

# Understanding Lessons Learned

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Report by the Natural Hazard Mitigation Association

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# Executive Summary

In the first two years of the Cooperating Technical Partners (CTP) Program, the Natural Hazard Mitigation Association (NHMA) focused on the development of the Resilient Neighbors Network (RNN) program. NHMA organized the RNN program, in conjunction with FEMA representatives and the ten selected pilot communities, to create a co-mentoring environment in which community practitioners can actively engage, learn, and share best practices with one another. The peer-to-peer learning opportunities have occurred through regular communications, including monthly conference calls, webinars, email exchanges, and workshops.

The ten RNN communities currently are:

1. Augusta, Georgia
2. Charlotte-Mecklenburg County, North Carolina
3. Grays Harbor County, Washington
4. Hillsborough County, Florida
5. Jefferson County, West Virginia
6. Pasadena, Texas
7. Rockford, Illinois
8. Central Shenandoah Valley, Virginia
9. Tulsa, Oklahoma
10. The State of Vermont

As part of the CTP agreement with FEMA, NHMA has also worked to identify ways to expand RNN's reach by continuing to build strong relationships and sharing opportunities, and identifying more precisely what communities need to increase resiliency and support the strategic goal of Disaster Risk Reduction (DRR).

To fulfill these work plan objectives, NHMA conducted more than 50 phone and in-person interviews that focused on DRR at the local level, and the most significant opportunities to support community leaders in successful DRR strategies. Interviews included RNN members, the NHMA Board and Advisory Committee members, and additional DRR experts.

Interview questions were purposefully broad, so as to create an open dialogue, and are as follows:

1. What lessons have you learned from working at the community scale? What is working? What is the secret ingredient of your success in working at community scale?

2. Have you had a risk assessment process that focuses on what really matters to a community? What is most important to their human well-being? What have you seen as far as people understanding risks? About educating and communicating people about risks?
3. What are the barriers? What is needed to guarantee that working at community scale is effective?
4. What type of support do you need to support your efforts and capabilities for disaster resilience?

Overall, this interview process found that there is a gap in practitioner knowledge and **a clear need to provide an educational program focused on DRR** for local leaders — a program that empowers them with the tools needed to create a community that prioritizes natural hazards mitigation and risk reduction.

Other key takeaways from interviews included:

- Identifying what local residents care most about *before* a disaster will lead to better post-disaster and long-term resiliency outcomes.
- The most effective risk assessment presents real information that is science based but also relates the assessment to risks that people can understand. This process leads to more tangible solutions.
- Political barriers are often cited as one of the top barriers, including election cycles that work against long-term planning;
- While funding is a challenge, it is not usually what stops communities from making changes; it is more important that residents understand where and how mitigation money is invested;
- Data is often too broad and needs to be downscaled so it can be usable at local level.

The following document contains:

- 1) The Interview Methodology;
- 2) Summary of Lessons Learned, including a synthesis of interviewee answers associated with each question,
- 3) Findings and Recommendations, which support a DRR Strategy;
- 4) Conclusion;
- 5) List of interviewees (Appendix A);
- 6) Entire set of interview notes (Appendix B).

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### Interview Methodology

The interview process created an opportunity to discuss and review what is working and not working in various communities. The interviews included RNN communities, communities identified through partner organizations, chief resilience officers, and individuals from climate science and mitigation. NHMA analyzed and identified themes of how community residents and businesses actually achieve DRR at the local level. Research and documentation includes a review of materials used on the positioning of government, businesses, non-profits and individuals on how to prepare for disasters, both pre and post disaster.

To address the study's objectives, NHMA researchers conducted 52 structured interviews from Dec. 15, 2014 to March 20, 2015. The list of interviewees is shown in Appendix A. The interviews identified the top needs and opportunities in order to address the myriad of issues from the perspective of the grassroots practitioners engaged in hazard mitigation/climate adaptation and other DRR at the local level. The sample included 10 individuals from 14 federal agencies and 30 individuals from ten state and local governments and nongovernmental organizations.

The goal was to solicit a diverse (as opposed to representative) set of views. Hence, we recruited interviewees using a purposive technique to obtain a sample drawn from a range of organization types (e.g., federal, state, or local government; contractors; consultants; professional organizations; non-governmental organizations), decision-maker perspectives (e.g., agency director, project leader), and sectors (e.g., planning, urban development, health, environment, insurance, science standards, engineering, and technology).

### Summary of Lessons Learned

#### ***1) What lessons have you learned from working at the community scale? What is working? What is the secret ingredient of your success in working at community scale?***

NHMA learned through the interviews that the secret ingredient to success is to truly identify what the community needs by identifying what people already care about ... before a disaster. Communities that are successful in this process will develop better partnerships that bring people from all sides of an issue to the table and gain strength by recognizing what residents care most about. Success is achieved by listening to local priorities and allowing all parties to have a role in creating a resilient community. When political leadership can get out in front of the problem rather than reacting, action can be taken that already has community buy in. Wise land use planning prior to an event, which has identified problem areas and has a plan in place for addressing issues, is critical. Local officials must create a dialogue with citizens about how resiliency is inter-connected with everything (grid, transportation, water, buildings) and be aware that there is a cascading effect during a disaster.

As an example, one community was particularly successful in response to the Colorado Floods of 2013. The community acted in an effective fashion because they had done so much work on communications before the storm. The community was able to get all the right people to the right places by recognizing that first that they had a problem, secondly that they needed help, and third they had procured political buy-in by Town Council (with help of a local champion) and requested support through mutual aid agreements. Success at the local level is educating everyone about what is available as far as funding sources for hazard mitigation and businesses. Knowing what is driving vulnerability at the local level informs decision makers on where to target limited mitigation resources.

#### ***2. Have you had a risk assessment process that focuses on what really matters to a community? What is most important to their well-being? What have you seen as far as people understanding risks? About educating and communicating people about risks?***

Several interviewees suggested to not refer to the process as “risk assessment,” but to list key things people care about and to ask what kind of community people want. The proper process can bring stakeholders together to conduct a vulnerability assessment, looking for opportunities and for guidance for pre-disaster mitigation as well as for advice on how to get people back on their feet as quickly as possible. While communities routinely go through a Natural Hazard Planning process every five years, many find it hard to get public input, stating that there’s a lot of apathy and the idea that people think that it is up to public agencies to just take care of problems. Some also stated that the FEMA planning requirements focus on the components of the plan rather than the outcomes of the planning process and support for proposed projects.

Often the risk is seen as something external or abstract (the river is causing a flood, the tornado outside can happen anywhere so we can’t do anything about it); and not as a result of our actions (living close to the water, not heeding warnings and building safe rooms/shelters). The key to a risk assessment process

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is to create an opportunity for conversation about risk and economic well-being by using language that people understand. The most effective risk assessment presents real information that is science based and relates it to risks that people can understand which identifies tangible solutions.

### ***3. What are the barriers? What is needed to guarantee that working at community scale is effective?***

#### ***Summary of what is needed for a community to be effective.***

Political barriers, whereby a top down approach can quickly turn into political agenda, are often cited. Election cycles work against long-term planning. While funding is a challenge it is not usually what stops communities from making changes. There is a need for a new type of funding that creatively leverages other programs, as well as one to make sure that funds go into actual work — not just visioning. People have difficulty understanding what funding buys them (you don't get flash flood every day!) and mitigation is challenging to communicate because people often don't have the patience for long-term plans and impacts.

There is a need to evaluate local planning and to provide access to data (i.e. small communities without GIS). Data is often too broad and needs to be downscaled so it can be usable at local level. Solutions need to be local; there is no "one-size-fits all" approach but there are real opportunities to connect peers from different communities to share and exchange ideas. It has been stated that communities need to have more cause and effect, more consequences and decisions at the community level, and that the reliance on Federal Government is a crutch, impeding a community from pulling themselves up by their own bootstraps. There is a need to build local expertise in regards to the enormous amount of resources available about "resiliency" and what it means to communities.

### ***4. What type of support do you need to support your efforts and capabilities for disaster resilience?***

There is a need for "political will" at local and state levels to change policy and create consistent funding streams for hazard data development, mitigation technical support, and integrating mitigation and resilience into other plans and policies. In addition, there is a need to address the following:

- Create a toolbox to achieve DRR;
- Identify a "local champion" who understands and promotes the importance of DRR;
- Develop a grassroots understanding of mitigation so that local leaders include mitigation requirements in community development conversations, not as a block to development, but as an investment to a resilient community;

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- Effectively display how risks affect a community (more than just maps) with visualization tools including what resiliency looks like in their neighborhoods, homes, schools, business places and the community at large;
- Provide webinars with different formats, tools and organization that can help with whole-community approaches;
- Develop modern telecommunication and interagency cooperation with a better framework for resiliency to solve a problem;
- Share case studies of successful local efforts that illustrate proper planning to mitigate hazards; versus those that quickly rebuilt to return to “normal” without considering the possibility of a repeat disaster.

## Findings and Recommendations

Lessons learned from interviews highlight that DRR activities need to be integrated in the context of social, built, economic and natural environments while considering the diversity, needs, strengths and vulnerabilities within communities. Working with community groups is a cost-effective and efficient way to develop policy and programs that work for all residents, especially those who are most vulnerable and hardest to reach.

Gaps and lessons learned have identified clearly a need to integrate a community resiliency planning process that focuses on engagement and education. This includes readiness, both institutionally and with regard to capacity, to take every advantage of the vast number of programs available to promote both individual and community resiliency.

There is a growing body of knowledge about resiliency within the natural and social sciences, and in the field of DRR. Yet, while each of these perspectives is necessary to address the challenges communities face, none is sufficient on its own. As we move into the 21<sup>st</sup> century with an interconnected world, the future is not likely to resemble the past. There is a great need for interdisciplinary, cross-sectoral systems thinking and action on urban resilience. Moreover, DRR is focused on what might be called known unknowns — disasters that are unpredictable but not entirely without precedent. Local governments lack the resources needed to fully prepare for climate change and natural disasters on their own.

Those who work in government need to work together and understand how to implement and use resources well and look for co-benefits – one policy with multiple benefits. To look to develop good working relationships with communities – crossing silos in a non-threatening manner to get done what needs to get done. Communities successful in resiliency really surmounted barriers and reached out to all constituents and truly incorporated their ideas. For the risk assessment process to work it has to address issues that people care about. Not having the knowledge makes you vulnerable. By understanding and educating risk communities have successfully adapted plans.

Efforts must be targeted towards DRR, focusing on working with communities in order develop a curriculum that incorporates climate action and resiliency planning. The CTP Program Management Team, has determined that NHMA's proposal of DRR Ambassador's Curriculum would provide a viable tool for communities.

### **Findings to date support the need for a DRR curriculum that:**

1. Addresses the need to advocate for sound policy at all levels of government.
2. Provides techniques and tools that engage, inform, and empower the public and decision makers in planning and developing projects to make communities resilient and sustainable.

3. Seeks to identify, evaluate, and support community, regional, and state and federal initiatives as they relate to increasing social, technical, administrative, political, legal, economic, and environmental capabilities and opportunities for risk reduction and mitigation policies, strategies, and programs.

4. Utilizes successful mitigation that is been derived from planning and design.

NHMA has found that it is critical to engage all stakeholders in a meaningful process so that people can understand, both the technical and social aspects, of making a change. As Ed Thomas, president of NHMA, put it:

“...as a nation, we have a choice: we can build safely and properly so as to not exacerbate existing problems caused by improper construction and development; or we can continue to do business as usual and build an unsustainable future of misery, waste and needless destruction. Right now we are clearly on the path of mounting losses from foreseeable natural events. Our sales message of public safety and safe and resilient development and redevelopment must be delivered in an a political manner, crafted in a different manner to reach the hopes, fears, desires, and dreams of the various audiences which comprise our ‘Whole Community.’ As part of that sales job, in addition to recognizing the positive economic aspects of our message, we must also recognize impediments including the fact that many local officials feel that ‘Immunity’ shields them from improper decisions which result in harm.”

He goes on to say that there are three categories of community situations which need to be covered by our development of a systematic solution to the growing toll of disasters in our nation and throughout the world:

- a) Situations where undeveloped land is being developed for the first time or totally redeveloped. In this situation we need to recognize that our challenge is to design and build safe development: that is to say, development which will not result in a disaster following foreseeable natural events. Carefully planning such development will result in the costs that development be placed on the appropriate party: the developer or property owner. Such planning practices will prevent improper externalization of those costs to society at large when inevitably natural processes take place.
- b) The second situation which a community may be confronted is the redevelopment of an area that has been afflicted by a natural process. In this situation extreme care should be planned into the process to ensure that all foreseeable natural events do not result in another natural disaster.
- c) The third situation confronted by communities is dealing with existing development in areas subject to natural hazards. In this situation community leaders are confronted with the need to carefully evaluate preparedness for evacuations with consideration of safe rooms and a wide range of potential community-based activities to encourage the maximum safety possible in these areas in a coherent and economical way. Activities such as the concept of cumulative substantial improvement, rebates and other measures to encourage elevations and all other

measures which will reduce the risks and consequences of future natural events should be encouraged as a part of developing a resilient community. Each of these three major situations requires a very different approach to careful planning, community development and preparedness. Wise land use planning prior to any natural event becoming a disaster is the best and most cost effective means of reducing risk from hazards to solve a problem.

## **Recommendations**

Findings support the need for a DRR curriculum which is intended to provide a means to integrate the three areas of resiliency, including;

1. Disaster response and recovery;
2. Climate change, and
3. Community financing and risk management.

The challenge is to focus on a DRR strategy that defines resiliency efforts as a decision-making process whereby the needs of the local community and natural environment are genuinely heard and considered. It affirms the potential for participatory democracy and situates within the existing planning framework. In order to achieve this, the following strategies are suggested:

### **1. Define, Strengthen and Expand the NHMA Peer-to-Peer DRR Strategy**

Participants in a peer-to-peer DRR strategy must learn how to identify and evaluate what is needed for resilience advocacy and to increase peer-to-peer communication channels. They must assist “whole community partners” in making resilient investments in development and rebuilding by emphasizing support for FEMA’s “Whole Community” and “All Hazards” mitigation outreach and risk communication strategy. The RNN charter outlines a leadership structure and operational framework; with clearly identified roles, responsibilities and an implementation plan for local, grassroots involvement.

