

Resilient Neighbors Network Framework Plan



Charter members, Resilient Neighbors Network Steering Committee.

**Resilient Neighbors Network Steering Committee
&
Natural Hazard Mitigation Association**

December 31, 2012

Resilient Neighbors Network Framework Plan

This framework plan was prepared by the Resilient Neighbors Network Steering Committee and the Natural Hazard Mitigation Association, with support by the Federal Emergency Management Agency, the Federal Insurance and Mitigation Administration, and NHMA's Blue Ribbon Advisory Team.

Facilitators: NHMA's Alessandra Jerolleman, Tim Lovell, and Ann Patton.
Report editor and photographer: Ann Patton.

Published in 2012 by the Natural Hazard Mitigation Association, a national nonprofit group that supports reducing disaster losses through hazard mitigation.

NHMA's Resilient Neighbor Network links together grassroots people working to create sustainable, safe, and resilient communities.

For more information, see NHMA.info and ResilientNeighbors.com.



Seven charter members of the Resilient Neighbors Network met in Colorado, July 2012.
Seated: Marcy Leach, Rockford, IL, and Sheryl Siddiqui, Tulsa, OK. Standing: Chuck Wallace, Grays Harbor County, WA; Daya Dayandanda, Pasadena, TX; Barbara Miller, Jefferson County, WV; Mike Kline, Vermont; Tom Bennett, Tulsa, OK.

Contents

I. Introduction	- 1
II. Background	- 2
III. Definitions	- 3
IV. Members, Mentors and Partners	- 6
V. RNN Goals & Objectives	- 12
VI. Operational Context	- 13
VII. Communications Strategy	- 14
VIII. Timeline	- 14
IX. Expansion Options	- 15
X. Success Measures	- 16
XI. Budget and Funding Options	- 17
XII. Conclusion	17
Appendix: Community Profiles	



In May 2012, NHMA convened a San Antonio workshop of local and state representatives to begin planning for Resilient Neighbors Network.



The ten charter communities are working to form collaborative networks and curb disaster losses. (Map by Tom Malmay)

Resilient Neighbors Network Framework Plan

I. Introduction

The Natural Hazard Mitigation Association (NHMA) is launching a special program named Resilient Neighbors Network (RNN) to link together and build cooperative grassroots communities learning and working to become safer, disaster-resilient, and sustainable.

A. Plan purpose

The purpose of this framework plan is to provide structure for developing and growing the RNN, which will connect grassroots people working together to create resilient communities.

B. Planning process

This framework plan was developed by representatives of ten charter RNN communities, with assistance from NHMA, the Federal Emergency Management Agency (FEMA), and resource experts on a Blue Ribbon Advisory Team (Advisory Team). In May 2012, NHMA convened a San Antonio workshop of local and state representatives to begin planning for Resilient Neighbors Network. Then representatives of seven designated communities met via conference call and then in person. At their July 2012 meeting in Colorado, they decided to add three more communities. A draft framework was drawn up as a result of facilitated discussion at the in-person meeting and then reviewed by all ten communities and the Advisory Team.

C. Scope

This framework lays out a roadmap for the development and operation of the network during the initial months in the summer and fall of 2012. It also sets out a plan for potential activities over the course of the next two years. These activities may include additional projects, communities, and/or partners, dependent upon funding.



The RNN Steering Committee developed the network's framework plan.

D. Use

This document is intended to be used by the charter communities, as well as their facilitators, partners, and advisors, to create and test the network during a pilot period. It is also intended to serve as a guiding document for potential activities and funding requests over the course of 2013 and 2014.



The ten charter communities are working to form collaborative networks and curb disaster losses. (Map by Tom Malmay)

II. Background

A number of key factors have demonstrated the need for a project such as RNN. These are outlined below.

A. Rising losses

1. Disaster losses continue to rise.
2. Projected trends are even worse.
3. The numbers of people who are especially vulnerable in disasters are rising rapidly, in part because of changing climate and demographics, while rising economic stress and poverty curtail our national capacity to protect them.

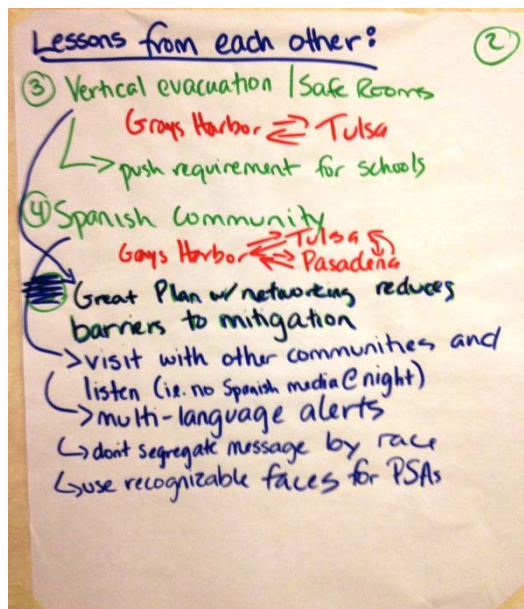
B. Holistic grassroots actions

1. These challenges are best met by holistic grassroots efforts aimed at changing the culture, promoting individual action by residents, and informing policy discussions.
2. Holistic grassroots efforts to change local cultures that value hazard mitigation and loss reduction are often referred to as “resilience.”
3. It would be especially useful to link together those communities working to become resilient.
4. Some resilient communities can mentor each other and learn together.

C. Peer-to-peer network

1. A peer network is essential to meeting these challenges and support local efforts.
2. Around the nation, communities are working to become resilient. These forward-looking towns are often working in isolation from one another. They can learn from and inspire each other through a peer-to-peer sharing network.
3. It has been proven again and again that communication is one of the most effective tools to spread desired knowledge and change. If they can talk together, by whatever means, these grassroots leaders can learn from each other and inspire each other.
4. In fact, peer-to-peer communication among workers “in the trenches” can create a very special kind of understanding and inspiration that cannot be duplicated by other means.
5. NHMA is facilitating such a sharing vehicle: Resilient Neighbors Network.

For all these reasons, NHMA seeks to facilitate this new project named Resilient Neighbors Network.



Workshop flip chart.

III. Definitions

Community. Each community which participates in RNN is self-defined in terms of its membership. In some cases these communities encompass specific geographic or political areas, such as a county, but in other cases they are self-defined by their interests or goals and may encompass a different or wider area. Within each participating community, there is a network of smaller communities, which would consist of self-defined communities of interest such as neighborhoods, cultures, etc.

Community recovery in this context involves a series of actions to build and restore a community after a disaster. Recovery planning may occur before, during, and after a disaster, by a community as a whole or by individual stakeholders, businesses, and citizens.

Community resilience is used in this context to mean comprehensive efforts to reduce disaster losses and improve quality of life through actions that engage risk-bearers, stakeholders, and the public very broadly. One goal is to help communities recognize where they may be vulnerable and actually change community values to reduce risks. Resilient communities work to strengthen social resources, so people take responsibility to help each other in times of trouble. When a disaster occurs, such communities can recover more quickly and, in fact, reconstruct in better and safer ways than before. Disaster losses can be reduced by neighbors helping neighbors, whether their neighbor is next door, across town, or another community far across the map.

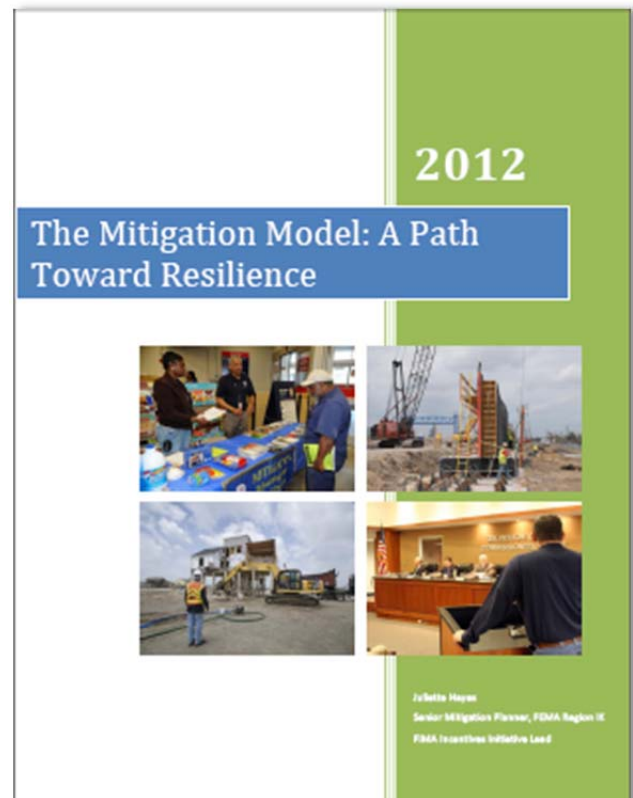
FEMA's Mitigation Model. The Federal Insurance and Mitigation Administration (FIMA) Incentives Initiative was created to increase the likelihood of community action. The initiative undertook six incentive pilots; then, based on findings and outcomes of the pilots, the Mitigation Model¹ was created. The model's goal is to increase community resilience by establishing mechanisms and incentives to facilitate and enable local risk and vulnerability reduction actions. A critical component of the model is to assist with the development of collaborative information sharing and mentoring programs to increase effective risk reduction actions. Essential to this collaboration is the creation of a functional network by which "bottom-up" innovation meets "top-down" support while connecting communities so they may learn from each other. The Resilient Neighbors Network will serve as this functional network bridge.

Grassroots. For the purposes of this project we consider grassroots efforts to be those activities that occur primarily at the local level and are driven from the bottom up. These grassroots efforts can include a wide range of interests, risk-bearers, and stakeholders, including households, citizens, and private, nonprofit and government interests.

Holistic. For the purposes of this project, we are considering holistic efforts to be those that involve a wide array of participants with very diverse interests, such as sustainability, capacity building, mitigation, green, development, social justice, etc.

NHMA. The Natural Hazard Mitigation Association is a national nonprofit group that links people around the nation who support "hazard mitigation" – actions to reduce disaster losses. Examples of hazard mitigation include moving damage-prone houses from a floodplain, building strong houses that can withstand a windstorm or earthquake, and teaching people how to survive a hurricane.

