, tribal, and Federal governments and industry to identify and address the hazardous materials preparedness needs of local jurisdictions. It also enhances a community's ability to operate within the National Response System (as described in the National Contingency Plan). The Environmental Protection Agency and the U.S. Department of Transportation are key Federal partners in CHER-CAP.

The principal purpose of CHER-CAP is to:

- Identify opportunities for plan revisions.
- Identify communications needs.
- Identify resource needs.
- Improve coordination.
- Identify and accomplish required training.
- Clarify roles and responsibilities.
- Improve individual performance.
- Serve as a Train-the-Trainer initiative for additional jurisdictions.
- Test plans and systems in a comprehensive exercise.
- Motivate public and private officials to support emergency programs.
- Increase general awareness of proficiency and needs.
- Improve the Federal-state-tribal government-local-industry emergency management relationships.

CHER-CAP is conducted in phases spanning a total of four to six months. Communities interested in undertaking CHER-CAP notify their state emergency management agency and the state then selects jurisdictions for participation.

After selection of a CHER-CAP community by the state, an initial meeting is held between FEMA and the Local Emergency Planning Committee to discuss the scope of CHER-CAP and the time that will be needed to conduct the program. Following a commitment by the community, information gathering begins, including emergency response plans, any existing mutual aid agreements, agency-specific Standard Operating Procedures, existing data on hazardous substances in the community, documentation regarding training previously undertaken and training needs. Most CHER-CAP initiatives eventually include fire, police, emergency medical services, public works, health and environmental agencies, public officials and hospitals, in addition to industry.

After a review of the plan and Standard Operating Procedures, communities implement any necessary modifications. Local, state, and tribal government officials,

industry and the FEMA coordinator identify available training programs based on identified needs. A tabletop exercise may also be conducted prior to the full-scale exercise.

The final phase of CHER-CAP is a full-scale hazardous materials field exercise with live props, such as a tanker truck, rail car or fixed facility with simulated smoke, leaking liquid and casualties. The exercise typically involves 100-300 participants and lasts approximately four hours. Peer evaluators from nearby jurisdictions observe the exercise and record their observations. A final report is prepared and submitted to the participants following the exercise.

CHER-CAP has already proven to be invaluable in those communities that have implemented it and then experienced a hazardous materials incident.

Tool #18 Community and Family Preparedness Program

Like the readiness phase of the Sustainability Program, which offers the opportunity to create a sustainability network by building partnerships and identifying potential participants in reconstruction, the Community and Family Preparedness program ensures that all Americans have the necessary information, education and skills to protect themselves, their families, their homes and their business from disasters. The Community and Family Preparedness program emphasizes reaching children and schools, helping neighbors and vulnerable persons and cooperating through community and neighborhood organizations.

The Community and Family Preparedness program supports a variety of disaster public education programs and activities by working through a broad coalition of partnerships. It concentrates on providing reliable and accurate information and supporting the exchange of information to a nationwide network of disaster educators and the public. The program also supports the development of curriculum materials on disaster preparedness for classroom use, outreach through national partners, seminars for neighborhood associations, materials for individual school presentations, special seasonal disaster preparedness campaigns, special preparedness seminars for employees of business, industry or other organizations, as well as churches and youth groups.

Community and Family Preparedness partners include state and local emergency managers, Boy Scouts of America Exploring program, Girl Scouts of the U.S.A., Church World Services, the Society of St. Vincent de Paul, The Salvation Army and others. New partnerships are being forged with other networks, such as the Women in the NAACP, the U.S. Department of Agriculture cooperative extension network, and voluntary organizations active in disaster relief.

FEMA cooperates with other Federal Departments and agencies such as NOAA's National Weather Service, the U.S. Geological Survey, the U.S. Department of Agriculture Cooperative State Research, Education and Extension Service, the Centers for Disease Control, the International Association of Emergency Managers, the National Fire Protection Association and the Institute for Business and Home Safety. These activities are accomplished through an informal National Disaster Education Coalition.

FEMA has developed and made widely available for distribution a number of basic disaster public information materials such as: *Emergency Preparedness Checklist; Your*

Family Disaster Plan; Your Family Disaster Supplies Kit; Preparing for Emergencies – A Checklist for People with Mobility Problems; Helping Children Cope with Disaster; Disaster Preparedness Coloring Book; Food and Water in an Emergency; an Emergency Management Guide for Business and Industry; and Adventures of the Disaster Dudes (a video popular in school presentations).

FEMA makes disaster public information materials available to state and local emergency managers and other partners who reproduce and disseminate them locally. Publications are available from the FEMA Publications Distribution Center via an 800 number, camera copies are available, and FEMA also provides the *FEMA Disaster Preparedness and Mitigation Library on CD Rom*, which holds electronic files of publications for such users. The information is also available for downloading from FEMA's website.