### **2. Enhance Internal RNN Communication**

RNN must be able to continue, and expand, regular communication opportunities among RNN members and other local communities, including conference calls that emphasize team building, learning and sharing. Exploring the feasibility of using other complementary internal communications such as development of an online workspace to enhance frequency of informal network interactions and sharing of resources is important, as are one- on-one peer learning exchanges to promote sharing of resilience efforts and site-specific examples.

### **3. Promote Peer-to-Peer DRR Resources Broadly**

RNN must enhance existing communication tools (e.g., NHMA’s RNN website) and explore additional social media opportunities (e.g., LinkedIn group, Twitter and Facebook pages) to make resiliency

resources and materials available to the public and practitioners. This also can stimulate peer-to-peer interactions both within the network and throughout the larger professional domain of resiliency experts.

Coordination with other communities through monthly conference calls should continue; after two years of working together, the calls exemplified the benefits of a peer-to-peer exchange of ideas and contacts. They were productive and proved to be part of the coherent and consistent line of communication.

## Conclusions

These interviews highlight the need for a DRR curriculum and training that is focused on building capacity at the local level. Many interviewed stressed that in order for mitigation to be taken seriously (one that helps local grassroots efforts to educate and inform politicians) a professionally recognized certification for DRR (similar to that for Certified Floodplain Managers) would be essential. Repeated messages and lessons learned were echoed and will be included in the DRR Ambassador Curriculum being developed as part of the 2015 NHMA-FEMA Cooperating Technical Partners Program Award.

When one looks at the landscape of available programs, it is evident that NHMA provides a solution-based approach that can cross narrow focus “silos” and create a curriculum that effectively addresses how to localize what it takes to conduct a comprehensive DRR practice. One community stressed the need for better outreach and messaging to address what is important to vulnerable populations and how to best reach out to citizens. Some have suggested that a face-to-face event is helpful to keep the community’s engagement. It has been noted in several interviews that the more stable and connected a community is before going into an event the better off they are at bouncing back.

NHMA facilitates efforts for committed community representatives to engage in the discussion of how disasters can be reduced through local action; be exposed to other local experts and technical experts so that they can effectively influence “whole community”; and to use the best-available data and analytic tools to make better risk-informed decisions before, during, and after disasters.

NHMA believes that silo approaches of the past will not solve the problems of the future. It is essential to reach and influence the local decision makers and encourage more holistic thinking and practice. We believe that the DRR curriculum program will provide a whole systems approach that will build resilience by solving more than one problem.

NHMA’s next steps are to work with experts to develop curricular materials for local leaders in planning and building, legal, financial, and the natural and social sciences. In that process, the Association will create tools for communities to ask, analyze, and act to improve their resilience with solutions that meet multiple needs and are equitably applied.

## Appendix A. Interviewees

1. Aaron Brown, Vital Communities, White River Junction, VT
2. Adam Beck, Director of Innovation, Eco Districts, Portland, OR
3. Adam Powers, Montana Dam Safety
4. Barbara Miller, RNN - Jefferson County
5. Bill Robison, PE, CFM, Tulsa, OK
6. Brian Varella, Olson Engineering (formerly City of Fort Collins)
7. Christy Miller, CFM, Ex-NFIP Coordinator AK
8. Daya Dayananda, Pacadena, Texas, RNN Community
9. Dennis Dixon, Pierce County, Washington NORFMA Director and CRS Class 2
10. Don Watson, FAIA, Project Manager CTP 2015
11. Edward Thomas, President NHMA | [Edwathomas@aol.com](mailto:Edwathomas@aol.com)
12. Eugene Henry, Hillsboro County Florida
13. Gary Ehrlich, Homebuilders Association
14. Jason Hartke, PhD, VP, National Policy and Advocacy, US Green Building Council
15. Jeff Goebel, About Listening – Portland State University
16. Jennifer L. Jurado, Ph.D., Director, Environmental Planning and Community Resilience Division, Broward County, Florida
17. Juliette Hayes, FEMA
18. Kathy Whiteman, Ph.D., Western New Mexico University
19. Kevin Geiger, VT Regional Planning Office
20. Kristin Baja, City of Baltimore
21. Lara J. Hansen, Ph.D., Chief Scientist and Executive Director, Eco Adapt, Bainbridge Island, WA
22. Linda Langston, Linn County Supervisor, Cedar Rapids, IA
23. Lisa Corbly, Natural Hazards Planner, DLCD, Oregon

24. Marcy L Leach, CFM, Engineering Operations Manager, Rockford, IL
25. Mark L. Stephensen, CFM, Mitigation Section Chief, State Hazard Mitigation Officer, Idaho
26. Michelle Steinberg, National Fire Protection Association
27. Ned Swanberg, CFM, Mapping and Planning Coordinator, Vermont Rivers Program - Watershed Management Division
28. Patrick Otellini, Chief Resilience Officer, San Francisco
29. Pheobe Suina, High Water Mark LLC
30. Rebecca Joyce, RNN Central Shenandoah Valley
31. Sarah Murdock, Nature Conservancy
32. Steve Adams, Institute for Sustainable Communities
33. Susan Moser, Climate Access California
34. Thomas Ruppert, Esq. Coastal Planning Specialist, Florida Sea Grant
35. Timothy Trautman, PE, CFM, Program Manager, Charlotte Mecklenberg
36. Traci Sears, CFM, Montana NFIP Coordinator
37. Alessandra Jerolleman, JEO Consulting
38. William B. Hooke, American Meteorological Society
39. Lori Salamack, FEMA
40. Jim Mullin, NHMA Board Member – retired Seattle Emergency Manager
41. Jim Murphy, PE AECOM
42. Elaine Enarsen, NHMA Advisory Board Member
43. William S. Becker, Presidential Climate Action Project, NHMA Advisory Committee Member
44. French Wetmore NHMA Advisory Board Member
45. Julia Burrows, Governance Institute
46. James Schwab, APA, NHMA Advisory Board Member
47. John Duffy, State Emergency Management, NHMA Board Member

48. Lawrence Frank, AECOM

49. Jacki Patterson, NAACP

50. Molly Mowery, Fire Adapted Communities

51. Jo Ann Howard, Esq. President, H2O Partners

52. Maximilian Dixon, University of Washington Planning Graduate

## Appendix B. Interview Notes

### 1. *What lessons have you learned from working at the community scale? What is working? What is the secret ingredient of your success in working at community scale?*

- *Important to work at local and regional level and to leverage connections you have. Need relationship and local contacts to target other communities.*
- *Connections and relationships first and foremost.*
- *Through project impact developed partnerships and a framework for people and understand and work together. Bringing people together to do work. Think about what people do on a daily basis and not reinvent the wheel. Important to have healthy discussion and prioritize what is important. Process has changed but the power of bringing 25-40 people in room so important. Nothing more beautiful to bring risk folks and developer to strengthen what we want to protect – the river.*
- *Hazard and disaster risk information is at building scale, not at neighborhood scale/city wide scale. This is a huge gap and leaves neighborhood vulnerable.*
- *What is working? Silver Jackets. 101 Floodplain Course for Realtors Interactive Response and Recovery Workshop. Working downstream (i.e. educating those that have direct contact locally with general population, realtors, teachers, first responders, government officials and organizations). Helping local organizations identify potential sources of funding and requirements. Having strict building requirements and a knowledgeable floodplain administrator.*
- *Biggest secret to success is “to strike when fire is hot” and be “storm ready”. Important to link mitigation into what “level of risk that is acceptable?” Difficult to track what is effective. Rockford gets a lot of support from FEMA but need more support locally. RNN is very helpful as is HUDs Strong Community program.*
- *Master planning and execution of plans. Utilize master planning process to assess where problems are and to look for alternatives in order to optimize their resources for resiliency. Execution of plans have been problematic (not entirely failures, because have good intentions) but because of funding and people not wanting to pay for level of service. One particularly successful community recognized hazards and need to change by requiring moratorium on all future development and high water marks for master plans for regulating to high water marks. Very future thinking and recognizing tourism that economic resiliency has to do with future success. Very keyed in to needs of the community.*

- *Having good partners on projects whether that is other State and federal agencies to “pool” funds to complete mitigation projects. As an NFIP State Coordinator (now retired) there was not enough funding through FEMA to complete a project but by adding other funds to mitigate for instance a substandard septic and/or well system, a roadway that caused additional flood blockage, a small mitigation project could be completed and allow more complete risk reduction not only to the targeted property but sometimes to adjacent properties. Focusing on highest risk target mitigation areas, rather than individual projects. Single projects are very time intensive and true risk reduction needs to look beyond the footprint of a single property at risk.*
- *Community Outreach and public participation process. With outreach trying to reach more people (has language barrier of 62% Spanish speaker). To be effective, realize the need to go to people such as through events during holidays or by having a booth at rodeo festival.*
- *Having multiple different messages that go out. Flood information doesn’t really kick in until flood. So find helpful to have flood because creates awareness. Need to keep people aware of risk – people want to think it’s being taken care of.*
- *One program that seems to be working well is a template developed by the Nature Conservancy on how to develop Natural Hazard Mitigation Plans (used in about 20 CT communities so far). These plans have been incorporated into the Community Rating System (CRS).*
- *Wise land use planning prior to any natural event becoming a disaster is the best and most cost effective means of reducing risk from hazards. Realize there are a variety of funding sources that become available following a disaster that support hazard mitigation and businesses. Not all hazard mitigation solutions have to be million dollar solutions. Higher codes and standards, pre-arranged agreements and local collaboration is important tools that can be used for hazard mitigation. Speed of recovery is not always effective in building a more resilient community. Taking time and doing proper deliberate planning is more important.*
- *With partnership and collaborations have more chance to advance issues. While going through Code updates it is important to have a unified front.*
- *Not just talk about problems but talk about solutions. Elected officials need to learn to have a conversation and build awareness. Building awareness about risk. From building side and community side must change from greenhouse gas and use of renewable to discussion about how to reduce risk. Have to create a dialogue with locals about how resiliency is inter-connected with everything (grid, transportation, water, buildings) and that there is a cascading effect of disasters. This is the golden age of opportunity.*
- *We actually don’t work much directly at a community scale since we serve a professional community that is nationwide, but sometimes we provide direct technical assistance after major disasters like Katrina or Sandy, usually with training. However, we do produce case studies at that scale for use in our reports and presentations. In that regard, one of our “poster child”*

success stories is Roseville, California, with the following key attributes for risk reduction: 1) thorough integration of hazard priorities in major aspects of the local planning process so that it becomes embedded as a public policy priority, 2) widespread public education and involvement to achieve buy-in and the creation of a local culture of preparedness and 3) political leadership to get out in front of the problem rather than leading only after disaster happens.

- *Bringing conversation to local level to address at neighborhood level and features. Relate information to what people are familiar and to what others have direct experience with so that they can translate to future conditions. Do focal groups for all parties so that everyone knows that they have a role – not just government, but local business level and developers.*
- *Resiliency needs to be part of something they are already doing. Built into other initiatives, incorporate into what they are doing. Need someone who is focused on it all the time at community level.*
- *Local officials can be easily confused when talk about instead of NFIP – freeboard, flood proof – some reason – we say no development period – no adverse impact. Towns that did well – communicated well. They addressed rumors and took time to communicate. Towns that didn't do well, never took time to do meetings. With cell phones people think should be able to get the information but the person fixing road and not updating Facebook. Growing expectation that people should be able to find out what is going on now.*
- *Paradigm shift. Prevention side when dealing with climate need to work together in whatever capacity. Holistic planning – look at land not just as city, state, tribe but by who is affected by us downstream (example such as salmon shed, hurricane shed, tornado shed) Urban vs. rural interface with fire and homeowners knowing consequences. Review from “fresh slate” point of view how we would design to be energy efficient too. Review what is the trade out system. Peer to peer – rancher to rancher – good example of how to make people shift from human thinking paradigm shift to constructive to environment.*
- *Baltimore did a huge process in 2012 – 2013 by completing an All Hazard Mitigation Plan that links Climate Adaptation and to overall Disaster Plan. Incorporated in risk assessment process - 6 goals, 50 strategies, 231 actions by working with technical information including depth grids. Reviewed Baltimore's heat islands and precipitation as well as City's vulnerability and sea level rise. Included information on bridges, infrastructure, and natural resources services through a huge community outreach with 40 neighborhood groups. Baltimore received a lot of state and federal assistance and combined HazUs data with adaptation information and Department of Natural Resources coast smart program. From Plan Development now on implementation — make a plan; build a kit, work together. The City's hosts trainings that provide free CPR, energy plans, physically build kits, and reach out to all community and find out who's living alone? Provide HELP/SAFE signs. Cell phones and community response teams. Use community leaders and use common ambassadors. Utilize Baltimore energy process. Having conversation about*

*how they have been impacted and about the damaged in 2003 versus Hurricane Sandy that sat over them.*

- *Need political will. If you have someone that thinks it's important and can make it a mandate. A lot of people on fence and there are not a lot of examples of political will to make it happen. Need a very slow and laborious approach which starts with what people care about. Not just about climate but something important to them. Say, for instance, a house in New Jersey that they just want to fix but need to understand or change design of house.*
- *The various groups must listen to each other, respect each, and accept disagreement. At the local level, I have found that identifying the intersections of interests/goals is critical to ensuring that very diverse groups can work together towards risk reduction.*
- *All about relationships. A lot of education and inclusion of people, of not just usual suspect's repetitive messaging. Meetings can cause "Planning Fatigue" so need to balance and keep interesting. Have benefited by an "almost flooding event" because it activates people who might have become complacent. The policy maker must frame the issue so that it triggers public response.*
- *Make it easily accessible (data, maps). Make tasks efficient (reduce redundancy whenever possible). Engage local decision makers (so action can be taken). Respect local priorities and information. Go local (limited local resources often mean "we" must go to "them"). Make linkages to real life local examples (use hyper local examples).*
- *Knowing what is driving vulnerability at the local level informs decision makers on where to target limited mitigation resources. Make the information as local as possible (smallest scale). Local communities ask for more data from the State of Oregon – DLCDC. Keep hazard/risk messages simple and repeat.*
- *Communities are composed of different people and interests. It is important to engage the community as inclusively and thoroughly as possible. In particular try to bring together the various board members and the public in the same place to consider the same information and opportunities.*
- *Try to engage stakeholders that bring multiple perspectives to the decision including the people affected by flood risk and watershed groups.*
- *Do your homework by preparing data, handouts, focus on the local situation, and good graphics in presentations. Respond to questions and needs promptly.*
- *Be clear about what the opportunity is... and what decision needs to be made. Deadlines are critical to move decision priorities from "important" to "urgent".*