RNN. The Resilient Neighbors Network is being facilitated by NHMA to link together grassroots communities working to reduce disaster losses and become safer, better places to live. The network is currently a pilot project that will help local communities learn from each other and inspire each other, through a peer-to-peer sharing network. Communities in the pilot RNN network will be able to talk together, by a variety of methods, learn what is or is not working in each place, and encourage each other to continue working to be more "resilient."



¹ http://nhma.info/uploads/DRC_committee/The_Mitigation_Model_final_draft_03-02-12.pdf

IV. Members, Mentors and Partners

A. RNN communities



Augusta, GA, and Terri Turner

Initially, RNN will include ten charter communities.

1. Augusta, Georgia

- Lead Representative: Terri Turner, Development Administrator
- Secondary Representatives: John Paul Stout, Sustainable Development Manager, and Chief Wayne Taylor, interim EMA Director.
- Stakeholder Groups Involved: Multiple City departments, schools, neighborhoods, hospitals, emergency services, universities, local industry, business leaders, Chamber / CVB, non-profits (Salvation Army, Red Cross,

Kroc Center), environmental groups, Fort Gordon, FEMA, Georgia Emergency Management, GA DOT, GA Forestry, GA DNR, GA EPD.

- Primary Projects: An active sustainability and resiliency initiative in the downtown area and urban corridors. A robust flood buyout program with grant funding in past years and SPLOST funding (local funding) in recent years. “Doing more with less.”
- Innovations: Involving whole community in planning processes to bridge diversity, overcome strife, and build community cohesiveness. “Every citizen is a stakeholder.”
- Community Characteristics: Older inland Southern City, facing flood, tornado & hurricane risk. Overcoming urban challenges of white flight to the burbs and efficiency of government post-consolidation. Having to come up with creative solutions to deal with more needs than there is budget to cover.

2. Central Shenandoah Valley Region, Virginia

- Lead Representative: Rebecca Joyce, Senior Planner
- Secondary Representative: Ryan Triplett, Planning Assistant
- Stakeholder Groups Involved: Central Shenandoah Planning District Commission, Shenandoah Valley Project Impact, Emergency Management, and a broad group of partners, volunteers, and organizations.
- Primary Projects: Floodplain acquisitions, preparedness and mitigation education, emergency management and hazards mitigation planning, community wildfire protection plan, CERT.
- Innovations: Regional education program, Shenandoah Valley Project Impact, has been creating whole-community partnerships for mitigation since 2000.
- Community Characteristics: Western Virginia valley between Allegheny and Appalachian Mountains, farmland with 5 counties and 16 historic communities such as Lexington, Staunton, and Harrisburg. Main hazards: floods, tropical systems, winter storms, thunderstorms, and tornadoes.

2. Charlotte/Mecklenburg, North Carolina

- Lead Representative: Tim Trautman, Flood Mitigation Program Manager
- Secondary Representative: Sharon Foote, Storm Water Public Information Officer
- Stakeholder Groups Involved: Local fire-responder agencies including fire and emergency management departments.
- Primary Projects: Floodplain buyouts and an extensive program to rank risk for each property and recommend mitigation techniques on a property-by-property basis. Innovations: Programs for floodplain buyouts, public information, and risk ranking.
- Community Characteristics: Progressive community with flooding problems; more than 4,000 homes and businesses in the Special Flood Hazard Area.

4. Grays Harbor County, Washington

- Lead Representative: Chuck Wallace, Deputy Director of Emergency Management
- Secondary Representative: Roger Faris, earthquake mitigation volunteer, Seattle Emergency Management
- Stakeholder Groups Involved: Wide spectrum of public, private, and nonprofit agencies, groups, and individuals.
- Primary Projects: Building collaborative team, addressing many issues including wildfires, earthquake, tsunami, flooding, and planning for emergency management, hazard mitigation, and recovery planning.
- Innovations: vertical evacuation planning for isolated island communities with severe tsunami risk.
- Community Characteristics: West coast of Washington State, 150 mi south of Seattle. County includes 50 islands, 74,000 people, 2 tribes, 9 cities. High tsunami and flood risk, two earthquake zones, Cascadia earthquake subduction zone, a volcano, two main rivers and hundreds of smaller ones impacted by logging problems, landslides, and major wave action. High unemployment, low education rates, growing Hispanic population.

5. Hillsborough County, Florida

- Lead Representative: Gene Henry, Mitigation Manager
- Secondary Representative: Nancy Witty, community consultant
- Stakeholder Groups Involved: Hillsborough County, Florida Dept. of Community Affairs, FEMA
- Primary Projects: Resilience projects include surge markers, stronger codes, recovery planning
- Innovations: Recovery plan identifies priority redevelopment areas' for incentives after a disaster
- Community Characteristics: Florida western coast, urban coastal county; flood & hurricane risk

5. Jefferson County, West Virginia

- Lead Representative: Barbara Miller, Director, Homeland Security Department
- Secondary Representative: Terri Mehling, Deputy Director, and John Sherwood, Steering Committee Chair



- Stakeholder Groups Involved: 100 established partners include businesses and chamber of commerce, nonprofits, academics, farm community, federal agencies.
- Primary Projects: Many mitigation projects along the rivers, including elevations, relocated mobile home parks, some floodplains turned into parks. Work groups include counter-terrorism, public awareness and training, animals in disaster, and vulnerable populations.
- Innovations: Combines emergency management, homeland security, and a long-established and broad partnership program begun through Project Impact. Website and a popular monthly newsletter that goes to about 3500.
- Community Characteristics: About 58 miles from DC, rural farmland, home to Harpers Ferry National Park at confluence of Potomac and Shenandoah Rivers. Major 1996 flood and 2012 derecho (windstorm). Threat of terrorism, severe storms, winter storms.

7. Pasadena, Texas

- Lead Representative: Daya Dayananda, Assistant Director of Public Works
- Secondary Representative: Luz Locke, Engineering Tech
- Stakeholder Groups Involved: Schools, nonprofit organizations, many government agencies, private businesses, industries, foundations.
- Primary Projects: Working on more than \$35 million in recovery projects after Hurricane Ike (2008). Resilience projects and recovery plan.
- Innovations: Extensive public involvement in planning, outreach, and education, Recovery planning, and homeland security project to harden significant buildings.
- Community Characteristics: A coastal community in Harris County south of Houston, prone to hurricanes, floods, tropical storms. Working on resilience. 150,000 residents, 62% Hispanic, 70% low to moderate income. Home to Armand Bayou Nature Center. Pasadena was damaged heavily during Hurricane Ike in 2008, bounded back with federal recovery assistance recovery including \$35 million over past 3 years for structural improvements and mitigation. Also energy efficiency projects with DOE and MS4 storm sewer system.



Pasadena's Daya Dayananda

8. Rockford, Illinois

- Lead Representative: Marcy Leach, Public Works Engineering Operations Manager.
- Secondary Representative: Brad Holcombe, Stormwater and Environmental Program Manager
- Stakeholder Groups Involved: HUD, FEMA, Rockford Metropolitan Agency for Planning, Winnebago County, ILDCEO, many public and private organizations
- Primary Projects: Flood mitigation projects totaling \$15million to date, NPDES compliance, sustainability project (a pilot project with FEMA for regional stormwater master planning), energy efficiency projects such as wind, solar, hydropower and building retrofits.
- Community Characteristics: Midwest community that is divided by the Rock River and called the City of Gardens and the Forest City. Primary natural hazard concerns are flooding, microbursts/tornados and blizzards. Rockford covers 64 square miles and is home to approximately

152,000 residents, 3 major hospitals, 2 entertainment venues, several museums, many public and private schools, and the Chicago/Rockford International Airport.

9. Tulsa, Oklahoma

- Co-Lead Representatives: Tom Bennett and Sheryl Siddiqui, Tulsa Partners volunteers; and Bob Roberts, Tulsa Partners President and Tulsa Public Schools Emergency Manager
- Stakeholder Groups Involved: Many private businesses, nonprofit agencies, government entities, and institutions, such as Home Builders Association, Tulsa Public Schools, Community Service Council, State Farm Insurance, City of Tulsa, and others.
- Primary Projects: Language and Culture Bank (multi-cultural volunteer group who foster education across ethnic group, languages, disabilities, etc.). Disaster-Resilient Business Council (encourages contingency planning for small businesses, nonprofits, etc.). Millennium Center (education and advocacy for living safely and in harmony with nature).
- Innovations: Considerable success in implementing an aggressive floodplain management program, including stern regulations, extensive planning, broad public education, and capital projects including floodplain clearance. Collaborative approach, including very broad-based hazard mitigation planning that cuts across nearly all government and nonprofit agencies.
- Community Characteristics: City of 400,000. Rolling terrain, major river and flashy tributary streams. Significant risk from tornadoes, high winds, extreme temperatures, hail, and industrial/transportation related threats.



Tulsa is working to become a resilient community.

10. Vermont

- Lead Representative: Mike Kline, State Rivers Program Manager, DEC Watershed management Division, Agency of Natural Resources
- Secondary Representative: Ned Swanberg, Vermont RiskMAP Coordinator
- Stakeholder Groups Involved: State agencies, community leaders, federal agencies, environmental groups, business community.
- Primary Projects: Working to integrate water quality, hazard mitigation, floodplain management and NFIP into a unified program, with a focus on community understanding
- Innovations: Integration of river science and river protection into other issues. High level of collaboration, working to change people's relationship to water resources.
- Community Characteristics: Vermont has a significant river erosion hazard, now working to understand the science to integrate it into river management. Building interactions with federal agencies to build an incentive-based program with communities around the state. Three federally declared disasters last year, including TS Irene that devastated half the state.

These ten communities will be represented on a Steering Committee for the first two years of the RNN, which will guide the activities of the network as further communities are added. Further information on these communities can be found within the Community Profiles Appendix.

The vision of RNN is that it will be an open network; however, there is a need for a core group to establish the network initially. Other communities are welcome to participate in RNN discussions via web forums such as Facebook and are welcome to access materials created by the RNN. In the future, they may join RNN as full network participants. Additional communities also may be invited by a currently participating community as a sister community.



Advisory Team members Shirley Laska and Kristina Peterson with facilitator Alessandra Jerolleman, in Colorado workshop, 2012.