- *Helps with recognition program and having a behavior change if leaders doing it “spark plug” first. Need an advocate to work with National program. Need partnership to reach people. Need local champion. After getting familiar with Firewise locals realized on their own should have ordinance. People adopting new theory and behaviors as referred to Everett Rogers “Diffusion of Innovation Theory”. Innovation is voluntary.*
- *Resiliency, systemically and structurally has two different methodologies on how to obtain. It is necessary to not just look at functional resiliency such as, we can fix bridges, culverts? But how do we get Main Street stores back open? – the social, economic side is not addresses. They are successful at spending HMGP (get projects done) and get a lot of support from feds. They have received help through the Army Corps Silver Jackets program.*
- *All Hazard plans and solicits comment by survey. Some people understand risk, especially if repetitive loss property. Climate change is more remote to most. Education about risk is key. Really think to have change of behavior for resiliency and updating practice in plan have to work at the community scale; one on one with people or smaller group of why they have to make a difference. Small scale – biggest impact. Rural area – she tries to capture people where they are.*
- *Believe need direct engagement work to build capacity and ensure you convey to right folks, right issues, well-framed and an open and inclusive process on climate change adaptation and DRR. Find that place based work critical to build relationships with unusual suspects together and to reach across silos. Help people realize and problem solve. Can be addressing emission reduction by talking about smart growth.*
- *Very helpful to have stable dedicated funding source. In their case System Development Charge from storm water. In the big picture, funding is cure behind our efforts at community level.*

- *The principal lesson I've learned is to involve the entire community in mitigation, adaptation, disaster planning and recovery efforts. The idea is not only to tap the creativity within communities, but also to build "political sustainability" for whatever initiatives evolve. There are some important keys to success in community-wide planning, however, first, outside consultants who help communities convene planning processes should be invited to the community by its leadership. Second, outsiders should be facilitators in helping members of the community be their own change-agents and architects of programs. My role always has been to expand a community's menu of choices, often choices people didn't know they had. Third, involve the traditional planning leaders in the process — regional planning commissions, city managers, etc. If you don't win their hearts and minds, they are likely to cause the community to snap back into old patterns once you've left. Fourth, identify and provide ongoing backup assistance to one or more local champions who will continue the work of keeping the community on course. Depending on the community's situation, the snap-back problem can cause a community to lose great opportunities to improve its safety, health and so on. People have a strong tendency to stick with what's familiar and will revert to old patterns without constant inspiration and leadership.*
- *Working as a whole with all departments including public works, commissioners and coordinating plans.*
- *Communities need to have their hand held in developing good sound plans.*
- *What works is viewing the problems and solutions from a local official/citizen perspective and being able to talk in their language.*

**2. Have you had a risk assessment process that focuses on what really matters to a community? What is most important to their human well-being? What have you seen as far as people understanding risks? About educating and communicating people about risks?**

- *Have done some climate modeling under HUD sustainability project but not sure public is aware of this. Irene showed VT that we don't know neighbors – not connected as we had thought.*
- *Most Montana Counties and Tribes have a mitigation plan in place. FEMA planning requirements focus on the components of the plan rather than the outcomes of the planning process and supporting proposed projects. What is most important to their human well-being? Family members. Economic well-being. Loss of community. What have you seen as far as people understanding risks?*

- *Something on landscape might change. Tried to bring in other planning agencies – comp plan (10-15 year rotation) and regional plan. Last very different from first one but committee has been consistent since 2002 – does at least a one year review. It is so important to have healthy discussion. For THIRA questioned where we were going to get resources to people – process was changed but the power of bringing 25-40 people into the room .*
- *Risk Assessment – Mapping – spent money on mapping. Paid contractors to do mapping did not have GIS at the time. All of County’s GIS now on and links with 911 CAD system. Reach out to businesses – for continuity of program. The Disaster Ready Program – used day cares, schools to get information to parents. Sent home with DVD and books. We teach the older kids about taking care of their cats and dogs. They have BARK in the Park which is a dog day for animals – have booth at County Fair for 10 days. It was mostly 4H when started but do more with faith - based groups now.*
- *Local and regionally people get it, fire, and floods. As far as execution most fail to succeed (not entirely fail because have good intentions). Funding problem – people don’t want to pay for level of service. They have trouble understanding what it buys them (don’t get a flash flood everyday) or challenge of communication*
- *Go through Natural Hazard Plan every five years but hard to get public input. There’s a lot of apathy by community and people think that it is up to public agencies to just take care of problems. Some developers and businesses are taking action for tornadoes more seriously. For example, home depot shows model of above ground shelter for educational purposes. One developer added restrictive covenants to require shelters stating that every home needs to have a storm shelter. Unfortunately, he did not sell any and he had to change restrictive covenants. The City’s Community Rating System Public Participation process greatly adds to the City’s attempts to encourage behavior change and awareness through repeating message. Very difficult to get public input many people think public agencies will take care of problems. A questionnaire was sent out about Natural Hazards and there was only a 1% return. Not as focused as floodplains – have mapped incidents of tornadoes. Utility bill stuffing is most effective.*
- *I have long been an advocate of No Adverse Impact the ASFPM do no harm approach. It seems to resonate well at the individual and community level and advocates developing activities that really address local situations with the ‘do no harm’ focus. People get it, then it is a matter of communicating risks that are real to people. I long-ago learned the 1% flood doesn’t mean much if, for example, erosion and moveable bed streams are taking out infrastructure, homes and are not really addressed.*
- *Had no risk assessment – did not know of risk map or HAZUS.*

- *Fundamental shift in understanding of risks and hazards with younger generation (concept of safer and 24/7 accessible services). Greater reliance on community resources than individual/family. About educating and communicating people about risks? Perception guides understanding. Crafting valid messages.*
- *Need many tools to communicate with outreach specialist. Through social marketing tools. Question is how to measure? How to change people's behavior?*
- *The discussion of risk assessment is a start. The larger community engagement templates that address other related issues should also be used (and are being used throughout nation). Recent FEMA guidance that this must include sea level rise and climate change is a new challenge that will require new tools. These have yet to be developed, except by advanced A&E firms.*
- *Effective hazard mitigation following in the wake of a major disaster requires a carefully planned "Whole Community" approach when assessing damage and determining the way forward. A speedy recovery rarely involves building back more resiliently and safely. Ideally one should avoid developing in hazard risk zones. The economics of development will often drive development into such areas. So, if you must develop with much higher standards of safety than are currently in general use. Four Feet of Freeboard above FEMA set Base Flood Elevations is one specific example.*
- *Last Fall we did a risk assessment and the community called for more interactive systems to help identify what their risks were. The interactive systems show what homeowners can do pre-disaster with mitigation. It was through response to National Weather Service that assisted with this effort and homed in on where do you need to be prepared and empowered community to make your own decisions. Forces mitigation and code helps to pick higher standard and code, maintenance and new construction.*
- *Did thorough risk assessment which showed vulnerability at neighborhoods level and reviewed what neighborhood needed to do to move forward. When it comes to people and accessibility, need to ask how they feel, if they are comfortable. It's not low hanging fruit but what do we address? Something is in our control and some not. "Resiliency center" – heating shelter cooking. Consider peoples wellbeing – roof, food, cared for. Attended to access to what they need. What people need — some things seem easier but what makes them feel they have adapted to heat, no HVAC system, no water, no work – pieces most important. Stronger communities most prepared in connection with preparedness, not separate hazard mitigation plan – more comprehensive approach.*
- *Recognize that risk assessment is difficult and that there is a need to create common language. Create opportunity for conversation about risk and economic well-being. Protecting investments from risk – to top elected officials but to sharpen decision-making. Not just understand this but*

*for community good but also good for economy. Here's what it is costing and translate that "risky business.org"*

- *People are aware of their risks not so much risk but solutions. Coordination is hardest part and financing for it is hard. Educating new people to a community about risk such as educating on earthquake.*
- *Risk assessment program happens at Hazard Mitigation planning process. Underestimate the coming risk. Believe it is important to mark high water marks.*
- *Data and decision support – gap. Deciding which path to go down in economic staff – building time and partnerships.*
- *She doesn't think people really understand risk – need to work with insurance people. Need whole community understanding for business and continuity of operations and to individual. Risk Assessment has to be whole community and needs to ask what kind of community do you want? Building a safe room is not a requirement but need to do it and have to find a creative business model. Equity issues or some can't afford to have place with safe room. When people can't afford to have food on table, difficult to address anything else. How to use issue of equity to heighten people's awareness.*
- *Don't call it risk assessment but list key things people care about. Conduct a vulnerability assessment and opportunity using a whole model. Have people be part of process, to build capacity and be part of work. Monitor process after 6 months to see where they are on implementation (need matrix and more funds to evaluate).*
- *Community members care about a very wide range of issues and are dealing with stressors ranging from poverty to chronic environmental degradation and accompanying health risks. It is very difficult to engage in a conversation around risk reduction when we refuse to take these underlying factors into account. The challenge is that these underlying stressors have a lot to do with how we organize our societies and require a type of systemic change which is not often discussed in the US as part of risk reduction.*
- *Best thing they have is plan revision and maintenance and doing missionary work – which needs to do and be involved in work. Risk map – Corps realized lack of H and H study. Also added landslide onto radar and need to redefine this stuff.*
- *Risk Assessment – what matters to them. What will fire mean to their site? "Most doomed" – there are example of what work, what to emulate. Site specific stuff. People can accept and can understand science – if give it in clear way. A scientific fact.*

- *Thinks risk assessment so important but so difficult. Try to teach, train to be well trained, conduct risk assessment that is for locals – need info on where to get started – To first understand risk.*
- *In Vermont we have pulled together available data on risks (structures, insurance costs, insurance coverage, public losses, incentive info etc.) and provided access online through the Flood Ready Vermont website. This includes existing flood hazard data and the recently released river corridor data that is now available across the state. This data provide a (rare) measureable basis by which to prioritize and evaluate avoidance and mitigation actions.*
- *Each community has its own experiences, stories and needs. Some communities (e.g. Jeffersonville and Waterbury Village) have done extensive work to analyze opportunities. In five communities the Agency of Commerce and Community Development has initiated a related process under the Vermont Economic Resiliency Initiative (VERI). In the Mad River Valley ACCD and ANR cooperated with two communities and EPA in a flood resilience-planning project.*
- *Trying to work in community authentically. People in community hear a lot of noise and are very good about detecting fakes. When talking about risk communication (need to lay it on table). Evaluation doesn't make building dangerous – not having knowledge makes you vulnerable. Government has to be able to adapt and plan. Community has intelligent input and needs to adapt plans. Plans need to actually include their input. Outreach in person. Not just to send emails but need to go into neighborhoods and talk with them.*
- *With risk models and methods to understand risk and natural infrastructure not in it. Cost benefit of natural vs. structural. There might be closer market nexus for incentive pricing. Strategy to have conversation and for everyone to recognize. Reinsurance a little farther away. As they get more into flood market also insure municipalities and large commercial. Review community resiliency index and Resilience Climate Action Plan which has tons of content and action items.*
- *It is hard to communicate risk. Of all the frightening and precarious elements in the lives of people... it is hard to consider and weigh in medium-term risks. (Hence the importance of good planning ahead of time!) To avoid the difficulties and costs there is a high premium on denial. It is better to speak to the strategy of not adding more to the problem and not exacerbating the problem for those at risk.*
- *We've worked with eastern communities; have bought numerous stakeholders to table. Always looking for guidance and how they can want to get back on feet as soon as possible. Always looking for guidance on how to get people back on feet quickly. People understand risk more after flood event and do earthquake drills at state and local level.*
- *Because I frequently am dealing with flood risks and the NFIP, the greatest challenge I face in communicating risk and educating is the fixation of local stakeholders on the insurance*

requirements. While the floodplain managers may understand the need to reduce risk, local leaders are primarily concerned with insurance requirements based on only the FEMA maps. There is a general misconception that if locally, we pressure FEMA to reduce the footprint on the map, we no longer have a flood risk in that area!

- Has scoring mechanism that customizes on a property-by-property basis using risk assessment process as a way to manage risk and work with people – address cost of what it takes community to get back on feet. We are doing what we are doing with storm water plan.
- There has been considerable work done on how to communicate effectively about climate change and some of that work undoubtedly pertains to communicating about resilience.
- Risk management can be an effective framework, I think, because everyone does it in their own lives, from insuring themselves against car accidents and health problems to buckling their seat belts. Communicating proximity is very important — i.e. helping people understand their personal stake in risk management and the personal impacts if they don't. People seem to respond to the moral dimensions of risk management — i.e., their obligation to their children. If we engage communities in recognizing, assessing and mitigating climate and disaster risks, that offers an opportunity to identify "what really matters" to individuals and communities as a whole.
- The public needs to be able to see how the risk relates to their daily lives – e.g., will it affect their home, kid's school or work. For example, will a disaster/hazard event cause an economic disruption that would damage their community and in the long-term, drive down the value of their home or cause their employer to leave town? It is important for people to visualize the risk (e.g., see how high flooding could reach on a recognizable landmark or building).
- Often the risk is seen as something external or abstract (the river is causing a flood, the tornado outside can happen anywhere so we can't do anything about it); and not as a result of our actions (living close to the water, not heeding warnings and building safe rooms/shelters). There is a need to connect the potential event to what people are doing or can do to reduce the risk.
- As far as risks, folks focus on the last flood or disaster they had, not what could happen. They want to spend more time and resources on the dangerous and scary hazards, like terrorism, even though the risk (odds of happening times impact) is lower. At one planning session we presented clear data that flooding was a bigger threat than any other hazard at the county level. The committee voted tornadoes as the number one hazard to be addressed. They're just scarier!

**3. What are the barriers? What is needed to guarantee that working at community scale is effective?**

- *Funding is a challenge – municipalities more cash strapped. Need new type of funding.*
- *Top down approach can be very quickly turned into political agenda. Barrier to get out of way and to have a Chief Resilience Officer that is out knocking on doors, having coffee with neighborhood folks, and getting out of city hall.*
- *Compliance with multiple regulations/requirements from multiple agencies defeats the benefits for individual. Accepting new ideas may take years. Projects extended over multiple years stretches beyond. Need lead organization/individual to spearhead. Need technical assistance from multiple organizations to build awareness of available programs to support.*
- *Housing process costs are so high and haven't had a good flood in a long time – so important to learn from one another. Resiliency seems to be key word can mean anything to anyone depends on group you represent. Resiliency is all of this, all of these things – how to do with limited resources. Learning from other RNNs and their pitfalls and how they picked up and succeeded is key. A deeper connected is important for RNN because we learn from each other and once solidified could multiple forces.*
- *Barriers are primarily money but we have found that single most important message is outreach. How to track what is effective and review phone calls. Road blocks getting people aware. Working with Army Corps on levee setback – worried about getting food on table. How they will be notified and what evacuation route is.*
- *Election cycles work against us. Human interest and short-term memory for disasters per Dennis Mileti's work. 1) trouble understanding what it buys them – don't get flash flood every day. 2) Challenge of communication – don't understand long-term plans. New State Resiliency initiative in disaster clean up mode and to help in recovery.*
- *The one-size-fits all approach of the FEMA NFIP, and some other state and federal minimum regulatory standards don't work at the local level. Communities need the flexibility, sometimes, yes, to even tailor a federal standard to fit local conditions, but this rarely possible — nor do small communities have the time to try to fit federal programs to their local needs.*
- *Language barrier is an issue with 62% being Spanish population. A lot of organizations get broken up into different silos. Some in economic development looking for open land and create jobs.*
- *The principal barrier that CTP might address is the complexity of the discussion... new definitions and concepts. ASFPM and FEMA training does a great job of training the professional staff. I see CTP opportunity in providing basic introduction of concepts to demystify the terms and methods for community level grassroots activists.*

- *Right now we are clearly on the path of mounting losses from foreseeable natural events. Development which externalizes future costs to disaster survivors, the taxpayer and the environment are poor planning and community development, and are highly dubious morally, legally and economically. After a disaster, opportunities to create greater resilience are only limited by the imagination of the community, especially those controlling decisions.*
- *Take advantage of things people need to do i.e., roofing and maintenance or required construction. Integrating competing goals into resiliency not always the same standard.*
- *Barrier to educating and communicating about risk. For instance, maintain a recommended list of high priority items and adopt policy on resiliency with decisions at local level with all stakeholders at land use level and building level.*
- *Making sure that communities put through an inclusive process by creating a dialogue with as many people as possible. Flip side of barriers is that communities think holistically and cut across silos.*
- *The main barriers in my experience involve political will and governmental capacity. The former involves a willingness both to study the issue as a priority, to realize the community can be subject to game-changing events, and to take an effective stand based on the understanding achieved from doing so. The capacity issue is largely one related to the size of the jurisdiction and the scope of its resources. Large cities like NYC or Chicago are unlikely to experience major resource problems, but small towns and rural areas simply may not have the staff or the money to execute even the most logical plans they might produce.*
- *Translating planning into action. A lot of dialogue about what will we do in conversation but need investment in vulnerabilities – someone will need to start with funding. Need to make sure that funds go into actual work not just vision.*
- *Barriers – To new innovation approaches – why effective, more than business as usual. Helping people make connection requires real commitment with all levels – all different areas including social, environmental, economic.*
- *Need time to build relationships and partnerships to have local facilitation and meetings around a common issue. Using these relationships to communicate with FEMA – organizing with RNN. How to incentivize communities – 3 areas – partnering, try different things under different areas, such as, playbook on how to do rebate program. To look at right pricing idea and loan issues. RNN creates accessibility. Fast growing (need land use) vs. shrinking communities (how to use open space for neighborhoods).*
- *Not bothering to actual look at what we are doing is working. There is not an awareness of local planning and no history of evaluation – need to adjust what doesn't work. Two kinds of barriers – perceived and tangible (state of adaptation surveys). Real barriers – lack of political will.*

- *There are many barriers, some of which are organizational and policy related. Other barriers have to do with the history of interactions between different communities within the community. Funding is often cited as a barrier, but I don't believe it is truly the biggest barrier.*
- *There are equity barriers and understanding risk. Have to have a coalition – policy people need to be on board with this. What is the cost – developer to do right thing – difficult things to say to people. Provide data, incentives, and deadlines, align w/ community goals- start with shared /inclusive dialogue among boards-be clear about action path-provide good models, tools – make the best path the easiest path.*
- *Demonstrate ease of change, ease of admin, and clear system value for community at all scales.*
- *Access to data (i.e.: small communities without GIS). Data too broad scaled — needs to be downscaled so it can be usable at local level. Don't parachute in and out — make sure you address and offer coordination/assistance with the “so-now-what?” phase (implementation phase.)*
- *Do not do follow-up to engage feedback. Barrier is allocation of resources to maintain dialogue – can only do once a year – get in and get out*
- *Concerned about how to recover Idaho economy. Only a few people speak resiliency and local businesses needs to know what it takes to meet payroll, which supply jobs in a town of 350 people. Need to get whole culture out there! Have to get commerce, admin, and association of counties, IEMA – getting to same level of understanding. “Resiliency is in the eye of the beholder.”*
- *Municipalities and other entities tend to consider the risks in terms of their own assets/ portfolios and not inclusive of externalized losses to... Residents, children, water quality, habitat, and sustainable systems.*
- *It is important to give them the risks on all dimensions anyway. Emphasize tangible goals/incentives, fiduciary responsibilities, and public safety but show how these are synergistically aligned with broader community interests (as above).*
- *Partners/ stakeholders (regional planning commissions, other agencies) that can authentically work together on shared goals – this has been a slow process to develop and requires continuing attention.*
- *We will also need to augment the incentives to promote more effective action toward flood resilience in Vermont.*
- *Approach people on their own terms.*

- *Barriers to political capital huge issue. Need balance. Getting buy in from strongest opponents – true sign of collaboration. How we remove barriers.*
- *Multiple dimensions but all has to do with social capital and what happens between people – social capital piece. If community has good infrastructure and economic vibrancy before event are better off – have capital to put in. Resiliency is never just local – always draw on neighbor, state, and feds, crucial to get back on your feet.*
- *Not talking about probability. Vulnerabilities to threats. Seen some done in comprehensive manner – starting with someone who knows the area. Know what people care about. Include most vulnerable groups, least resources – not a lot of choice (based on jobs etc). Homeless people – vulnerability assessment, need local people to tell you.*
- *A lot of capacity barriers – human power needed to do work with skills and skill set – local officials wanting to do better job – to have social resilience, social justice, and how to become more effective. Monetarily some have recovered and some have not.*
- *By being pro-active with mitigation save multi- million dollars savings. Consensus building. Development of peer groups at young age.*
- *One of the big dangers of working with community is that can only get part engaged in public process (liberal to conservation spectrum) – get louder voices, don't get silent majority. Outreach to usual suspects is really important to make a worthwhile process.*
- *Enabling people to be part of meaningful process technically and socially so that anyone can participate.*
- *Reaching out to individuals through marketing of workshops and selectively accepting invitations to present at forums that reach these types of individuals. Collaboration with the Association of Counties and the League of Cities (or maybe the same organizations at the national level) has been helpful in reaching elected officials.*
- *A lot looking at different things – some put resources into wildfires. Comes down to local communities and local leaders. Local person very proactive and works with local communities' local service announcements. A lot of programs looking at different issue such as just to wildfires. Need encompassing approach. Comes down to community leaders!*
- *Reliance on Federal Government. Communities need to have more cause and effect, more consequences and decisions to community level. System is set up as a Catch 22 – better you manage risk, less assistance you get! Barriers result because Federal government provides so much assistance and help. Risk for community isn't that great compared to us not managing risk. More consequences more/cause and effect consequences and decisions to community level. If*

*consequences community may make different decisions. As long as backdrop is there. Less incentive then there is communities to do more.*

- *I frequently come into many communities as a representative of FEMA (their consultant on levees). The most important item for success is the presence of a local champion. However, usually we cannot control/influence this.*
- *The #1 factor for success that we can influence is to understand “How the local community perceives the resiliency challenge and what their objectives are”. We cannot go in and impose our preconceived solutions onto their problems. Rather we can help them meet and tweak and achieve their goals by assisting them to understand available resources, what others have done in similar situations, and the constraints/boundaries they face.*
- *Terminology may be a problem here. By “community scale” I think you mean working at the local level to educate the public about risks that they face and encouraging active efforts to engage elected and appointed decision makers on how best to mitigate that risk.*
- *In Seattle, before my departure in 2004, we established a block by block program aimed at assisting neighborhoods to sustain themselves following an earthquake or some other disaster that would restrict the local government from being immediately available. We explained the possible negative consequences such an event, and provided training and exercises to assure that those blocks at least were prepared for the first 72 hours or so. To mitigate a communications effort, we enlisted amateur radio operators (over 100 in the city) to help maintain the basic communications capabilities we would need to be informed about developments. In engaging in this effort, we were also able to educate citizens about mitigation measures (retrofitting residences and schools) to allow people to take control of their personal safety. While we were able to convince the city council and several mayors that this was a good idea, they never took the next step and legislated against threats, and in one instance I was nearly fired for releasing information about landslide areas that the Administration at the time thought might thwart development.*
- *Solutions need to be local; there is no "one-size-fits all" approach but there are real opportunities to connect peers from different communities to share and exchange ideas. Collaboration is productive but requires good facilitation and leadership. With limited resources, it's also more productive to work with communities that show real commitment and enthusiasm (i.e., don't spend time chasing those that aren't interested).*
- *As always funding and resources. But as mentioned above, the number 1 success factor is having a local champion. By the way a local champion almost never comes forward until after a community has experienced a flood event.*
- *Because I am frequently looking at infrastructure issues, the ability and best practices to integrate public/private entities to work together to address resiliency. Neither group on their*

*own can move forward very far without the other. Too frequently the private sector considers the public sector as only their regulator and not their partner, and this friction extends to discussions about resiliency – meet requirements, but not a true partnership.*

- How to get beyond the “BELIEVERS” such as the planners, floodplain managers, code officials, and really reach out to private sector movers/shakers/influencers, and political decision makers.*
- There aren’t any barriers if the community wants to do a serious job addressing the hazards it faces. I take that back – the community may have the will, but not the expertise.*
- I’m not sure that FEMA’s hazard mitigation planning approach helps. It focuses way too much on technical data about the hazard and spends very little time on reviewing all the alternatives. There’s almost no public involvement, which is vital to get something that will work locally and that people will want to see implemented over the years. The result is a document that is 80% hazard assessment and 20% lists of things FEMA grants should fund.*
- Barriers are people’s time and commitment to moving this forward in light of so many other competing and compelling challenges*
- Local ‘culture’ influences priorities. It is difficult to make changes when key people wear many hats. What is working well is relating issues like climate change and need to address hazards to something in their daily jobs. Think of mitigation as another consideration in any community investment. Show how other agencies have a stake in it also (e.g., Transportation Dept. needs to consider risk from hazard in citing new roads and bridges).*
- “Local champion” is a cliché but it’s true; most plans and ideas turn into real projects when there’s at least one person (at an appropriate position) committed to taking action. And that person is usually connected to several other stakeholders and has good access to correct information and knows how to get things done.*
- Time and money are big barriers as well as level of interest and local politics*
- Attention is high after a disaster but when local staff changes, or elected official changes, previous efforts are discontinued or die out.*
- Right now we are clearly on the path of mounting losses from foreseeable natural events.*
- Development which externalizes future costs to disaster survivors, the taxpayer and the environment are poor planning and community development, and are highly dubious morally, legally and economically.*

**4. What type of support do you need to support your efforts and capabilities for disaster resilience?**

- Need more modern telecommunication. When disasters hit huge swaths are without broadband.*

- *Need to develop real meaningful appropriate tools for neighborhoods and district. Such as Green Star. Need awesome tools for conversation on resiliency but do not scare them off.*
- *Interagency cooperation to solve a problem.*
- *Support – most comes from within the County. State capital 6 hours from them. They have 5 different cities and all individual entities. Few Federal agencies in disaster plan – as they are National Park of Harpers Ferry and are on their own. They do call in and let County know what they are going to do, At local level go to State, then to FEMA – technical folks training at EMI. Where RNN going as far as developing peer to peer and having a clear mission is necessary to interview to get support from County Commission.*
- *Making things easily accessible- data, meetings easy for them – make data available. Efficient as possible, reducing redundancy, vulnerability scores – local plan and state plans – ranking vs. what the state has ranked. Similarities and differences. Methodology- has analysis is not what state is very. Analysis of why accuracy and how to align. Local actions – counterproductive actions happening. Making Hazard Analysis as efficient as possible linkages at state level as hyper local as possible. Level of risk understood. Illuminating disconnect – and begin conversation between local and state.*
- *Better framework for resiliency. Need Toolbox for DRR. Funds to evolve in a way that better communicate risk. If we don't have social scientists and sociologists more effective way to communicate resiliency and risk. Congress needs to do more with watershed support. Social media or density basis to increase awareness is huge and to recognize economy being part of resiliency and need to understand hazard.*
- *Find out what level of resiliency is “good enough” at the local level. May sound bizarre but communities have varying levels of risk compared to neighboring communities, and within a community some areas are more hazardous than others. Some folks can live with a level of risk while others need total mitigation; find the tipping point in your community area-by-area. Look OUTSIDE the hazard areas for what else are needed, additional open space, a transportation corridor, etc. and build support for resilience well beyond a target area.*
- *Received a FEMA grant for design but need funds to harden structures.*
- *Most important thing they need is an updated map. Map modernization only got to “preliminary” – need to have real map to regulate, to make sure property is not undervalue, and to stop having good spots taken out of development. Need political will.*
- *The urgent opportunity is to present a viable process by which to engage the whole community, using community participation methods, listening, and citizen involvement in research. Examples identified in international development and community health literature, the process has to be made simple enough for community stakeholders to make their own.*