B. Blue Ribbon Advisory Team

The Advisory Team will consist of national experts, representing many agencies and organizations, to serve as resource advisors to the network, when needed. The RNN communities can turn to the Advisory Team for suggestions and feedback as needed. Additionally, Advisory Team members may make webinar presentations to the communities based upon their areas of expertise and may visit the sites near them.

Charter members include:

- Bill Becker

Affiliation: Natural Capital Solutions

Areas of Expertise: hazard mitigation, sustainability, energy conservation

- Bill Hooke

Affiliation: American Meteorological Society

Areas of Expertise: meteorological policy and practice

- Bob Freitag

Affiliation: University of Washington

Areas of Expertise: hazard mitigation and floodplain management

- Cynthia Palmer

Affiliation: Federal Emergency Management Agency

Areas of Expertise: federal policy and local practice, hazard management



NHMA President
Ed Thomas

- Ed Thomas

Affiliation: Natural Hazard Mitigation Association

Areas of Expertise: law, floodplain management and hazard mitigation

- Dennis Mileti

Affiliation: Colorado University

Areas of Expertise: risk communication and hazard management

- Dick Krajewski

Affiliation: Natural Hazard Mitigation Association

Areas of Expertise: community organizing, developing social resource mapping and networking, adoption of innovations, participatory action research and problem-solving, adult and community education, volunteer management.

- Elaine Enarson

Affiliation: Independent Scholar

Areas of Expertise: gender issues in disaster risk reduction

- French Wetmore

Affiliation: French & Associates

Areas of Expertise: floodplain management, Community Rating System, mitigation planning, floodproofing, public information programs

- Gavin Smith

Affiliation: University of North Carolina, Center for the Study of Natural Hazards & Disasters

Areas of Expertise: hazard mitigation planning

- Jane Kushma

Affiliation: Jacksonville State University

Areas of Expertise: emergency management

- Jim Schwab

Affiliation: American Planning Association

Areas of Expertise: planning for risk management and education

- JoAnn Howard

Affiliation: H2O Partners

Areas of Expertise: insurance, floodplain management, hazard mitigation planning

- Juliette Hayes



Rockford's Marcy Leach.

Affiliation: Federal Insurance and Mitigation Administration

Areas of Expertise: hazard mitigation and management

- Kristina Peterson

Affiliation: University of New Orleans, Center for Hazards Assessment, Response and Technology

Areas of Expertise: community resilience

- Lincoln Walther

Affiliation: CSA International Inc.

Areas of Expertise: hazard mitigation and recovery planning

- Lynne Carter

Affiliation: Southern Climate Impacts Planning Program

Areas of Expertise: climate adaptation

- Margaret Davidson

Affiliation: National Ocean and Atmospheric Administration

Areas of Expertise: national and local policy in mitigation and management

- Matt Campbell

Affiliation: Federal Emergency Management Agency

Areas of Expertise: disaster recovery

- Sam Riley-Medlock

Affiliation: Association of State Floodplain Managers

Areas of Expertise: floodplain management and law

- Shirley Laska

Affiliation: University of New Orleans, Center for Hazards Assessment, Response and Technology

Areas of Expertise: community involvement, planning, and management for risk reduction



Planning team: Tim Lovell, Ann Patton, Matt Campbell, Juliette Hayes, Alessandra Jerolleman.

C. Facilitators

NHMA is facilitating the RNN using a project team that includes the following individuals: Alessandra Jerolleman, NHMA Executive Director; Tim Lovell, NHMA Secretary & Tulsa Partners Executive Director; and, Ann Patton, NHMA 2nd Vice-President. NHMA will also engage volunteers from throughout NHMA's broad national membership base, as needed.

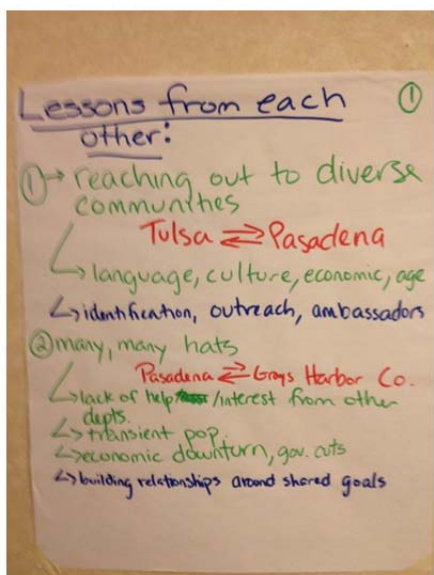
D. Partners

The founding national agency partner is FEMA and, within FEMA, the Federal Insurance and Mitigation Administration (FIMA). FIMA's liaison to RNN is Juliette Hayes.

NHMA and RNN are seeking additional collaborating partners who could provide technical assistance and other resources to the communities. The Steering Committee has decided to reach out to the following:

- National Oceanic and Atmospheric Administration (NOAA)
- Voluntary Organizations Active in Disasters (VOAD)
- UNISDR
- International City-County Management Association (ICMA)
- SCIPP
- American Public Works Association (APWA)
- Federal Alliance for Safe Homes (FLASH)
- National Association of Counties (NACO)
- American Planning Association (APA)
- National Emergency Management Association (NEMA)
- Association of State Floodplain Managers (ASFPM)
- Department of Transportation (DOT)
- Federal Highway Administration (FHWA)
- National Storm Shelter Association (NSSA)
- International Association of Emergency Managers (IAEM)
- American Red Cross (ARC)
- Social Entrepreneur Association
- River Network
- Firewise
- Insurance Institute of Business and Home Safety (IBHS)
- Business Groups
- American Society of Public Administration (ASPA)

V. RNN Goals & Objectives



Goal 1: Establish a Peer-to-Peer Sharing Network that will:

Objective A: Lead to faster, better, cheaper mitigation and recovery

Objective B: Increase community resilience

Objective C: Support peer learning

Objective D: Provide inspiration and emotional support to network members

Objective E: Create tools and resources for member communities

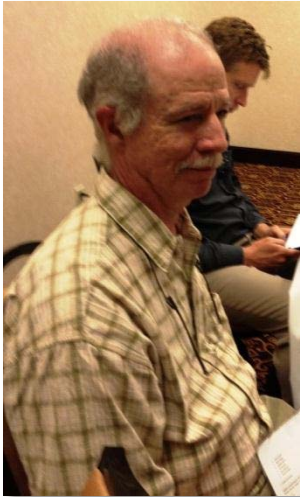
Objective F: Facilitate formal and informal communications between communities

Objective G: Allow communities to assist each other in planning, recovery and day-to-day efforts

Goal 2: Create a mechanism for informing public policy

Objective A: Advise NHMA

Objective B: Advise national policy efforts such as FIMA's mitigation model and PPD8



Vermont's Mike Kline.

VI. Operational Context

Over time, RNN may come to function in multiple contexts as participants develop relationships, both short- and long-term. The three primary contexts for RNN will be routine interactions (day-to-day communications both formal and informal), post-disaster (assistance between communities following an event), and pre-disaster planning (assistance between communities in developing mitigation programs and planning for recovery). Initially RNN will function primarily through routine interactions, but will move toward the remaining two contexts and meaningful relationships over time.

A. Routine interactions

1. RNN communities will interact both formally and informally with each other, as well as with the Advisory Team.
2. RNN community representatives may serve as grassroots advisors to policy and program developers at all levels.

B. Post disaster

1. RNN communities are willing to assist other communities following a disaster. This may occur through informal mechanisms, such as phone calls for advice, or through a more formal process in partnership with FEMA or directly between participants.
2. RNN member communities are willing to participate in brief visits to impacted communities, as available resources allow.
3. Advisory Team members may be available to provide technical assistance following a disaster.

C. Pre-disaster planning for recovery

1. RNN member communities that have experienced a particular event can be an excellent resource to those who are planning for recovery.
2. Some member communities have plans in place, while others do not.

3. Advisors and partners may be of assistance in giving support and advice in planning for recovery and during post-disaster recovery.

VII. Communication Strategy

RNN will rely on both formal and informal communications mechanisms, depending upon the needs of the communities. Currently, RNN communities are using the following tools:

- Conference calls
- Email
- RNN website
- Facebook
- In-person meetings
- Informal visits among members and Advisory Team members
- Distance learning

In addition to communicating with each other, RNN communities will also use public venues to share some resources and information with other communities and stakeholders.

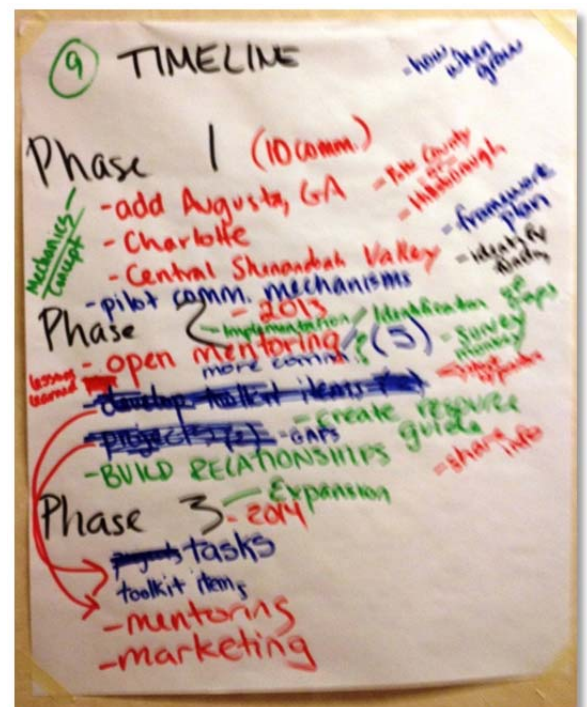
RNN will consider additional communications mechanisms such as:

- Web directory
- Document-sharing software
- Discussion forums organized by questions
- Compiling best practices and guides

VIII. Timeline

A. Phase 1 – May to December 2012

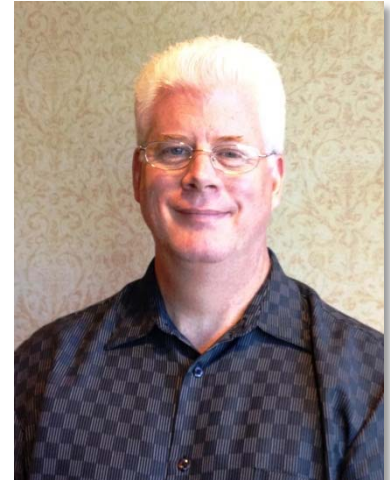
1. Convene charter members, using email, conference calls, Facebook
2. Organize Blue Ribbon Advisory Team of national experts as resource advisors when needed
3. Convene Colorado planning workshop: NHMA workshop July 17-18 and RNN workshop July 19
 - Develop RNN Framework Plan
 - Identify primary communications mechanisms
 - Identify toolkit components
4. Establish and test pilot communications mechanisms
5. Identify potential sources for additional funding



- Submit framework plan to FIMA, based on results of RNN conference calls, July 19 workshop, etc.