- *My recommendation is for NHMA CTP to identify leaders from RNN active communities and have them become the evaluators and pilot trainers of the curriculum...this of course depends on results from RNN work accomplished.*
- *Involvement of the “Whole Community” involving all stakeholder groups, including underserved populations is essential to long-term recovery. Following disasters look for opportunities to properly plan for and mitigate hazards; rather than quickly rebuilding so as to return to “normal”. Such quick and irresponsible planning only serves to create disasters in the future. Remember, the post-disaster “window of opportunity” lasts a relatively short period of time; residents and business will quickly pressure their locally elected officials to let them return to their homes.*
- *More support in the RNN and talk with the neighborhood levels. Neighborhood training trumps anything – having same awareness and same level of risk. Tsunamis vs. flooding. Change and priorities and what’s your implementation measures – when response not the same. Something to chew on and keeps you involved and how to rotate. Wearing so many hats helpful to have RNN because sometimes one community is so busy and can turn to others for help to carry torch. Helps to maintain base system.*
- *If improvements are going to be to building codes – need good solid technical discussion. Need stakeholders at the table – tenant and landlords.*
- *We all need to be in an area of solutions. Not just working in a vacuum sensitive to all parts of community. Need to know how to fund solutions – insurance companies need to come up with solutions and incentives?*
- *Start by seeing the answer to question #1. We don’t work at that level. However, I do believe from long experience that planners must be willing to assume the role of educators for the community with regard to the consequences of the development choices the public and decision makers make. That should inform a highly participatory process.*
- *It would be helpful for organizations like APA, in the role that we play, if we could find foundations that were not only willing to tackle this issue but to maintain a commitment to the subject matter over a period of years. Foundations have a habit of shifting gears after underwriting some interesting initiatives, and leaving their grantees high and dry. I think they need to listen more to the real needs of the communities they are supposed to be helping.*
- *How to interest people in the topic of disaster recovery and hazard mitigation during long lulls between events, when there is a tendency to forget about such issues and plunge forward, sometimes, with questionable development practices.*

- *Ensure that funding streams from state and fed require climate resiliency and design standards are utilized – make it a requirement for infrastructure. How people see what is most successful – learning from neighbors!*
- *Have to work at community scale – get in your car and drive over there day after disaster. Decisions are being made at that point. Cleaning houses, roads, not necessarily addressing substantial damage issues. Do a lot of emergency planning. If not they're with boots on ground – not meaningful.*
- *Support – need sustained funding to practice and play. Need EMPG funding. – Emergency Manager Performance Grant. Have \$350 million nationally – every state gets a check – bread and butter of emergency management but it is 50-50 match. Need to have staff to be able to jump right in – VT has transportation funds and a planning initiative with federal highway and supports a transportation planner. Regional Planning agency maps culverts and GPSs conditions and types – gave example if road around it damaged and culvert not – then feds say culvert not damaged. – Need to address this.*
- *Need range of support from all community leaders. Identifying folks and tracking information – doing predictive modeling. Have someone that knows who is doing what. Storm water captures – need community by in but need ownership of lot. All support from agencies, state, federal (not just data – needs facts and information) not in report – universities – to be able to use info more? – Depth grids – help from FEMA HAZUS. Database of Tools – how do we get strong info and data that is being used effectively to make sense? Something to use easily – not how to use tools and data – info that is simplistic. Anything that encourages communities' engagement – not just power point but what interest communities. Here's great opportunity to make community more livable and more prepared and ready. To continually update (not sitting on shelves) less from prevention approach but used for comprehensive approach.*
- *Assessing whether things are working so that they can be shared more broadly. Monitoring. And address how curriculum can connect with other organizations on their dashboards.*
- *Mechanisms and formats for networking with other folks at the local level. I would like to hear from the communities. They have a lot to share and should have active voices, not just be treated as recipients of knowledge.*
- *Need broad coalition of support. As local policy maker need local, state, federal, non- profit and academic. Need to understand human behavior. Layer in issues and trying to get people to understand – whatever training we do make sure it is manageable chunks.*
- *Funding to increase internal resources so state can provide the level of support to local communities that are being asked. Political will at local and state levels to change policy and create consistent funding streams for hazard data development, mitigation technical support, and integrating mitigation and resilience into other plans and policies.*

- *Tying in to plan, reevaluating risk and priorities. Economic recovery from recession isn't happening – lowest income in highest risk area. Very challenging to talk flood insurance. If don't mitigate won't recover economically.*
- *Elected officials need more education to work through what to do. Only a small minority of officials gets it. Need to educate local elected officials. A good resource is: <http://www.nap.edu/catalog/13028/building-community-disaster-resilience-through-private-public-collection>*
- *An effort is being launched at AMS, using targets of opportunity nationwide. The AMS has more than 120 local chapters nationwide, and we also have about 1300 broadcast meteorologists distributed in major and small markets across the country. We also have a K-12 education program that's reaching into local communities and even working with local emergency managers. These are great assets for helping local communities build weather-resilience/contribute to NOAA's Weather-Ready-Nation program and shine a spotlight on what's happening locally.*
- *If DRR going to be successful must be completely professional with a cultural shift of understanding why so important. To give credibility to say a wildfire mitigation specialist provides a training course assessing wildfire hazards – really important for people to know. Need credit for them – so hard to tell them the connection to then build capacity. Need to value these skills – it's a huge societal thing. Needs to trickle down or come from the grassroots.*
- *A lot of piece meal work. Ideally, resiliency would have someone dedicated to allow staff to do education. A lot of people doing resiliency work – doing as on a part of tiny jobs – in an ideal world it would become more of a staff sources. Her work is tied to grant funding but not at all level of communities have fire chief or public works. If someone dedicated to this worth more time to educate public.*
- *Other RNN's – CRS is a part of what they do. Even if going to implement local zoning codes if don't have people understanding they won't make them. Could be lack of funding for all programs but if pooled funding could be mixture of all funds. Even a little bit dedicated to do education.*
- *Use preparedness and ready.gov from FEMA. Credibility when using FEMA material. But could use more available free materials that are attractive and informative that individual could use and community can use. RNN – learn from other communities. Peer to peer always helpful. Commissioners see as a resource and that they have best practices. All Hazard plans and solicits comment by survey. Some people understand risk, especially if repetitive loss property. Climate change is more remote to most. Education about risk is key.*
- *Smart – Safer Coalition has various interests and lobbied on flood insurance legislations.*

- *Requiring wholesale changes to react to and fund disaster. Efficiency in Mitigation. Smart growth strategies and hazard mitigation measures have similar goals. Both aim to make communities safer, healthier, and fiscally responsible. Communities across the nation use smart growth strategies to ensure that new development or redevelopment benefits the entire community and that limited public resources are used as efficiently as possible. Hazard mitigation works to keep people and property safe by reducing risk.*
- *Nature Conservancy works with insurance companies, environmental groups, and fiscal conservatives, affecting federal policy and reviewing market mechanisms to finance and review what will change and how to bring in re-insurance.*
- *Interviewee is very willing to help NHMA at Federal level and to help with Hazard Mitigation and Community Resiliency. Communities that better integrate smart growth approaches and hazard mitigation can use funds and staff time more effectively, make development rules clearer and more predictable for developers, and keep people and property safer.*
- *Funding investment in community that is focused on building a practice is a huge barrier.*
- *Don't have enough conversation about resiliency. At local community level, local communities don't have own technology and technical know-how and building a public conversation on it. A lot of things to implement need money. Most incentives toward rebuilding in same place — tax incentives — what if you actually have incentive! Need to rethink very fundamentally how we fund — huge barrier and need. Need right conversation.*
- *Stable funding and commitment to mapping and mitigation. Ongoing federal and state grants augment local funds. To do mitigation, upgrade flood maps — ongoing funding is critical to us. Show partnerships. Can take our annual funding and leverage our money to stretch dollars. It's a win/win because we can do more. Other — training. Examples of: How'd you deal with substantial damage? Flood buyouts and specialties. What's unique about RNN — don't need to be the best in everything. Document there and provide comprehension brand spectrum — if other communities have contracted out or not. Not have to find out — from FEMA — how did you get it done? Backbone funding if we will fund these communities to come out and train you guys.*
- *Being able to have ready-made materials before during and after. Money so that can have material to send out. Resources available to support local community and continued efforts for education. 2007 - DES — Dept. of emergency services — state plan just completed — has been struggle EF's (emergency functions) not complete so have gross policy book — what are hazards, if event — what happens in each community. EFs not being as knowledgeable — having someone come in for community.*
- *I mentioned the snap-back problem. I alluded to the problem of traditional planners and leaders reverting to old practices and plans once an outside facilitator has left town. I come back to this role of outside facilitator because that has been my field — going into communities, sometimes*

*with small teams of experts in relevant skill sets to facilitate action. Egos come into play when an outsider comes to town, as though an outside expert is a criticism of the job that the local planners have done. It's very important to get them on the facilitator's side, sometimes by having them invite outsiders into the planning process, or giving them credit for bringing expertise in, and praising the work they've done in the past.*

- *One other thought about appropriate technology. There are marvelous and highly sophisticated tools available today to democratize planning, help people visualizing what must be done and what it would look like, etc. (Visualization is very powerful by the way.) But I've found that it's important not to use technologies that intimidate the community, or make an outsider feel like an outsider. This is a hard one to explain clearly, but sometimes it is more effective to use a flip chart than a PowerPoint program, or scale models that people can play with rather than sophisticated software.*
- *I worked with the Department of Energy during the Clinton Administration and created the Center of Excellence for Sustainable Development, which worked with more than 100 communities, many in disaster recovery situations. We negotiated an MOU with FEMA to integrate sustainability and clean energy options into its recovery programs, including establishing sustainability desks at the disaster assistance centers FEMA sets up immediately after disasters. There is some talk at DOE today about creating a similar MOU with FEMA.*
- *I want to underscore again the importance of helping communities visualize what resilience looks like. There are many tools to help -- visual preference surveys, Photoshop, etc. We made heavy use of visuals in another project I and two colleagues did with the United Nations prior to and during Rio+20 -- the UN's big international conference on sustainability a couple of years ago. We got the UN to adopt the theme of "The Future We Want" and to invite people around the world to send their input, both verbal and visual. We found that words cannot begin to be as effective in communicating the impact of resilience on improving people's lives -- including what it would look like in their neighborhoods, homes, schools, business places and the community at large.*
- *As you might expect from my comments so far, the use of appropriate visual tools would be a great topic. A webinar on different formats, tools and organizations that can help with whole-community approaches might be useful. For example, the American Institute of Architects used to sponsor local design charrettes and back in the day there were plenty of guidebooks on how to do them. A webinar on the input and insights you've gathered from these emails could be a great topic. Or a webinar on how to most effectively communicate about the need for and multiple economic, health and safety, aesthetic benefits of resilience efforts (whether or not the audience accepts the reality of hazards of global warming).*
- *The obstacle in general to community level efforts are elected officials who cannot envision themselves explaining - post disaster - why they did not mitigate obvious risks pre disaster -- they*

*are betting that this will not occur on their watch. Until those officials see mitigation as an investment that assures safety and as a support of continuity of commerce, government and the social equilibrium there will be limited pockets of success.*

- *Too often the impetus for mitigation is a “top-down” effort, and the federal interest is not altruistic — its financial. The most recent argument for mitigation I have heard from FEMA is that they don’t want to repetitively have to fix the same problem.*
- *Mayors, city council members, county and state officials need to recognize that their political futures and their legacies are tied up in minimizing severe damage ONE time. That is all it will take to derail their term(s) in office. FEMA may be “eternal” but elected officials are temporal and vulnerable if the public feels unprotected.*
- *I think most people are willing to consider and acknowledge the credible information about the risks their particular community faces. When we presented earthquake risk data to citizens in Seattle, and in Washington State when we presented, for example, tsunami risks to the west coast of the state, we also balanced the threat with what my smart staff called “efficacy” messages. In short, don’t drop a problem on people and not give them an avenue where they can minimize the threat through their own actions. Whether that is accomplished through a practiced evacuation, or mitigation measures, or some form of warning system that activates a series of protective measures with which the public is aware, or a combination of the above, this education should also be viewed by the public and decision makers against the likely consequences of being unprepared, and the threats being unmitigated. Look at the likely consequences and then try to minimize if not eliminate the worst case scenario.*
- *To emphasize, don’t drop a threat on people where there is no alternative to disaster. We should have learned that from the nuclear armament scares – there was no way to go if that balloon went up and often the threat was met with resignation and despair.*
- *Repetition is important. NFL quarterbacks repeat and repeat and repeat their cadence, their steps, their reading of defenses, even after years of doing so. A mitigation-savvy community will have turnover in both political leaders and changes in the social makeup of the community. People will move in, others will move out. I once heard that the state of Florida after Hurricane Andrew passed legislation aimed at improving mitigation, and ten years afterward with their aging population that had experienced the hurricane and was generally supportive of the mitigation had passed away, followed by people who moved in, elected legislators who wondered what these controls were all about. That story may be apocryphal, but in essence that can happen in most communities. A grass roots understanding of the need for community support for mitigation needs to be sustained, and from that will spring a demand for local leaders to calibrate mitigation requirements into community development conversations, not as a block to that development, but as an investment to allow the confidence that every valid mitigation concept has been inserted. And that strengthens the case for mitigation.*