B. Phase 2 – 2013

1. Build relationships
 - Share information
 - Create a resource guide
2. Identify gaps
 - Use survey monkey
 - What do communities really need?
3. Consider potential expansion
 - Invite additional collaborating partners, such as USACE Silver Jackets, FEMA Recovery, NOAA, HUD, EPA, and others.



Chuck Wallace of Grays Harbor.

C. Phase 3 – 2014

D.

- Identify potential pilot projects (best practices, recovery, training, etc.) and seek funding.
- Begin working on toolkit items as possible
- Market and expand
- Develop mentoring function

IX. Expansion Options

A. Pilot projects

The following are examples of potential projects, all dependent on funding.

1. Community exchanges after disasters. Communities hit by disaster might invite visiting mentors from places that have survived disaster.
2. Best practices as booklet, book, webinars, etc. RNN community experiences could be distributed in case studies and best practice stories, books, booklets, presentations, video accounts, and other ways.
3. Recovery planning and sharing as pilot project. Charter RNN communities could be funded to engage in pre-disaster planning for recovery, producing living plans to augment hazard mitigation plans, emergency operations plans, and similar documents.
4. Adaptation planning and sharing.

5. Innovative local-state-federal teams (i.e., cooperation with Silver Jackets). An example of an innovative pilot projects is an information and collaboration programs under development by Tulsa with the Oklahoma Silver Jackets program, which will mobilize federal, state, and local teams.
6. Training for resilience and recovery planning/management. Training modules could focus on public engagement, recovery planning, resilience, etc.
7. Toolkit. The creation of a toolkit to include resources on the following:
 - Identification of stakeholders and outreach models
 - Guidance regarding interactions with the media, both initiated and non-initiated
 - Working with competing interests
 - Recovery planning
 - Historic resources

B. Additional partners

Additional resource partners can be invited to participate, including agencies, businesses, and nonprofits.

C. Additional RNN Communities

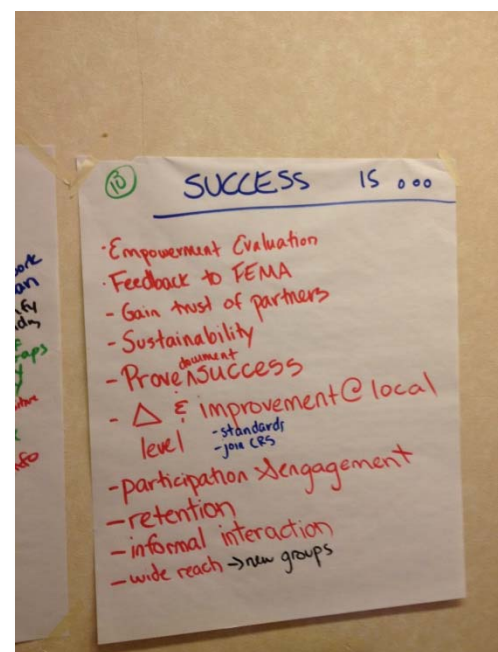
After the initial pilot period, when the project will be limited to the ten charter RNN communities, it is anticipated that the RNN program will be expanded to include additional community members.

X. Success Measures

A. Measures

The RNN communities have defined the success of the network as:

1. Gaining the trust of partners
2. Sustainability of the network
3. Provision of feedback to FEMA and other federal partners
4. Levels of participation and engagement
5. Informal interactions
6. Proving and documenting success
7. Sustainability
8. Change and improvement at the local level
 - Standards
 - Join CRS
9. Wide reach to new groups



B. Measurement tools

Some tools to measure success are:

1. Empowerment evaluation
2. Measuring retention
3. Measuring network reach
4. Measuring levels of participation and engagement

XI. Budget and Funding Options

Several options exist for ensuring sustainability of the network, including the following.

Option A

NHMA applies for and manages funds for network management, training, toolkit development, seed grants to communities, etc.

Option B

RNN members apply for funds for local projects within the RNN framework, preferably including some funding for sharing results/process with other communities (i.e. travel funds to annual RNN meeting).

XII. Conclusion

The Resilient Neighbors Network framework plan, developed by RNN charter members, can provide guidance for testing and growing the peer-to-peer network to offer mutual support, education, and inspiration for communities working to become places that disaster-resilient places that are safe, sustainable, and disaster-resilient.



Peer sharing: Sheryl Siddiqui, Mike Kline, and Barbara Miller

Resilient Neighbors Network Community Profiles



Charter members, Resilient Neighbors



Seven charter members of the Resilient Neighbors Network met in Colorado, July 2012. Seated: Marcy Leach, Rockford, IL, and Sheryl Siddiqui, Tulsa, OK. Standing: Chuck Wallace, Grays Harbor County, WA; Daya Dayandanda, Pasadena, TX; Barbara Miller, Jefferson County, WV; Mike Kline, Vermont; Tom Bennett, Tulsa, OK.



Tom Malmay map.

**Resilient Neighbors
Network Steering
Committee
&
Natural Hazard
Mitigation Association
December 31, 2012**



In May 2012, NHMA convened a San Antonio workshop of local and state representatives to begin planning for Resilient Neighbors Network.

Resilient Neighbors Network Community Profiles

Contents

Introduction

Profile 1, Augusta, GA

Profile 2, Central Shenandoah Valley, VA

Profile 3, Charlotte-Mecklenburg, NC

Profile 4 – Grays Harbor County, WA

Profile 5, Hillsborough County, FL

Profile 6 – Jefferson County, WV

Profile 7 – Pasadena, TX

Profile 8 – Rockford, IL

Profile 9 – Tulsa, OK

Profile 10, Vermont

Summary Matrix, Resilient Neighbors Community Profiles

Introduction

This report contains one-page profiles on ten U.S. communities who are working to become disaster-resilient – safer, more sustainable, and better places to live.

In 2011 representatives of these ten communities were drawn together to work as a steering committee to establish a new “Resilient Neighbors Network,” a vehicle for peer-to-peer sharing of information and inspiration on their mutual journeys toward resilience.

The RNN Steering Committee was drawn together by the Natural Hazard Mitigation Association, a national group of people who support hazard mitigation and resilience. The Federal Emergency Management Agency supported the program, too.

These profiles provide thumb-nail snapshots of the towns and the work they are doing, compiled and published by NHMA to offer inspiration for other communities wanted to become more resilient.

Credits:

This report was prepared by the Resilient Neighbors Network Steering Committee and the Natural Hazard Mitigation Association, with support by the Federal Emergency Management Agency, the Federal Insurance and Mitigation Administration, and NHMA’s Blue Ribbon Advisory Team.

*Facilitators are NHMA’s Alessandra Jerolleman, Tim Lovell, and Ann Patton.
Report editor and photographer: Ann Patton.*

Published in 2012 by the Natural Hazard Mitigation Association, a national nonprofit group that supports reducing disaster losses through hazard mitigation.

NHMA’s Resilient Neighbor Network links together grassroots people working to create sustainable, safe, and resilient communities.

For more information, see NHMA.info and ResilientNeighbors.com.

Leaders mobilizing 'whole community' to protect and preserve Augusta, Georgia

Augusta, Georgia, plans to be ready long before the next disaster hits that Southern community. That's why Augusta is going "all-out" to engage in planning, planning, and -- just to be on the safe side -- more planning.

Leaders know disaster losses can be curbed by planning, preparedness, and prevention measures (better known as "hazard mitigation") and they know this kind of endeavor needs everybody involved, not just the leadership within the community. So Augusta's goal is involve the entire community (every single person) in reducing long-term risk to human life and property from natural hazards.



Planning to be disaster-resilient

A few years ago, Augusta faced a daunting array of urban challenges, including sprawl, fragmentation of governments, and significant risks from floods, tornadoes, and other hazards, says Terri Turner, Augusta's Development Administrator. "To bring our community together, we formed very large planning and stakeholders committees representing city leadership, local agencies, and community-based organizations," Terri says. "Together they decided to completely rework our five-year Hazard Mitigation Plan. The goal was to produce a 'living document' to reflect the community's profile, present circumstances, and current and future needs."

Public involvement was the key. "The public was given many opportunities to be involved in the process. The plan reflects common goals of sustainability, community resiliency, economic vitality, and protection of the community, as a whole." Now, the plan is complete, but their work is far from over. The planners and stakeholders will spend the coming years building on experiences from the recently updated Hazard Mitigation Plan and continuing to work to make Augusta more disaster resilient.

"Augusta has learned that proactive community hazard planning and implementation save lives, reduce property loss, and minimize the social, economic and government disruptions caused by disasters," Terri says.

Building a safer community

"Augusta encourages homeowners to build safer, stronger and more resilient homes and businesses, with strong building, stormwater and floodplain management regulations", Terri says. To reduce disaster risks, Augusta supports floodplain acquisition, relocation, and retrofitting of existing vulnerable buildings.

Protecting nature, promoting sustainability

Additionally, Augusta takes pride in protecting its valuable natural resources, including the natural and beneficial functions of its vast array of wetlands, floodplains and sensitive areas.

The community has invested tremendous time, effort, and money into its prototype Greenspace Program, as well. The Central Savannah River Land Trust plays an important role in protecting sensitive places, which provide needed floodplain storage, recreation, and beloved amenity areas for the community's citizens. Phinizy Swamp Nature Park conducts research and provides vital education and wetlands programs for the community. Finally, a new sustainable development manager has been recently hired to direct a number of sustainability initiatives community-wide.