- *What is needed anywhere, whatever the primary threat facing a community, is the political leadership and courage to imagine the chaos and destruction that the worst case likely event could cause, consider what recovery or restoration efforts would be needed to get the social equilibrium (commerce, transportation, schools, employees, power, supply chains, etc.) back in balance, and how quickly that could be accomplished. This includes what new legal authorities would need to be provided, what relocation or reoccupation decisions would be entertained, what financial burdens would be imposed, what businesses would be destroyed or badly damaged, and finally, WHAT WOULD THEY HAVE WISHED THEY HAD THOUGHT OF AND DONE BEFORE ALL THAT HAPPENED. And then, they can begin to methodically address the mitigation, preparedness response and recovery challenges in advance. Who will lead this inquiry? Who will cooperate with it? Who needs to be at the table? Can we engage the public so they can participate and advise on the knottier issues that affect them directly, in their neighborhoods?*
- *Political leaders might be surprised to learn how smart their constituents really are if they try this.*
- *Caution that political leaders should not be written off as the enemy as so often happens when strident community leaders (themselves not always spokespersons for a lot of people, but merely the loudest voices) begin attacking elected officials: they should be invited to join in, and community leaders should try to understand why they might be hesitant to tackle these issues, and then have their back if they do jump in.*
- *Case studies of successful local efforts. I've done one on the post-flood project we did in Conway, South Carolina, that's used as the example for <http://recovery.stormsmart.org/>.*
- *Our Fire Adapted Communities Learning Network has developed a community self- assessment tool to help stakeholders (including the public) understand their unique wildfire risk and prioritize areas requiring future work.*
- *Reassurance of ongoing funding to provide uninterrupted services*
- *In the face of all of the many resiliency efforts out there, how does a community know which one to pick? Does it matter whether or not we are united in our efforts, or is it more important for a community to simply committing to some type of resiliency/risk reduction activity? Perhaps this topic could be interwoven into a currently proposed webinar.*
- *Good risk data. Good ways to display how the risk affects the community (more than just maps).*
- *Showcase best practices, not just from big disasters.*
- *More metrics on how long a project can take from mitigation plan "action" status to "in progress"*
- *Commonalities between climate change adaptation and disaster resilience*

- *Best practices and examples of communities that rallied the public and officials to mitigate risk and lead to action. It would be ideal if it was a time other than after a big disaster b/c that is much more readily available.*
- *Within the city, county (whichever jurisdiction) have a champion- someone who gets the importance of this subject through and promotes it through the organization. Who is going to own it and be held responsible? Example- the city manager's office.*
- *Citizen input is really important. Memories are often short when disasters come and go. People that have been affected by a disaster don't forget as quickly. Need representation from citizens? Also include the business community, make sure they are connected with police, fire and hospitals. A once a month community committee meeting is a great way to get everyone connected.*
- *Be creative — gave goat grazing as an example. Roseville received grant money to have goats come and eat the weeds, also became a tourist attraction.*
- *The best way to communicate is through visuals, this will show them how they will be impacted. The use of maps and online tools- people can type in their address and look at the map and the tools will show them the different hazard levels.*
- *You need a champion and to reach out to the community (it can take time)*
- *Adopt a process and make sure it is accessible- post it on your website- explain what projects are going on and their progress.*
- *Barriers- always time (staff, council agendas) and money (funding)*
- *Webinars- since people don't travel anymore, webinars are a great resource. Get service organizations involved, cities, regions, FEMA, etc.*
- *Effective hazard mitigation following in the wake of a major disaster requires a carefully planned "Whole Community" approach when assessing damage and determining the way forward. A speedy recovery rarely involves building back more resiliently and safely.*
- *Realize there are a variety of funding sources that become available following a disaster that support hazard mitigation.*
- *Ideally one should avoid developing in hazard risk zones. However the economics of development will often drive development into such areas. So, if you must develop with much higher standards of safety such, than are currently in general use. Four Feet of Freeboard above FEMA set Base Flood Elevations is one specific example.*

- *Following disasters look for opportunities to properly plan for and mitigate hazards; rather than quickly rebuilding so as to return to “normal”. Such quick and irresponsible planning only serves to create disasters in the future. Remember, the post-disaster “window of opportunity” lasts a relatively short period of time; residents and business will quickly pressure their locally elected officials to let them return to their homes and businesses.*
- *After a disaster, opportunities to create greater resilience are only limited by the imagination of the community, especially those controlling decisions.*
- *Not all hazard mitigation solutions have to be million dollars solutions. Higher codes and standards, pre-arranged agreements and local collaboration is important tools that can be used for hazard mitigation.*
- *Speed of recovery is not always effective in building a more resilient community. Taking time and doing proper deliberate planning is more important.*
- *Involvement of the “Whole Community” involving all stakeholder groups, including underserved populations is essential to long-term recovery.*
- *Ability to identify and bring all sectors together in the DRR training. A holistic approach that is solution based and provides a road map on how to create a Chief Resiliency Officer locally. Key factor is addressing economics of communities and economics related to DRR from insurance perspective, building perspective and holistic community perspective.*

**Table 1. Interview Response Highlights**

	<b>Set 1: Lessons learned? The Secret Ingredient to Success?</b>	<b>Set 2: Risk Assessment Process Focusing on Community?</b>	<b>Set 3: Barriers Met?</b>	<b>Set 4: Support needed for Disaster Resilience?</b>
1	<i>Important to work at local and regional level and to leverage connections.</i>	<i>Climate modeling under HUD sustainability project but not sure public is aware of this. Irene showed VT that we don't know neighbors</i>	<i>Need new type of funding.</i>	<i>Need more modern telecommunication.</i>
2	<i>Connections and relationships first and foremost. All people connected with relationships – sandbags didn't save community.</i>	<i>Hazard and disaster risk at inside building scale not at neighborhood scale/city wide scale, which is the vulnerability level. Huge gap.</i>	<i>Top down approach can be very quickly turned into political agenda. Barrier to get out of way – how to create Chief Resilience Officer - - need to be getting out of city hall, knocking on doors.</i>	<i>Need to develop real meaningful appropriate tools for neighborhoods and district. Such as – green star. Need awesome tools for conversation on resiliency but do not scare them off.</i>
3	<i>Working downstream (i.e. educating those that have direct contact locally with general population, realtors, teachers, first responders, government officials and organizations). Helping local organizations identify potential sources of funding and requirements.</i>	<i>Family members. Economic well-being. Loss of community. Fundamental shift in understanding of risks and hazards with younger generation (concept of safer and 24/7 accessible services). Greater reliance on community resources than individual/family.</i>	<i>Need lead organization/individual to spearhead.</i>	<i>Interagency cooperation to solve a problem</i>
4	<i>Biggest secret to success is “to strike when fire is hot.”</i>	<i>CRS – PPI adds believability with repeating message. Very difficult to get public input. A lot of apathy. CRS Public information credit – adds to believability facts-repeated message. A whole lot of sources. Utility bill stuffing is most effective.</i>	<i>Barriers are primarily money – we have found that single most important message is outreach. How to track what is effective and review phone calls. Rd blocks getting people aware.</i>	<i>Making things easily accessible-data, meetings easy for them – make data available. Efficient as possible, reducing redundancy, vulnerability scores – local plan and state plans – ranking vs. what the state has ranked.</i>

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5	<i>If we want community to change we need to recognize hazards. Very future thinking and recognizing tourism that economic resiliency has to do with future success. Very keyed in to needs of community need.</i>	<i>Put together a plan – council made deliberate action. Moratorium on all future development and high water marks for master plans for regulating to high water marks. Poster child – if we want community to change we need to recognize hazards. Very future thinking and recognizing tourism that economic resiliency has to do with future success. Very keyed in to needs of community need.</i>	<i>Election cycles work against us. Human interest and short-term memory for disasters. Most people don't understand long-term planning. A community can get it right, (without waiting for funding) – identify the problem and need to call friends for help, then leadership talks to town council and gets council's support, and asks people under mutual aid group.</i>	<i>Better framework for resiliency. Need Toolbox for DRR. Hazard Mitigation has two components: 1) planning and 2) execution. Planning – Master plans have helped communities themselves to really sort out where problems are and to look for alternatives and to optimize their resources for resiliency. – Congress needs to do more with watershed support.</i>
6	<i>Focusing on highest risk target mitigation areas, rather than individual projects. Single projects are very time intensive and true risk reduction needs to look beyond the footprint of a single property at risk.</i>	<i>Advocate of No Adverse Impact the ASFPM do no harm approach. It seems to resonate well at the individual and community level and advocates developing activities that really address local situations with the 'do no harm' focus. People get it, then it is a matter of communicating risks that are real to people</i>	<i>The one-size-fits all approach of the FEMA NFIP, and some other state and federal minimum regulatory standards don't work at the local level.</i>	<i>Find out what level of resiliency is "good enough" at the local level. Some folks can live with a level of risk while others need total mitigation; find the tipping point in your community area-by-area.</i>
7	<i>Community Outreach and public participation process. Success is going to their events during holidays, like a rodeo festival.</i>	<i>Had no risk assessment – did not know of risk map or HAZUS.</i>	<i>Language barrier is an issue with 62% being Spanish population.</i>	<i>Received a FEMA grant for design but need funds to harden structures. Peer to peer exchange of information on funding opportunities.</i>

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<b>8</b>	<i>Having multiple different messages that go out. Flood information doesn't really kick in until flood. So find helpful to have flood because creates awareness. Need to keep people aware of risk – people want to think it's being taken care of.</i>	<i>Full process undertaken with Emergency Management Division – full comprehensive, river risk analysis. Needs of each watershed – cost – benefit – analysis. Several levels of risk management. Need broad range to communicate 2 outreach specialist – social marketing tools – how to measure? How to change people's behavior?</i>	<i>A lot of organizations get broken up into different silos. Some in economic development – looking for open land and create jobs. Sometimes creates a mixed message – not a good place in floodplain. Trying to get one voice for county.</i>	<i>Most important thing they need is an updated map. Map modernization only got to "preliminary" – need to have real map to regulate, to make sure property is not undervalued, and to stop having good spots taken out of development. Need political will.</i>
<b>9</b>	<i>The template developed by TNC to develop NHMPs seems to work well (used in about 20 communities so far).</i>	<i>The discussion of risk assessment is a start. The larger community engagement templates that address other related issues should also be used (and are being used throughout nation).</i>	<i>The principal barrier is the complexity of the discussion...new definitions and concepts. The urgent opportunity is to present a viable process by which to engage the whole community, using community participation methods, listening, and citizen involvement in research.</i>	<i>My recommendation is for NHMA CTP to identify leaders from RNN active communities and have them become the evaluators and pilot trainers of the curriculum...this of course depends on results from RNN work accomplished.</i>

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<b>10</b>	<p><i>Wise land use planning prior to a disaster is the best and most cost effective means of reducing risk from hazards.</i></p> <p><i>There are a variety of funding sources that become available following a disaster that support hazard mitigation and businesses.</i></p> <p><i>Not all hazard mitigation solutions have to be million dollar solutions.</i></p>	<p><i>Effective hazard mitigation following in the wake of a major disaster requires a carefully planned “Whole Community” approach when assessing damage and determining the way forward. A speedy recovery rarely involves building back more resiliently and safely. You must develop with much higher standards of safety than are currently in general use. Four Feet of Freeboard above FEMA set Base Flood Elevations is one specific example</i></p>	<p><i>Development which externalizes future costs to disaster survivors, the taxpayer and the environment are poor planning and community development, and are highly dubious morally, legally and economically.</i></p> <p><i>After a disaster, opportunities to create greater resilience are only limited by the imagination of the community, especially those controlling decisions.</i></p>	<p><i>Involvement of the “Whole Community” involving all stakeholder groups, including underserved populations is essential to long-term recovery.</i></p> <p><i>Following disasters look for opportunities to properly plan for and Mitigate hazards; rather than quickly rebuilding so as to return to “normal”.</i></p> <p><i>Post-disaster “window of opportunity” is short; residents and business will quickly pressure their locally Elected officials to let them return to their homes.</i></p>
<b>11</b>	<p><i>Teams are important- public &amp; private</i></p>	<p><i>Identify what the risks are Forces mitigation and code helps to pick higher standard and code, maintenance and new construction</i></p>	<p><i>Industry (economics) vs. community goals is part of good of community but wan to achieve high level of standards and don’t equate. Integrating competing goals – resiliency – not always same standard.</i></p> <p><i>Pressure not always the same.</i></p>	<p><i>More in the RNN and talk with the neighborhood levels. Neighborhood training trumps anything – having same awareness and same level of risk.</i></p>

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<b>12</b>	<i>Always collaboration and partnerships, more partners and stakeholders – more chance to advance issues. He sees as code process all the time when going to amend proposal being able to have a unified front.</i>	<i>More cost benefit analysis in general. Amt membership is involved with Disaster Response to get in touch with their members to volunteer (why they failed etc.) or why they worked.</i>	<i>Barrier to educating and communicating about risk. For instance, maintain a recommended list of high priority things we can adopt, yet decisions at local level with all stakeholders at land use level and building level.</i>	<i>If improvements are going to be to building codes – need good solid technical discussion. Need stakeholders at the table – tenants and landlords.</i>
<b>13</b>	<i>Not just talk about problems but talk about solutions. Elected officials need to learn to have a conversation and build awareness. Building awareness about risk.</i>	<i>Recognize that risk assessment is difficult – need to create common language. Create opportunity for conversation about risk and economic well-being.</i>	<i>Flip side of barriers is that communities think holistically and cut across silos.</i>	<i>Insurance companies need to come up with solutions and incentives?</i>
<b>14</b>	<i>Paradigm shift. Prevention side when dealing with climate need to work together in whatever capacity. Urban – rural interface with fire and homeowners knowing consequences. “Trade out system”.</i>	<i>Review from “fresh slate” point of view – how we would design to be energy efficient etc.</i>	<i>Holistic planning – look at land not just as city, state, tribe but by who is affected by us downstream (example such as salmon shed, hurricane shed, tornado shed)</i>	<i>Peer to peer – rancher to rancher – good example of how to make people shift from human thinking paradigm shift to constructive to environment.</i>
<b>15</b>	<i>Relate information to what people are familiar and to what others have direct experience with so that they can translate to future conditions.</i>	<i>Whole community approach</i>	<i>Need to make sure that funds go into actual work not just vision.</i>	<i>How people see what is most successful – learning from neighbors!</i>