Resilience demands the "whole community" working together to protect each other.

Resiliency doesn't just fall into your lap. It takes the concerted efforts of a lot of "somebodies" doing a lot "somethings" right.

It demands people with vision, stamina, and purpose.

It involves leadership, good management, sustainability, and the courage to act in the community's best interest.

Terri L. Turner, AICP, CFM



A common purpose

The goal of all of this planning is to promote processes, policies and strategies that lend support to a resilient, economically vibrant, sustainable community, better prepared to respond to hazardous events and dedicated to the success of all citizens of and visitors to Augusta.

For more information: Terri L. Turner, Development Administrator, or John Paul Stout, Sustainability Manager; Augusta Planning & Development, 706-821-1796; or the EMA Director at 706-821-1155

Central Shenandoah Valley, Virginia Going the 'Extra Mile' for All 21 Jurisdictions



When it comes to Central Shenandoah Valley and its natural hazard and emergency management planning, there is a lot of ground to cover -- literally. Located in the western part of Virginia, Central Shenandoah covers five counties, five cities, and eleven towns.

This regional area has gone all out to make sure that it can 'weather' any storm. Rebecca Joyce, Senior Planner with the Central Shenandoah Planning District Commission, has been at the wheel for 15 years helping steer this regional area toward becoming more resilient. "We all help each other," Rebecca says, "because everyone in this region has to be in it together to remain resilient, thriving, and disaster resistant."



Thinking BIG

The Central Shenandoah Valley region covers a vast amount of area that is home to several types of natural hazards, so its people can't afford NOT to plan for the threat of natural hazards.

"We're in the heart of the Appalachian Mountains," Rebecca says, "bordered by the Allegheny Mountains to our west and the Blue Ridge Mountains to our east. Because of the mountains and the rivers that run through our communities, our main threats are flooding, tropical systems, and winter storms. But we're also prone to severe thunderstorms and tornadoes."



Rebecca Joyce

These hazards are all the more reason for the valley to work on its All Hazards Regional Mitigation Plan. Planning isn't anything new to Central Shenandoah; several communities are also working on Emergency Operations Plans.

Throughout Rebecca's time with CSPDC, she's also been involved in flood mitigation projects through FEMA's Hazard Mitigation Grant Program, plus disaster preparedness and mitigation education through their regional education program.

Central Shenandoah was a Project Impact community, through a former FEMA program. "Project Impact is still moving along and going strong since we started with a seed grant in September of 2000 - though on a smaller scale with volunteers," she said.

Now the region has undertaken a Community Wildfire Protection Plan, a first for Virginia. The large scope of the region, covering many cities, counties and towns, means there are always major planning efforts underway. Each September the region holds a Disaster-Resistant Forum, when all partners help Central Shenandoah evaluate what planning working well, then disband what's no longer effective.

"Central Shenandoah has a plan -- actually several plans -- to stay ahead of whatever hazards head our way," Rebecca says.



Training through CERT exercise.

Helping Hands from All Walks of Life

Central Shenandoah practices collaborative planning and emergency management, with high involvement of volunteers and partners. "We work every day with wonderful volunteers who are willing to give their time in order to ensure that their neighborhoods and communities are kept safe and disaster resistant," Rebecca said.

Central Shenandoah Valley also has the help of several agencies and schools as well as a very active CERT (Community Emergency Response Team) to assist them in all-hazard planning efforts. "We realized that some people go to local libraries for information in the aftermath of events so we reached out to them" said Rebecca. And reached out they did. When Central Shenandoah reached out, the community gave back.

Central Shenandoah has also enlisted the help of its partners in local governments, human service organizations, scout programs, after-hour school programs and even universities such as James Madison. The Virginia School for the Deaf and Blind and the Woodrow Wilson Rehabilitation Center have been very helpful in times of need.

Reaching out to special needs populations doesn't just entail making sure evacuation is done properly or that all are accounted for. Everyone has a place to help in Central Shenandoah. Disability doesn't impact the ability to help and they've found many volunteers who are more than willing to offer assistance and are looking for a way to help.

Hazard mitigation & preparedness

Central Shenandoah Valley isn't just putting pen to paper when it comes to planning. Rebecca recalls in her very first mitigation project, the region acquired, relocated, or elevated 53 houses in a small town at the confluence of the James and Maury Rivers. Today the area makes sure its residents are up to date on different hazards known to the area such as winter storms. CSPDC publishes preparedness resources for citizens and residents to browse and offers information to stay aware through the Central Shenandoah Planning District Commission website.

Learn more

For more information about what Central Shenandoah Valley is working on next, go to: <http://www.cspdc.org/>

Building a Flood-Resilient Future

In the mid 1990s, Charlotte was hit hard by widespread flood damage twice in three years. Residents wanted solutions and these floods provided a crucial opportunity to change Charlotte-Mecklenburg's future. Guided by strategic principles and solid planning, Charlotte-Mecklenburg implemented innovative solutions. The result: protection of lives and property and restoration of the natural functions of floodplains, two key elements of resiliency.

Creating a vision and building partnerships

"Gaining support from local elected officials and community partners like



Realtors and developers was essential to change course and create a more sustainable future," says Tim Trautman, Charlotte-Mecklenburg

Storm Water Services' flood mitigation program manager. Charlotte began updating its floodplain maps, becoming FEMA's first Cooperating Technical Partner east of the Mississippi River and later the

first local partner to process Letters of Map Change. As part of remapping, Charlotte-Mecklenburg created Future floodplains, based on full buildout conditions, to account for anticipated watershed changes. "Continuing to use FEMA's existing conditions flood insurance maps to regulate new construction would only continue the cycle of flooding and rebuilding for generations to come," says Trautman. Charlotte-Mecklenburg's Future floodplains are incorporated into adopted land use plans and all new construction meets this higher standard. In addition, Charlotte has adopted policies that detain and treat larger amounts of storm water runoff, preserve water quality buffers along streams and lakes, and promote greenways along floodplains.

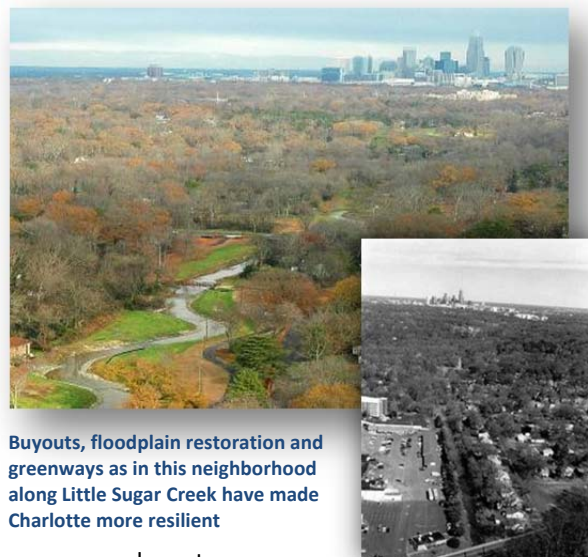
Because flash flooding is very common in Charlotte-Mecklenburg, another resilience strategy provides advanced flood notification to emergency responders. Charlotte-Mecklenburg created a one-of-a-kind Flood

Information & Notification System (FINS). This cooperative partnership with the US Geological Survey uses a dense rain and stream gauge network. Dozens of times in its 10 years of existence, FINS has helped put responders and citizens in a better position to prevent damage and get out of harm's way.



torn down, moving more than 575 families out of the regulated floodplain. Charlotte-Mecklenburg has implemented three local "Quick Buy" programs that accelerate plans to buy damaged structures immediately after a flood. The voluntary sales don't involve federal funding or the time-consuming FEMA grant process, reducing the acquisition costs and providing mitigation in a matter of months.

For more information: visit
<http://stormwater.charmeck.org>



Buyouts, floodplain restoration and greenways as in this neighborhood along Little Sugar Creek have made Charlotte more resilient



Building resilience before and after disasters

"Creating and maintaining a flood mitigation plan, then taking action to reduce risk is critical" says Trautman. Most of Charlotte-Mecklenburg's flood-prone homes and businesses were built before floodplain mapping. With a combination of federal, state, and local funds, more than 250 high-risk buildings have been purchased and

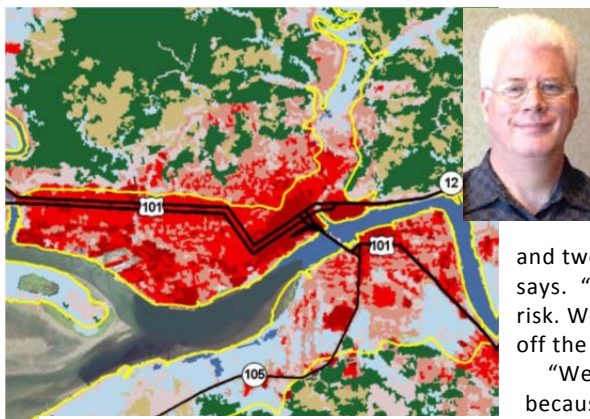
Key results in Charlotte's journey toward increased flood resilience:

- *Charlotte is a CRS Class 5 community.*
- *Charlotte's population surged by 32% while the number of significant rain events increased by 69%. Yet, overall damage has decreased by 36%.*
- *Voluntary buyouts avoid an estimated \$300 million dollars in future flood losses.*



Preparing for the worst on the Pacific rim in Grays Harbor County, Washington

Grays Harbor County, WA, is situated along the beautiful Pacific Northwest coastline, halfway between the cities of Seattle and Portland. Grays Harbor has it all: beautiful forests, vast beaches, small towns, surfing, fishing, and hiking— and a broad array of hazards, from earthquakes to tsunamis that challenge the county's emergency management capabilities.



The solid yellow line marks the tsunami inundation zone for Aberdeen, WA, one of nine Grays Harbor cities. Colors show land uses. Source: Washington State Dept. Natural Resources, Grays-

"Preparing for disaster is a continual process," says Chuck Wallace, Deputy Director of Emergency Management, "What we all need to understand is the physical, emotional and psychological toll a disaster provides for everyone, both the directly impacted and their extended families throughout the country. Here in Grays Harbor, we must prepare for everything."

Working to keep people safe

Grays Harbor County includes more than 74,000 residents, with nine cities and two tribal nations. We also have a growing Hispanic minority population," Wallace says. "We are working to mitigate and prepare for a significant earthquake and tsunami risk. We have two inland fault lines, and the Cascadia Earthquake Subduction Zone looms off the coast.

"We also prepare for volcanic activity with Mt. Rainier within sight of the coast and because of past impacts caused by the eruption of Mt. St. Helens. Many large rivers and streams add to our flooding problems, and the coastal areas are frequently the scene of wind gusts between 50-80 mph and 35-40 foot waves during the severe storm months that occur in the winter. Much of our critical infrastructure is located within a tsunami inundation zone. "

Tsunami – nowhere to run away

Grays Harbor faces a sobering question: What can be done to prepare for the possibility a tsunami could occur with no more than a 20-minute warning, impacting areas miles inland, leaving thousands of residents and tourists stranded far from high ground. "Two cities face the possibility of being overtopped with numerous tsunami waves," Wallace says. "We're faced with the fact that we'll be on our own for some time."

In addition to extensive emergency management and evacuation planning, Grays County is also developing what Wallace thinks is the nation's first "vertical evacuation" tsunami building. If people can't get away by running inland, the next best thing is to go *up* – in a safe-building type design, engineered to withstand the punishing ocean waves and effects of subsidence, liquefaction and earthquake.

"We have two school districts in tsunami inundation zones. After much planning, a building design is being developed that could provide safe haven for 700 students and faculty, plus up to 500 community members. We've been busy writing the parameters to build and operate the structure – adding pilings and accounting for wave and earthquake impacts. It's a huge undertaking."

Becoming a resilient community

Pulling a fragmented community together is no easy task. Across the county, all organizations, leaders and local citizens need to cooperate and participate to curb disaster losses. Maintaining a sustaining, recoverable community means pulling together numerous diverse issues, including hazard mitigation, environmental protection, disaster recovery, human, social and economic development, and citizen participation into a holistic community program.

"We're making progress," he said. This year, Grays Harbor County completed seven disaster planning exercises including two full scale exercises involving numerous partners, and he sees people learning to work together in a constructive fashion. "Educating, enabling, and working to maintain a safe, sustainable community in Grays Harbor County is both demanding and challenging and I'm grateful to NHMA and my peer communities in NHMA's Resilient Neighbors Network for all their help and support," Wallace said.



Source: VisitGraysHarbor.com

For more information, call 360-249-3911 or see GHCDEM@co.grays-harbor.wa.us and www.VisitGraysHarbor.com.

Tampa area planning now to survive & recover from next hurricane

When the next hurricane comes toward Tampa, Gene Henry will be as ready as humanly possible.

As hazard mitigation manager for Hillsborough County, FL, which includes Tampa, Henry has been working for years with his community to reduce the death, damage, and destruction from storms and other disasters.

Other vulnerable coastal areas can learn a lot from the forward-thinking Hillsborough County, which is working to become a disaster-resilient community.

Evacuation Zones and Surge Markers

Hillsborough County communities have identified five evacuation zones, all subject to storm surge.

“Coastal storm surge could extend as far as three miles inland,” Henry said, “and could be as much as 13 to 17 feet above ground level. That’s high enough to completely cover a one-story house.”

To demonstrate what this means, Hillsborough County has posted 30 storm surge signs in prominent locations in areas of its jurisdiction with major storm surge risk. The signs are part of an aggressive public education campaign about preparedness and hazard mitigation.

Building codes and safer buildings

Hillsborough County encourages homeowners and builders to build safer, stronger homes and businesses. “We encourage people to install hurricane straps to secure their roofs and walls,” Henry said. “Storm shutters can prevent damage from flying debris. We also recommend elevating the main breaker or fuse box above flood levels, keeping drains clear, maintaining flood insurance in floodprone areas, and developing personal preparedness plans including business continuity plans.”

Priority Disaster-Recovery Areas

Hillsborough is planning now for the community’s recovery from its next big disaster.

“As we watched New Orleans struggle with very difficult decisions after Hurricane Katrina, it was clear to us that we need to pre-plan how we will recover during the terrible times after a disaster,” Henry said. “Our plan identifies how our community will redevelop and recover. It emphasizes seizing opportunities for building back better and improving our community.” This landmark plan recognizes that there will not be enough resources to redevelop all areas simultaneously, so it targets Priority Redevelopment Areas, in areas with the least risk, where rebuilding will be incentivized for sustainable and holistic recovery. They will also target resiliency for Vulnerable Priority Redevelopment Areas projects to encourage safe, sustainable recovery.

For more information: See <http://www.hillsboroughcounty.org/index.aspx?NID=611>



Hillsborough County, Florida, encourages hazard mitigation, including elevation of homes in safe sites, planning, and public education. -HillsboroughCounty.org

Jefferson County, West Virginia

Getting down to business on disaster losses

Jefferson County is all about business when it comes to protecting its citizens against natural hazards. Hazard mitigation is a well-established habit in this historic West Virginia county, which has been designated a *StormReady* community by the National Weather Service since 2004 and a CRS Community since 2006, currently at a Class 8.



Located just outside of the National Capitol Region, Jefferson County has plenty of challenges, including a threat of mass evacuation to the area according to Barbara Miller, Jefferson County's director of Homeland Security and Emergency Management (JCHSEM).

"Many natural hazards also impact our county, including flooding, wildfires, winter storms, droughts and derechos—which is why we take planning so seriously," Barbara said.

But Jefferson County isn't stopping at mitigation plans -- they're going all out to ensure that EVERYONE understands their job in emergency preparedness, too.

"Disaster preparedness, mitigation, continuity planning, and developing Memoranda of Understanding are serious business, and everybody has a role and a responsibility," she said.

One community, one voice, SO many partners



Jefferson County had a leg up on community and partnership involvement before it was considered the 'thing' to do. The JCHSEM partners with and has several committees and work groups operating within it.

Each month there is a partnership newsletter available via the internet that gets distributed to at least 3500 readers, where it is then forwarded to others. Jefferson County posts their upcoming training and disaster exercises within the newsletter along with special topics and meetings and events to keep the public informed.

"One of the most important lessons we've learned is to encourage whole community public involvement in everything we do. Our strength lies within our relationships," Barbara said.

Reaching Out to Vulnerable Populations

Jefferson County realized the need to consider vulnerable populations in its effort to mitigate and prepare for hazards and reached out to seniors and children at the Jefferson County Fair held in August. There were books available for senior citizens that were authored by seniors, Spanish language literature, and Flat Stanley and Flat Stella available to help children learn about disaster preparedness.

Hazard mitigation & preparedness

Barbara encouraged participants at the 2013 Jefferson County Multi- Jurisdictional All Hazards Risk Assessment & Mitigation Plan meeting to "think outside the box" as they updated their mitigation plans. It takes creativity and bold innovation to meet their challenges with limited resources.

Jefferson County undertook several mitigation projects along the Potomac and Shenandoah rivers to protect against flooding. These included acquisitions, elevations, and turning floodplains into open spaces where people have been relocated out of harm's way.

Exercise, exercise!

The county has also participated in several exercises in 2012 to increase readiness and continuity in the event of an emergency; these include the Jennings Randolph Lake Full Scale Exercise and the Jefferson County Continuity of Operations Planning TTX, to name a couple on their extensive list.

During the summer, Jefferson County also tackled educating children about disasters with their "Disaster Ready Kids Program 2012."



The rich heritage of Jefferson County, WV, dates back to the founding of our nation.



For more info see: <http://www.jeffersoncountywv.org/homeland-security.html?page=government/departments/homeland-security.html>

Pasadena, Texas, offers leadership to help define national practices of public information and planning

Pasadena, Texas, is a low-elevation city within the Houston metropolitan area with a population of 150,000. It's bounded by Clear Lake, Galveston Bay, and the Houston Ship Channel. It has long been familiar with the hazards of hurricanes, tropical storms, inland flooding, and storm surges from the Gulf, most recently being a victim of Hurricane Ike's wind damage and extensive flooding in 2008. But Pasadena is bouncing back with a broad recovery program, including \$35 million in grants for infrastructure. Pasadena is actively sharing its hard-won experience to help set the standard for effective public communication, community involvement, and floodplain management in urban environments. Dr. Daya Dayananda has his hands full as Assistant Director of Public Works and City Engineer. He has been working with the city of Pasadena for the past ten years in managing several different aspects of emergency management to continue the trend of disaster and hazard resistance.



Dr. Daya Dayananda
Assistant Director of
Public Works



PPI Committee Members

First things first

Pasadena is up for challenges. Just ask Dr. Dayananda and Luz Locke, the Environmental Services Coordinator for the City. In 2012 the two teamed up and presented their Program for Public Information (PPI) and participation at the Municipal Storm Sewer Separate System (MS4) Conference in Fort Worth; the National Flood Workshop in Houston; and the Association of State Flood Plain Managers (ASFPM) Conference in San Antonio; as well as during the CRS Presentation session at the Texas Floodplain Managers Association (TFMA) in Corpus Christi and the plenary session at the TFMA Fall Conference in Rockwall, Texas. Talk about getting serious about reducing or preventing flood losses. With the support of

Dr. Dayananda, Locke took the initiative to form a Public Information Committee in February 2012 and develop an associated program outline. Pasadena became the PPI model program for the CRS manual in the U.S., helped along by French Wetmore, CRS activity coordinator for the manual. After valuable input and commitment from the community's PPI committee members, the program was approved for adoption by Pasadena City Council in December 2012 with the strong support of Mayor Johnny Isbell. According to Dr. Dayananda, the objective of the Program for Public Information "is for the involved stakeholders to take back messages to their respective audiences concerning planning and activities related to emergency management. The PPI team includes stakeholders from different social and economic backgrounds." Pasadena is currently a community with a CRS rating of 7, and for each class that the community achieves, policy holders receive a 5 percent discount on flood insurance premiums.



A group of volunteers clean the park they adopted. Pasadena has 9 watersheds and close to 120 miles of open channel.