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<b>16</b>	<i>Needs to be part of something they are already doing. Built into other initiatives, incorporate into what they are doing. Need someone who is focused on it all the time at community level.</i>	<i>People are aware of their risks not so much risk but solutions. Coordination is hardest part and financing for it is hard. Educating new people on risk – educating on earthquake.</i>	<i>Data and decision support – gap. Deciding which path to go down in economic staff – building time and partnerships.</i>	<i>As Federal person need time to build relationships and partnerships. For instance, local facilitation and meetings around common issues – don't talk to people – ability to come around a common issue and plan it out. Using these relationships to communicate with</i>
<b>17</b>	<i>Towns that did well communicated well. Addressed rumors. Need to take time to have meetings and inform people. Need to build trust and proactive before an event.</i>	<i>Risk assessment process happens at HazMat planning process. Living with climate caused by emissions will make it a lot worse; seem to underestimate coming risk. Need to show pictures and signs – blue line on things – this is high water mark.</i>	<i>Need to have boots on the ground immediately in post event – decisions are being made.</i>	<i>We need sustained funding to practice and respond and to mitigate. Look at EMPG funding – emergency managers performance grants. Need more education for realtors and lawyers about selling and buying of land. Thinks YouTube is a good educational type of webinar format. Wants DRR in modules.</i>

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<b>18</b>	<i>Having conversation – how they have been impacted – how damaged in 2003 and how hurricane sandy sat over them. Can talk about these things.</i>	<i>When it comes to people accessibility – how do they feel – comfortably – not just low hanging fruit – what do we address? Something is in our control and come not. “Resiliency center” – heating shelter cooking. More comprehensive approach.</i>	<i>Barriers – money / personnel. Live in community – a lot of? – Don’t have full team.</i>	<i>Need range of support from all community leaders. Identifying folks and tracking information – doing predictive modeling. Anything that encourages communities’ engagement – not just power point but what interest communities. Here’s great opportunity to make community more livable and more prepared and ready.</i>
<b>19</b>	<i>Need political will. A lot of people on fence - not a lot of examples of political will to make it happen. Need a very slow and laborious approach – starting with what people care about.</i>	<i>Do vulnerability assessment and opportunity – use a whole model and have people be part of process, to build capacity and be part of work.</i>	<i>Not bothering to actual look at what we are doing us working.</i>	<i>Assessing whether things are working so that they can be shared more broadly.</i>

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<b>20</b>	<i>The various groups must listen to each other, respect each other, and accept disagreement. At the local level, I have found that identifying the intersections of interests/goals is critical to ensuring that very diverse groups can work together towards risk reduction.</i>	<i>Community members care about a wide range of issues and are dealing with stressors ranging from poverty to chronic environmental degradation and accompanying health risks. It is difficult to engage in a conversation around risk reduction when we refuse to take these underlying factors into account. The challenge is that underlying stressors have a lot to do with how we organize our societies and require a type of systemic change which is not often discussed in the US as part of risk reduction.</i>	<i>There are many barriers, some of which are organizational and policy related. Other barriers have to do with the history of interactions between different communities within the community. Funding is often cited as a barrier, but I don't believe it is truly the biggest barrier.</i>	<i>Mechanisms and formats for networking with other folks at the local level. I would like to hear from the communities. They have a lot to share and should have active voices, not just be treated as recipients of knowledge.</i>
<b>21</b>	<i>All about relationships. A lot of education and inclusion of people, of not just usual suspects repetitive messaging. Meetings can cause "Planning Fatigue" so need to balance and keep interesting. Have benefited from "almost flooding", it activates people who might have become complacent, Framing is policy makers' role – what will trigger public response.</i>	<i>Need to work with insurance people. Need whole community understanding for business and continuity of operations and to individuals. Partnering with FEMA's Preparathon – memory is short-term. Risk Assessment has to be whole community – what kind of community do you want? Building a safe room is not a requirement but need to do it and have to find a creative business model. Equity issues or some can't afford to have place with safe-room. Can't afford to have food on table. How to use issue of equity to heighten people's awareness.</i>	<i>There are equity barriers and understanding risk. Have to have a coalition – policy people need to be on board with this. What is the cost – developer to do right thing – difficult things to say to people.</i>	<i>Need broad collation of support. As local policy maker need local, state, federal, non-profit and academic. Need to understand human behavior. Layers of issues and trying to get people to understand – whatever training we do make sure it is manageable chunks.</i>

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<b>22</b>	<i>Make it easily accessible (data, maps). Respect local priorities and information.</i>	<i>Keep hazard/risk messages simple and repeat.</i>	<i>Don't parachute in and out—make sure you address and offer coordination/assistance with the "so-now-what" phase (implementation phase.)</i>	<i>Political will at local and state levels to change policy and create consistent funding streams for hazard data development, mitigation technical support, and integrating mitigation and resilience into other plans and policies.</i>
<b>23</b>	<i>Economic recovery from recession isn't happening – lowest income in highest risk area. (Need to really come together).</i>	<i>Tying in to plan, reevaluating risk and priorities.</i>	<i>Only a small minority of officials gets it. Need to educate local elected officials.</i>	
<b>24</b>	<i>Resiliency, systemically and structurally has two different methodologies on how to obtain. It is necessary to not just look at functional resiliency – we can fix bridges, culverts but how do we get main street stores back open – the social, economic side is not addresses.</i>	<i>Best thing they have is plan revision and maintenance and doing missionary work – which needs to do and be involved in work.</i>	<i>Barrier is allocation of resources to maintain dialogue</i>	<i>Concerned about how to recover Idaho economy. Need to get whole culture out there! Have to get commerce, admin, and association of counties, IEMA – getting to same level of understanding. "Resiliency is in the eye of the beholder"</i>

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25	<a href="http://www.nap.edu/catalog/13028/building-community-disaster-resilience-through-private-public-collaboration">http://www.nap.edu/catalog/13028/building-community-disaster-resilience-through-private-public-collaboration</a>			<p><i>An effort is being launched at AMS, using targets of opportunity nationwide. We have a K-12 education program that's reaching into local communities and even working with local emergency managers. These are great assets for helping local communities build weather-resilience/contribute to NOAA's Weather-Ready-Nation program and shine a spotlight on what's happening locally.</i></p>

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26	<p><i>Helps with recognition program and having a behavior change – if leaders doing it “spark plugs” first. Needs an advocate to work with National program. Need partnership to reach people. Need local champion. After getting familiar with Firewise – locals realized on their own should have ordinance. People adopting new theory and behaviors – Everett Rogers – “Diffusion of Innovation Theory”. Innovation is voluntary. – Like recognition process criteria but not so structured.</i></p>	<p><i>Risk assessment – what matters to them. What will fire mean to their site? “Most doomed” – there are example of what work, what to emulate. Site specifics stuff. People can accept and can understand science – if give it in clear way. A scientific fact.</i></p>	<p><i>Provide data, incentives, and deadlines. Align w/ community goals start with shared /inclusive dialogue among boards be clear about action path provide good models, tools – <u>make the best path the easiest path.</u> Demonstrate ease of change, ease of admin, and clear system value for community at all scales</i></p>	<p><i>Thinks Risk assessment so important but so difficult. Try to teach, train to be well trained, conduct risk assessment that is for locals – need info on where to get started – To first understand risk. If DRR going to be successful must be completely professional with a cultural shift of understanding why so important. To give credibility to say a wildfire mitigation specialist provides a training course assessing wildfire hazards – really important for people to know. Need credit for them – so hard to tell them the connection to then build capacity. Need to value these skills – it’s a huge societal thing. Needs to trickle down or come from the grassroots.</i></p>

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27	<p><i>It is important to engage the community as inclusively and thoroughly as possible. Try to engage stakeholders that bring multiple perspectives to the decision – including the people affected by flood risk and watershed groups. Do your homework – prepare data, handouts, focus on the local situation, and good graphics in presentations. Respond to questions and needs promptly. Be clear about what the opportunity is and what decision needs to be made.</i></p>	<p><i>In Vermont we have pulled together available data on risks (structures, insurance costs, public losses, incentive info etc.) and provided access online through the Flood Ready Vermont website. These data provide a (rare) measureable basis by which to prioritize and evaluate avoidance and mitigation actions. Each community has its own experiences, stories and needs.</i></p>	<p><i>It is hard to communicate risk. Of all the frightening and precarious elements in the lives of people...it is hard to consider and weigh in medium-term risks. To avoid the difficulties and costs there is a high premium on denial. Municipalities and other entities tend to consider the risks in terms of their own assets/ portfolios and not inclusive of externalized losses to.... Residents, children, water quality, habitat, sustainable systems.</i></p>	<p><i>Partners/ stakeholders (regional planning commissions, other agencies) that can authentically work together on shared goals – this has been a slow process to develop and requires continuing attention. We are now able to track municipal actions on specific actions toward the ERAF benefit. This is very informative. We will also need to augment the incentives to promote more effective action toward flood resilience in Vermont.</i></p>

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28	<p><i>Approach people on their own terms. Trying to work in community authentically - is initially artificial. People in community hear a lot of noise and are very good about detecting fakes. Community has intelligent input – need to adapt plans. Plans need to actually include their input. Outreach in person. Not just to send emails but need to go into neighborhoods and talk with them.</i></p>	<p><i>When talking about risk communication (need to lay it on table). Evaluation doesn't make building dangerous – not having knowledge puts you at risk. "Not having knowledge makes you. Risk assessment - one example is private schools program. Mandatory evaluation – know it will drive retrofits – if parents write checks for education think "my kids are safe" vulnerable". Not having the knowledge makes you vulnerable. It is only by educating community about actual risks and vulnerabilities that allows communities to successfully adapted plans</i></p>	<p><i>Get successful policy by educators. Many associated with Hazards Mitigation – balance in bang for the bucks "people have to pay for it" – Barriers to political capital huge issue. Need balance. Getting buying from strongest opponents – true sign of collaboration. How we remove barriers. Look to develop good working relationships with City – crossing silos in a non-threatening manner to get done what needs to get done. Communities successful in resiliency really overcame barriers</i></p>	<p><i>Change culture of government – The Chief Resilience Officer from San Francisco summarized the field of resiliency as three basic groups of stakeholders; 1) Disaster response and recovery stakeholders; 2) Those primarily interested in Climate change and extreme weather; and 3) stakeholders focused primarily on finance and risk management. To authentically work in government need to work together and understand how to implement and use resources well and look for co-benefits – one policy with multiple benefits. For the risk assessment process to work it has to address issues that people care about.</i></p>
29	<p><i>By being pro-active with mitigation save multi- million dollars savings. Consensus building. Development of peer groups at young age.</i></p>			

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<b>30</b>	<i>Climate change is more remote to most. Education about risk is key.</i>	<i>A lot of piece meal work. Ideally, resiliency would have someone dedicated to allow staff to do education.</i>	<i>A lot of people doing resiliency work – doing as on a part of tiny jobs – in an ideal world it would become more of a staff sources.</i>	<i>Use preparedness and ready.gov from FEMA. Credibility when using FEMA material. But could use more available free materials that are attractive and informative that individual could use and community can use. RNN – learn from other communities. Peer to peer always helpful. Commissioners see as a resource and that they have best practices.</i>
<b>31</b>	<i>Hazard mitigation works to keep people and property safe by reducing risk. Nature Conservancy works with insurance companies, environmental groups, fiscal conservatives, affecting federal policy, and reviewing market mechanisms to finance and review what will change and how to bring in re-insurance.</i>	<i>With risk models and methods to understand their risk and natural infrastructure not in it. Cost benefit of natural vs. structural (with Swiss re) There might be closer market nexus for incentive pricing. Strategy to have conversation and for everyone to recognize. Reinsurance a little farther away.</i>		<i>Communities that better integrate smart growth approaches and hazard mitigation can use funds and staff time more effectively, make development rules clearer and more predictable for developers, and keep people and property safer.</i>

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<b>32</b>	<i>Focus on capacity building for local government. Training and place based context. Climate change and DRR connected and is direct engagement work that builds capacity. Ensure that you convene right folks, right issues, well framed and is an open and inclusive process. Place based work builds relationships of unusual suspects – silo breaking and helps people realize problem solving.</i>	<i>Most is adaptation frame. Vulnerability assessment – how they pose risk. Better at temperature projections – than precipitation.</i>	<i>A lot of capacity barriers – need to develop human power to do work skills and skill sets. And Monetary – some have recovered and some have not.</i>	<i>Investment in community is focused on building practice when it needs to also focus on watershed and environmental indicators.</i>
<b>33</b>	<i>Originally I envisioned the local government planners and attorneys as target audiences for my work on adapting to sea-level rise. Increasingly I have been able to reach these individuals through marketing of workshops and selectively accepting invitations to present at forums that reach these types of individuals.</i>	<i>Collaboration with the Florida Association of Counties and the Florida League of Cities (or maybe the same organizations at the national level) has been helpful in reaching elected officials in Florida; I have contacts with each group that are interested in these issues.</i>	<i>However, over time, it became clear that local gov't attorneys are not typically proactive enough (even if they were to realize the risks) to counsel local gov't boards about the potential future consequences of current development decisions. Planners, while very receptive to messages about adapting to SLR, often lack the political power</i>	<i>At the local level to have a significant impact in such a controversial area (at least until others in local gov't are on board). This has left me working to expand my target audiences to elected officials, local government administrators, and public works departments (because they usually have fairly significant power and financial impact due to large-scale capital improvements responsibility).</i>

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<b>34</b>	<i>Big picture - funding is cure behind our efforts at community level. Stable dedicated fee based funding (storm water). Resilient funding for initiatives.</i>	<i>Has scoring mechanism that customizes on a property-by-property basis using risk assessment process as a way to manage risk and work with people – address cost of what it takes community to get back on feet. Still not totally unified. Might not have hazards that they should have incorporated. Doing what they are doing. We are doing what we are doing with storm water plan.</i>	<i>Reliance on Fed. Government. Communities need to have more cause and effect, more consequences and decisions to community level. System is set up as a catch 20-2 – better you manage risk, less assistance you get. Some of barriers is because of Feds provide so much assistance and help. Risk for community isn't that great compared to us not managing risk.</i>	<i>Stable funding and commitment to mapping and mitigation. Ongoing federal and state grants augment local funds. To do mitigation, upgrade flood maps – ongoing funding is critical to us. Show partnerships. Can take our annual funding and leverage our money to stretch dollars. It's a win/win because we can do more. Other – training. RNN can be if we can get communities in place so we can find out what other questions we can get similar issues.</i>
<b>35</b>	<i>Good sound plans of this are what we want to do. Always looking for guidance on how to get people back on feet quickly.</i>	<i>Comes down to local communities and local leaders. Local person very proactive and works with local communities' local service announcements. Need encompassing approach.</i>	<i>Ready-made materials and money to send out.</i>	