Committing to outreach, one location at a time

It's no secret that Pasadena puts 100% efforts to remain resilient. When Dr. Dayananda and his fellow emergency management workers and volunteers aren't hitting the road to present what being resilient truly means, they're setting the example at home. There are several "adoption" programs in the area where groups can adopt a highway, a street, a waterway, a trail-monitor bayous or mark storm drains -- all in the name of flood prevention and environmental mitigation. Pasadena's extensive outreach includes 23 annual educational projects with over 79 volunteer environmental groups that participate in this program.

Reaching out to everyone in the audience

Pasadena does its job well when it comes to reaching everyone who could possibly be in its audience of stakeholders. With a population that mostly speaks Spanish, Dr. Dayananda reiterated that all communications are bilingual. "This is important so that everyone understands what is happening." Determining what messages to deliver to which groups of stakeholders is just as important as the delivery. For example, when speaking with school-aged children, one of the messages in a previous presentation was "Leaving No Trace" when it comes to the environment. Other messages have included the importance of protecting the natural environment, water conservation and protection, pollution prevention measures for residents, and reducing runoff. Keeping the natural environment in pristine condition is just as important as mitigating hazards and may aid in the prevention of some hazards.

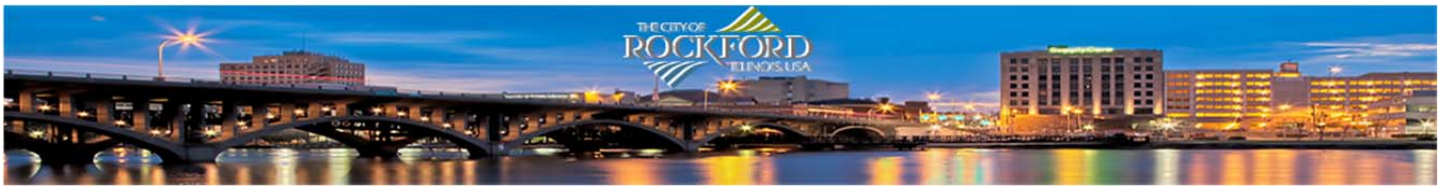


Environmental Services booth
at community events

Need partners? We've got them!

Pasadena has taken advantage of the helping hands that surround the community. The TEAM, or Pasadena's environmental organization, has partnered with local libraries, parks and recreation department, and several other businesses and nonprofit organizations to help them in different events and educational outreach programs. Ten years ago Pasadena started outreach program with powerpoints. Three years later they enlisted the help of teenagers and retirees. Now, whenever there is an opportunity, Pasadena reaches out to stakeholders with tailored messages to help them become and remain resilient.

For more information on Pasadena, e-mail: ddayananda@ci.pasadena.tx.us or llocke@ci.pasadena.tx.us



Rockford, Illinois: Growing *Forward* for Hazard Mitigation

Welcome to Rockford! With an area already over 64 square miles, the City of Rockford, Illinois, still has plenty of room to grow. How to grow and the extent of the growth has been an area of concern for many years.

As part of the Rockford Metropolitan Agency for Planning (RMAP), which covers Winnebago and Boone Counties, the city is working with RMAP to develop a Regional Plan for Sustainable Development. RMAP was one of the few agencies to receive a grant from HUD to create a 20-yr sustainable plan that will include components such as storm water master planning, energy efficiency, waste management, water resource management, and many other elements. The plan and data gathering are underway with a draft to be completed in 2013.



Marcy Leach

Resilience Takes Time...and Proper Planning

As part of RMAP's 2040 plan, one of its growth strategies is that "The region shall seek a coordinated growth strategy that enhances livability of neighborhoods, balances development pressure with infill development, promotes the agriculture economy, reduces greenhouse gas emissions, introduces walkable landscapes, conserves natural resources, and rejuvenates historical economic centers."

The City and its partners are well on their way to achieving this goal by planning and building walkable streetscapes and parks, studying the potential of wind and hydropower energy in the region, installing a solar field, studying greenhouse gas emissions, retrofitting buildings for thermal and electrical energy savings, and re-writing building codes for energy standards, says Marcy Leach, Rockford's engineering operations manager.

The City and its region are working together to promote these initiatives so the community can become more resilient to disasters and sustain itself throughout the changing times. Residents can also look to the city of Rockford's Emergency Preparedness homepage for tips issued by FEMA in terms of taking sustainability into their own hands when it comes to mitigating hazards.



Lifting Spirits While Rebuilding Against Natural Hazards

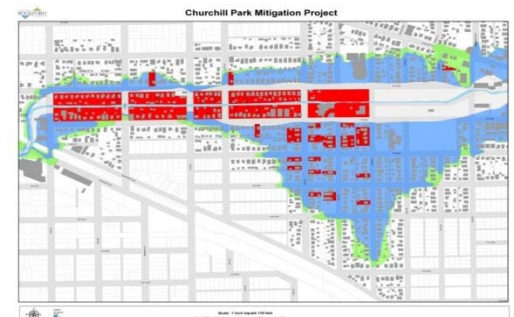
The City of Rockford and Rockford Local Development Corp in 2008 combined efforts to purchase 112 properties along Keith Creek that were inundated by declared disaster floods in 2006 through 2008. The city went outside the box and obtained a \$10 million line of credit to rescue the homeowners who were saddled with heavily damaged homes and no place to go. The cleared land provides community open space for a future linear park and community gardens.



Rockford worked with state agencies to obtain hazard mitigation grants and disaster recovery grants to repay the line of credit and demolish the homes. Five years later - the city of Rockford is still paying on the line of credit and still working hard to find grant money to help mitigate this Keith Creek floodplain. Though this process has been long, the Keith Creek/Churchill Park Neighborhood Association has not let that ruin their spirits.

This disaster and its remediation have brought the neighborhood closer together. They have come together to create community gardens and have banded together to bring their skate park back to life for the kids. This neighborhood hosted Rockford's National Night Out and worked together for a neighborhood tree lighting ceremony.

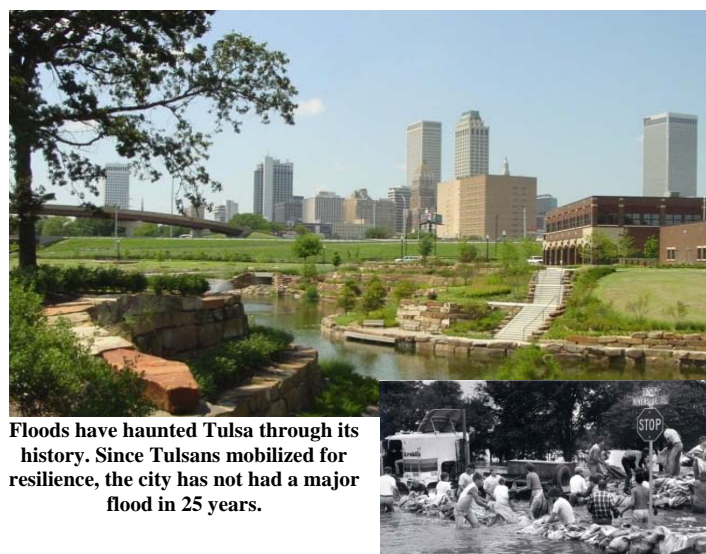
For more information on how Rockford combats hazards, check out the city of Rockford's Emergency Management website at: <http://www.rockfordil.gov/fire.aspx>



Tulsa builds partnerships to create a safe, resilient, sustainable community.

What would happen if a town, after suffering back-to-back disasters over several years, began to pull together to become more safe and sustainable? What if leaders, businesses, nonprofits, and citizens began to work together, as partners, in a fight to save their city from floods, tornadoes, and other calamities?

That's the story of what some call the dramatic "Tulsa Turnabout." In the 1970s and early 1980s, Tulsa had more federally declared flood disasters than any place else. After a 1984 flood, the town pulled together in an all-out fight to become disaster resilient, with stern regulations, clearance of more than 1,000 flooded buildings, millions of dollars for capital projects, and broad-scale public education. Now leaders can brag they haven't had a major flood in 25 years. Even more important, they've taken the lessons learned about collaboration, partnerships, and shared visions and used them to tackle other challenges and to building a stronger and more livable community.



Floods have haunted Tulsa through its history. Since Tulsans mobilized for resilience, the city has not had a major flood in 25 years.

Tulsa Partners



"We've learned to work together to confront many of our problems," says Tim Lovell, Executive Director of a nonprofit named Tulsa Partners, which is at the forefront of bringing people together to tackle disaster-related problems facing this Oklahoma town of 400,000. "When it comes to disasters, we really don't have turf wars these days, because we've seen over and over again that everybody wins when we work together."

A case in point is Tulsa Partners, a grassroots nonprofit formed in 2000 to carry on the Tulsa Project Impact program started with FEMA seed funding. "Tulsa Partners' mission is to mobilize all segments of the population to build a disaster-resistant, sustainable community," Tim says. "We do everything through partnerships – linking together government, businesses, nonprofits, and grassroots citizens. Together, we work to advocate, educate, plan, and empower on behalf of hazard mitigation; to develop mentoring relationships; to act as a clearing house for expertise and information; and to recognize and celebrate community successes."

Working to become resilient

Tulsa is on the long road to become what is often called "resilient" – the sort of place where people work together, throughout the town, to reduce the terrible toll of disasters, to bounce back quickly after trouble, and to build bridges of understanding that tie the town together.

Toward that end, Tulsa Partners is always on the prowl for opportunities to bring people together.

Innovation and opportunity

Tulsa Partners is currently focused on three core programs. The Disaster-Resistant Business Council, led by representatives of businesses and local, regional, and national organizations, works to help businesses survive emergencies and disasters. The Millennium Center for Green and Safe Living is a prototype program that ties together leaders and issues relating to the environment and hazards. And the Language and Culture Bank draws together people in diverse communities – multicultural and multi-lingual – to help vulnerable populations stay safe in times of trouble.



Above, Tulsa Partners' board of directors. Below, some of hundreds of Tulsans have worked over decades to create a resilient community, gathered in 2011 when NHMA presented its first "Tulsa Award" for the town's remarkable progress in disaster mitigation.

For more information: Tim Lovell, 918-632-0044, Tulsa.Partners@gmail.com, www.TulsaPartners.org.