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<b>36</b>	<p><i>Solutions need to be local; there is no "one-size-fits all" approach but there are real opportunities to connect peers from different communities to share and exchange ideas. Collaboration is productive but requires good facilitation and leadership. With limited resources, it's also more productive to work with communities that show real commitment and enthusiasm (i.e., don't spend time chasing those that aren't interested).</i></p>	<p><i>Our Fire Adapted Communities Learning Network has developed a community self-assessment tool to help stakeholders (including the public) understand their unique wildfire risk and prioritize areas requiring future work.</i></p>	<p><i>Barriers are people's time and commitment to moving this forward in light of so many other competing and compelling challenges</i></p>	<p><i>One additional thought to the many great suggestions already given by others: in the face of all of the many resiliency efforts out there, how does a community know which one to pick? Does it matter whether or not we are united in our efforts, or is it more important for a community to simply to committing to some type of resiliency/risk reduction activity? Perhaps this topic could be interwoven into a currently proposed webinar.</i></p>

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<b>37</b>	<p><i>Challenges that local communities face, such as access to training, limited support, and limited funding. What we have found to work is to get as many stakeholders and departments involved as possible. It often means dedicating one person to communication and outreach but the more people involved in projects the greater the likelihood of success.</i></p>	<p><i>In terms of understanding risks, people are most receptive where they have firsthand experience or knowledge of risks, such as recent tornado or devastating flood. In all of our work with local communities their primary concern is always the safety of citizens. Given that there is often a focus on more preparedness or response activities and educating community leaders on secondary risks and the importance of mitigation is often necessary. We have found that people respond to webinars and are often more attentive than a live meeting; therefore in addition to meetings we often will schedule webinars with communities to increase attendance and awareness. We have also found that most people respond to videos, animation, or other presentations that express risk through infographics or other visual representations versus definitions in a PowerPoint.</i></p>	<p><i>Barriers include lack of resources and time. Community officials often wear multiple hats and depending on the community also struggle for financial support. Communities and states that do not have Presidential Declarations very often also face limited grant funding for mitigation projects as their funding sources are limited to applications that compete nationally for funding such as PDM or FMA. There is no guarantee for effectiveness but garnering support from a variety of sources (both in terms of funding and hours/resources from staff, volunteers or stakeholders) and instituting change from the bottom-up versus top-down will help communities succeed.</i></p>	<p><i>Access to resources that can be easily shared, such as videos explaining topics and clear guidance on changes, such as Stafford Act updates, and how those changes will be implemented.</i></p>

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<b>38</b>	<p><i>Local governments and citizens need to understand the risks that they face, what if anything they can do about the risks in advance of an event and how to best respond after an event. The risk evaluation process needs to happen at an individual scale, community scale and regional scales. The secret ingredient to my success is money. People will show up, participate and follow through when they know there is money to implement their projects.</i></p>	<p><i>People want to feel safe. People want access to basic services, food, clothing, shelter, communications, health care, transportation, employment. They can wait for amenities. People underestimate their potential risk. Once they experience a serious event, they think that nothing that bad will ever happen again. People are not willing to invest in solving the worst disaster that could happen in their community but they are willing to invest in solving small frequent problems.</i></p>	<p><i>The barriers depend on the circumstances. Some people don't like one another and won't work together. However, when you introduce money into the equation, more people are willing to work together if working together is necessary to access the money. A process that would simplify the flow of money would put more money into project and less money into compliance.</i></p>	<p><i>It is my opinion that the topic of substantial damage is not well understood. Communities could use this requirement in conjunction with EO 11988 to help make the case that public facilities should be relocated outside the floodplain. Communities should understand alternatives for flood mitigation such as buyouts, elevation and relocation. Each alternative has a different impact on the community.</i></p>
<b>39</b>	<p><i>No one approach will work in all communities and a series of different outreach and education tools must be used. The biggest secret is listening. When asking a community what is important to them and what they fear they will share a great deal, and our job is to then highlight the larger issues and the interconnections. It is more effective for them to state that they have a lack of resources and depend on goods from away than for me to point that out.</i></p>	<p><i>The community needs to be engaged in the process. They need to have experienced an event in recent memory that mobilizes them, or be getting a service that they greatly value and will commit to with time and other resources.</i></p>	<p><i>Data and maps are always helpful. If I can provide data on storms, rainfall amounts, and other region specific information along with maps showing inundation zones and other predictions it is very easy to get people talking. They need to be able to relate to the scale of the data, and the source as well.</i></p>	<p><i>I believe a session on incorporating the practice and science of ecological design in community plans and land use regulations would be popular. We offered a similar session focused on vulnerability last fall and it was oversubscribed. <a href="http://www.antiochne.edu/innovation/climate-change-preparedness/sessions-workshops/">http://www.antiochne.edu/innovation/climate-change-preparedness/sessions-workshops/</a></i></p>

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<b>40</b>	<p><i>In Seattle we established a block by block program aimed at assisting neighborhoods to sustain themselves following an earthquake or some other disaster that would restrict the local government from being immediately available. We explained the possible negative consequences such an event, and provided training and exercises to assure that those blocks at least were prepared for the first 72 hours or so. Too often the impetus for mitigation is a "top-down" effort, and the federal interest is not altruistic- it's financial.</i></p>	<p><i>Most people are willing to consider and acknowledge the credible information about the risks their particular community faces. Don't drop a problem on people and not give them an avenue where they can minimize the threat through their own actions.</i></p>	<p><i>Repetition is important. A mitigation – savvy community will have turnover in both political leaders and changes in the social makeup of the community. People will move in, others will move out.</i></p>	<p><i>Political leaders, even those that may seem clueless, should not be written off as the enemy as so often happens when strident community leaders (themselves not always spokespersons for a lot of people, but merely the loudest voices)begin attacking elected officials: they should be invited to join in, and community leaders should try to understand why they might be hesitant to tackle these issues, and then have their back if they do jump in.</i></p>

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<b>41</b>	<p><i>The most important item for success is the presence of a local CHAMPION. The #1 factor for success that we can influence is to understand “How the local community perceives the resiliency challenge and what their objectives are”. We cannot go in and impose our preconceived solutions onto their problems. Rather we can help them meet and tweak and achieve their goals by assisting them to understand available resources, what others have done in similar situations, and the constraints/boundaries they face.</i></p>	<p><i>Because I frequently am dealing with flood risks and the NFIP, the greatest challenge I face in communicating risk and educating is the fixation of local stakeholders on the insurance requirements. While the floodplain managers may understand the need to reduce risk, local leaders are primarily concerned with insurance requirements based on only the FEMA maps. There is a general misconception that if locally, we pressure FEMA to reduce the footprint on the map, we no longer have a flood risk in that area. Somehow we need to separate out affordability of insurance from the actual risk of flooding.</i></p>	<p><i>As always funding and resources. But as mentioned above, the number 1 success factor is having a local champion. By the way a local champion almost never comes forward until after a community has experience a flood event.</i></p>	<p><i>How to get beyond the “BELIEVERS” such as the planners, floodplain managers, code officials, and really reach out to private sector movers/shakers/influencers, and political decision makers. Because I am frequently looking at infrastructure issues, the ability and best practices to integrate public/private entities to work together to address resiliency. Neither group on their own can move forward very far without the other. Too frequently the private sector considers the public sector as only their regulator and not their partner, and this friction extends to discussions about resiliency – meet requirements, but not a true partnership.</i></p>

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42	<p><i>Local officials do not have the money or are unwilling to spend the money they do have for hazard mitigation or preparedness; hence, state or federal funding would help crank local action, and (2) once they develop an interest in mitigation and/or preparedness, they prefer to invent their own approaches rather than be told what to do, but their approaches are far from being informed by what's known about mitigation and preparedness. What seems to work is when I work with them behind the scenes to nudge them in certain directions and then "let go" so they can come up with ideas and approaches that are their own ideas. If I have been successful at the local level, it's because I get more and more people interested and participating; and because I quietly ask then the right questions rather than give them answers.</i></p>	<p><i>People do not understand risk assessment or risk probabilities. What I think people most want is "peace of mind" from nature's fury. Communication and education seems to work best when you tell people about risk and what to do about it in simple terms and focus on the "trigger point" about taking actions, e.g., has it been reached and why.</i></p>	<p><i>There are no people in my local community who have the job of addressing risk and managing it. It's pretty much a volunteer activity (local government, business, and resident volunteers).</i></p>	<p><i>What I think would help the most would be simple topical summaries (1 pagers) on all the different topics related to hazard mitigation and preparedness and each of them accompanied by an action checklist.</i></p> <p><i>The webinar I can think of —would be on the topic of public warnings (warning preparedness for imminent threats).</i></p>

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43				<p><i>I strongly recommend a webinar on gender.</i></p> <p><i>Gender really is (in the US) a missing lens and really does (in the US, too) relate strongly to empowerment, capacity development, and strengthening resilience.</i></p>

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44	<p><i>Involve the entire community in mitigation, adaptation, disaster planning and recovery efforts. The idea is not only to tap the creativity within communities, but also to build "political sustainability" for whatever initiatives evolve. There are some important keys to success in community-wide planning, however. First, outside consultants who help communities convene planning processes should be invited to the community by its leadership. Second, outsiders should be facilitators in helping members of the community be their own change-agents and architects of programs. Third, involve the traditional planning leaders in the process -- regional planning commissions, city managers, etc.</i></p>	<p><i>Risk management can be an effective frame, I think, because everyone does it in their own lives, from insuring themselves against car accidents and health problems to buckling their seat belts. Communicating proximity is very important -- i.e., helping people understand their personal stake in risk management and the personal impacts if they don't. People seem to respond to the moral dimensions of risk management -- i.e., their obligation to their children. If we engage communities in recognizing, assessing and mitigating climate and disaster risks, that offers an opportunity to identify "what really matters" to individuals and communities as a whole. (Visualization is very powerful by the way.) But I've found that it's important not to use technologies that intimidate the community, or make an outsider feel like an outsider.</i></p>	<p><i>I mentioned the snap-back problem. I alluded to the problem of traditional planners and leaders reverting to old practices and plans once an outside facilitator has left town. I come back to this role of outside facilitator because that has been my field -- going into communities, sometimes with small teams of experts in relevant skill sets to facilitate action. Egos come into play when an outsider comes to town, as though an outside expert is a criticism of the job that the local planners have done. It's very important to get them on the facilitator's side, sometimes by having them invite outsiders into the planning process, or giving them credit for bringing expertise in, and praising the work they've done in the past.</i></p>	<p><i>I benefitted from funding to bring selected teams of experts into communities and to pay team members a small stipend for their time. I worked with the Department of Energy during the Clinton Administration and created the Center of Excellence for Sustainable Development, which worked with more than 100 communities, many in disaster recovery situations. We negotiated an MOU with FEMA to integrate sustainability and clean energy options into its recovery programs, including establishing sustainability desks at the disaster assistance centers FEMA sets up immediately after disasters. There is some talk at DOE today about creating a similar MOU with FEMA. I want to underscore again the importance of helping communities visualize what resilience looks like.</i></p>

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45	<i>What works is viewing the problems and solutions from a local official/citizen perspective and being able to talk in their language.</i>	<i>Hazard mitigation plans that are tackled primarily to meet a federal funding prerequisite aren't very useful. Those that were done because the residents wanted action and the local government didn't know where to start were the most effective. Folks focus on the last flood or disaster they had, not what could happen. They want to spend more time and resources on the dangerous and scary hazards, like terrorism, even though the risk (odds of happening times impact) is lower.</i>	<i>The community may have the will, but not the expertise. FEMA HM approach focuses way too much on technical data about the hazard and spends very little time on reviewing all alternatives. Almost no public involvement, which is vital to get something that will work locally and that people will want to see implemented over the years. The result is a document that is 80% hazard assessment and 20% lists of things FEMA grants should fund.</i>	<i>Case studies of successful local efforts. I would say told by the locals who did them, but sometimes an outsider can observe what happened and why things worked. I've done one on the post-flood project we did in Conway, South Carolina, that's used as the example for <a href="http://recovery.stormsmart.org/">http://recovery.stormsmart.org/</a></i>
46	<i>Have a champion Solicit citizen engagement Be creative</i>	<i>Communicate through visuals- maps and online tools</i>	<i>Make sure you have a champion Have a process Barriers are time &amp; money (always)</i>	<i>Webinars Get service organizations involved</i>
47	<i>Project impact 1997 pilot community.</i>	<i>They have sink holes in the area something on landscape mitigation change. Tried to bring in other Planning Agencies – comp plan (10-15 year rotation)</i>	<i>Risk Assessment – Mapping – spent money on mapping.</i>	<i>Resiliency is all of this, all of these things – how to do with limited resources. Learning from other RNNs and their pitfalls and how they picked up and succeeded is key. A deeper connected is important for RNN because we learn from each other and once solidified could multiple forces.</i>

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<b>48</b>	<p><i>Thorough integration of hazard priorities in major aspects of the local planning process so that it becomes embedded as a public policy priority.</i></p> <p><i>Widespread public education and involvement</i></p> <p><i>Political leadership to get out in front of the problem rather than leading only after disaster happens</i></p>	<p><i>Start by seeing the answer to question #1.</i></p> <p><i>That should inform a highly participatory process.</i></p>	<p><i>The main barriers in my experience involve political will and governmental capacity.</i></p>	<p><i>It would be helpful for organizations like APA, in the role that we play, if we could find foundations that were not only willing to tackle this issue but to maintain a commitment to the subject matter over a period of years.</i></p>