Resilient Vermont searching for ways to preserve waterways and protect citizens

Water can be a friend or a foe in Vermont, a state renowned for breath-taking vistas and clear mountain streams. But as Tropical Storm Irene proved in 2011, nature's extremes can also bring flash flooding with high velocities, stream-bank erosion, and tremendous damage and danger to people and both public and private property. Irene spurred the Green Mountain State to work even harder to create a Resilient Vermont.



Otter Creek, Vermont

Protecting people and rivers

"We're building partnerships and integrating river science and river protection into the other program and issues of our state," says Mike Kline, manager of the state rivers and floodplain programs. "We want to create a unified approach that incorporates floodplain management, hazard mitigation, water quality protection, and community development all into a balanced program with a focus on community understanding."

"We're working hard to understand the science of rivers and to educate ourselves, our partners, and our communities. People are learning what they can do to reduce their vulnerability. We want to change our culture and the way our people relate to their rivers and floodplains."



Mike Kline



Hurricane Irene devastated Vermont.

Tropical Storm Irene

Three big storms, including Irene, devastated half the state in 2011. People are still picking up the pieces in the 225 towns directly affected and other areas throughout Vermont wrecked by raging flood waters. Now leaders are working not only to recover and rebuild but also to build back better and smarter – with more consideration for the long-term benefits of safer building and greater harmony with the natural world.

It starts with understanding

With greater understanding of stream dynamics, the state is working toward flood resilience. This work includes policies to manage streams, rivers, and floodplains toward dynamic equilibrium, to curtail new encroachments and remove existing ones when possible, and to protect

existing investments in a way that causes the least harm to others and the environment.



Vermont is the Green Mountain State.

Becoming a resilient state

The Vermont Legislature in 2011 created a Flood-Resilient Communities Program that includes incentive funding to encourage communities to make positive changes.

"We're encouraging communities to think about flood issues before disaster," Kline says. "We want them to embrace smart growth, limit sprawl and create more walkable communities with strategic growth. We're encouraging them to adopt regulations on development and limit new encroachments in river corridor upstream and downstream of community centers so that functioning floodplains may reduce risks to existing investments."

Vermont is a charter member of the Resilient Neighbors Network, a peer-to-peer sharing group established by the Natural Hazard Mitigation Association to link together communities working to become disaster resilient and sustainable.



For more information, see <http://www.vtwaterquality.org/rivers.htm>

SUMMARY MATRIX - Resilient Neighbors Community Profiles

NHMA – December 20, 2012

#	Community	State	Characteristics	Resiliency Projects	Partners	Funding Sources	Innovations	Sources / Contact Information
1	Augusta	GA	Inland Southern city; flood, tornado, & hurricane risk – overcoming urban problems of white flight and multi-jurisdictional strife.	Community engagement in planning, sustainability, floodplain management, green-space protection, & hazard mitigation. Making the most of natural, historic, and human resources.	Schools, neighborhoods, Central Savannah River Land Trust, Center for Urban River Research, Center for Ecological Restoration, FEMA, state. Local industry, businesses, nonprofits, environmental organizations, and citizen leaders.	PDM and HMGP grants; sustainability/resiliency grants; LEPC (Local Emergency Planning Committee); SPLOST (Special Purpose Local Option Sales Tax). Looking to implement a stormwater utility.	Involving whole community in planning processes to bridge diversity, overcome strife, and build community.	Terri Turner, Development Administrator, City of Augusta Planning & Development, 706-821-1796, turner@augustaga.gov . www.augustaga.gov
2	Central Shenandoah Valley	VA	Valley includes 5 counties, 5 cities, and 11 towns between Blue Ridge and Allegheny mountains. Hazards include floods, thunderstorms, tornadoes, winter storms.	Central Shenandoah Planning District Commission created and is maintaining a broad-based resilience program in partnership with many jurisdictions, including planning for preparedness and mitigation.	Was Project Impact community and has broad range of partners from business, homeowners, nonprofit and government agencies.	Scarce. Funding from local governments for CERT, small donations from private citizens and in-kind service from a dedicated team of volunteers currently keep overall program active.	Hazard mitigation projects including floodplain clearance. Preparedness including CERT and community-wide wildfire protection plan.	Rebecca Leigh Joyce, Senior Planner, Central Shenandoah Planning District Commission, 540-885-5174, Rebecca@cspdc.org . www.cspdc.org .
3	Charlotte-Mecklenburg County	NC	Forward-thinking Southern city-county with progressive resilience program. Flash flooding hazard.	Future-based stormwater and floodplain management includes advanced notification systems, land use plans, risk based mitigation planning, and buyouts that will save \$300 million in losses.	Cooperating technical partner with FEMA. Also partner strongly with Charlotte Realtor Association and development community leaders.	Charlotte-Mecklenburg Storm Water Utility and FEMA mitigation grant programs.	“Quick buy” can buy damaged structures immediately after a flood. Floodplain maps include future urbanization. Risk based assessments and digital mitigation plans	Tim Trautman, Flood Mitigation Mgr, 704-336-7357, Tim.Trautman@mecklenburgcountync.gov , http://stormwater.charmeck.org
4	Grays Harbor County	WA	Diverse coastal county with significant hazards including tsunami, earthquake, wildfire, volcanos, and flooding.	Working to create a unified emergency management and hazard mitigation program across many diverse jurisdictions.	Emergency management, leaders of many local and state jurisdictions, FEMA.	Local government funding with state and federal supplemental funds.	Vertical tsunami evacuation: creating a safe building where hundreds of residents can see refuge where high ground is too far away.	Charles T. Wallace, Deputy Director, Emergency Management, 360-580-2281, cwallace@co.grays-harbor.wa.us . http://www.co.grays-harbor.wa.us/info/DEM/Index.asp

5	Hillsborough County (Tampa)	FL	Florida western coast, urban coastal county; flood & hurricane risk.	Resiliency projects include surge markers and stronger codes, with a prototype incentives-based recovery planning program.	Hillsborough County, Florida Dept. of Community Affairs, FEMA.	Recovery planning grants from FL Dept. Community Affairs, FEMA.	Recovery plan identifies 'priority redevelopment areas' for growth incentives after a disaster. Model for maintaining community partnerships.	Gene Henry, Hazard Mitigation Manager, 813-307-4541, HenryE@hillsboroughcounty.org . http://www.hillsboroughcounty.org/index.aspx?NID=611
6	Jefferson County	WV	Rural West Virginia county a hour west of DC facing flood, wind, winter storm, terrorism, and other issues.	Working for more than a decade to build strong local team mitigating hazards including drought and 2012 <i>derecho</i> windstorm.	Dozens of active partners include local businesses, citizen leaders, nonprofits, and agencies at all levels of government.	Emergency Management Planning Grant (EMPG) and County Government budget.	Aggressive public outreach to vulnerable populations. Long-established newsletter with 3500 readers.	Barbara Miller, Director, Dept. of Homeland Security, 304-728-3290, bmiller@jeffersoncountywv.org . http://www.jeffersoncountywv.org/homeland-security.html
7	Pasadena	TX	Coastal community south of Houston, TX. Recovering from Hurricane Ike is 2008. Prone to floods, storm surge, winds.	Working to become resilient city with recovery and extensive mitigation projects after Ike, plus energy, wastewater, and environmental programs.	Harris County, DOE, EPA, FEMA, Homeland Security, citizen groups.	Local government funding with state and federal supplemental funds.	Outstanding citizen involvement projects. Prototype mitigation projects include retrofits of power and other critical facilities.	Daya Dayananda, Asst. Public Works Director, City of Pasadena, 713-475-7269, DDayananda@ci.pasadena.tx.us . www.ci.pasadena.tx.us
8	Rockford	IL	Inland city of 150,000 on the Rock River in far northern Illinois; second largest city in the state. Prone to floods, tornadoes, blizzards.	Working on resiliency that balances smart growth with livability, agriculture, alternate energy strategies, environmental conservation, emergency preparedness, and hazard mitigation.	Rockford Metropolitan Agency for Planning; counties of Winnebago and Boone, IL; HUD; Rockford Local Development Corp.; state of Illinois; FEMA.	Used a line of credit for \$10 million program to clear flooded homes and turn the area into a park.	Broad resiliency programs include storm water master planning, reducing greenhouse gas emissions, retrofitting buildings, upgraded building codes.	Marcy Leach, Engineering Operations Mgr, City of Rockford, IL, 815-967-6740, Marcy.Leach@rockfordil.gov . www.rockfordil.gov/fire.aspx
9	Tulsa	OK	Inland city of 400,000 prone to flood, tornado, wind, heat, ice and chemical hazards.	Aggressive city floodplain management program includes future urbanization. Flood projects include detention parks, trails. Disaster teams work continually on a broad array of hazards and programs.	City of Tulsa, FEMA, Corps of Engineers, schools, and many other agencies. Tulsa Partners nonprofit links together businesses, citizens, and nonprofits to build a resilient community.	City uses stormwater utility fee, bond issues and sales tax for maintenance, management, capital. Scarce for nonprofit Tulsa Partners, which uses volunteers, occasional grants, and donations.	Broad local ordinances (watershed-wide) manage buildings floodplains and SafeRooms. Cleared more than 1,000 floodplain buildings cleared for trails, sports fields, & parks.	Bill Robison, stormwater engineer, City of Tulsa, 918-596-9475, brobison@cityoftulsa.org . Graham Brannin, Planning & Intergov. Adm., City of Tulsa. 918-596-9806, gbrannin@cityoftulsa.org Tim Lovell, director, Tulsa Partners Inc., 918-632-0044, tim.lovell@tulsapartners.org . www.TulsaPartners.org
10	Vermont	VT	New England state of 625,000 people with mountains, rivers, villages & small cities. Prone to floods & cold winters. Three 2011 storms devastated half the state.	Tropical Storm Irene recovery under way in 225 affected towns. Working to create a balanced program with floodplain management, hazard mitigation, and water quality protection.	Many state and federal agencies, including FEMA, working with local communities and citizens "to change the way people relate to their rivers."	State funding with federal grants from diverse agencies.	Flood-Resilient Program has communities' incentive fund to encourage hazard mitigation, risk reduction, strategic growth, walkable neighborhoods.	Mike Kline, State Rivers Program Manager, 802-793-7617, Mike.Kline@state.vt.us .