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1. Introduction

Purpose

This document is intended to be a roadmap for establishing and maintaining a resilient recovery program for the local communities in the Centralina Region. It highlights what led to the development of this roadmap, outlines best practices, and provides self-assessment and improvement planning tools. This is not an exhaustive document where all recovery-related information is compiled. Due to the changing nature of legislation, regulation, grants, and best practices, this document contains references to external resources that can provide extensive detail regarding the topics addressed. This roadmap is intended to be reviewed and updated annually to ensure that the resources are up to date.

Background

This document was developed as part of the Centralina Regional Resilience Collaborative's (RRC) ongoing effort to build a more resilient region. The RRC has developed the following guides and templates to support local communities in the development of pre-disaster recovery plans:

- Local Leader Disaster Recovery Guide: https://centralina.org/wp-content/uploads/2021/10/Local-Leader-Disaster-Guide-10.21-1.pdf
- Pre-Disaster Recovery Plan Development Guide: https://centralina.org/wp-content/uploads/2022/11/Pre-Disaster Recovery Plan Development Guide.docx
- Pre-Disaster Recovery Plan Template: https://centralina.org/wp-content/uploads/2022/11/Pre-Disaster Recovery Plan Template.docx

Funding from the North Carolina General Assembly gave Centralina the opportunity to continue to grow the RRC program to support regional disaster recovery activities. A statewide grant was awarded to the North Carolina Association of Regional Councils of Government (NCARCOG), wherein Centralina was deemed eligible to receive a disaster recovery capacity building subaward to support specific activities in the region. The aim is to ensure that all local governments are better prepared to recover from future disasters. The following grant options were selected by the RRC to guide the potential activities that would be supported by this funding.

- Prepare and scope a Federal Emergency Management Agency (FEMA) annual competitive grant program application (Building Resilient Infrastructure and Communities (BRIC), Flood Hazard, etc.).
- Provide support for other National Disaster Recovery Framework (NDRF) activities that local government leaders should pursue pre- and post-disaster as they lead long-term disaster recovery.
- Hire contractors or time-limited staff who are experienced in disaster grants management, FEMA Public Assistance grant management, and related disaster recovery

tasks to assist local governments in managing existing disaster grants or future grants associated with declared disaster events impacting the local government.

After the RRC members participated in surveys, interviews, and workshops around the types of activities that would best support the region, a resilience strategy was developed in which the following proposed activities were agreed upon:

- Establish a regional baseline for recovery and resilience and develop a roadmap outlining the specific steps that jurisdictions in the RRC would pursue.
- Facilitate progress along the roadmap by supporting such projects as researching and supporting the BRIC application, incorporating Recovery Support Function (RSF) and Community Lifeline data in the Equity and Resilience Mapping Tool, and facilitating partner collaboration workshops with local government leadership.
- Earmark a pool of hours for specialized technical assistance for support of RRC members, such as conducting a pilot project to support a county in populating the Pre-Disaster Recovery Plan template.

This document serves as the reference guide and roadmap for developing resilient recovery programs. The attachment at the end of this document provides a matrix and checklist for the RRC to self-assess their current capabilities in relation to the roadmap. Additionally, the matrix provides a method for outlining future goals and a tool to track the progress towards reaching them. The RRC then will review the baseline assessments and future goals and determine which projects will receive direct technical assistance and which projects will be supported through group workshops and other means.

To learn more about the RRC, visit https://centralina.org/regional-collaboration/resilience/.

2. Roadmap to Resilient Recovery



Figure 1. Roadmap to Resilient Recovery¹

Industry Best Practices

The roadmap outlined in this document is built upon the foundation of the FEMA Community Recovery Management Toolkit and is expanded upon by incorporating best practices and lessons learned from leading resilience and recovery organizations, such as FEMA and the American Planning Association (APA). Links to great resources and references that provide guidance to communities as they develop their recovery programs are provided below and throughout the remainder of this document.

- APA Hazard Mitigation and Disaster Recovery Division: https://hazards.planning.org/
- Effective Coordination of Recovery Resources for State, Tribal, Territorial and Local Incidents: https://www.fema.gov/sites/default/files/2020-07/fema_effectivecoordination-recovery-resources-guide_020515.pdf

Recovery Guiding Principles

FEMA has identified the following eight guiding principles that maximize the opportunity for achieving recovery success when put into practice:

- 1. Individual and Family Empowerment
- 2. Leadership and Local Primacy
- 3. Pre-Disaster Recovery Planning
- 4. Engaged Partnerships and Inclusiveness
- 5. Unity of Effort

¹ See Figure 2 for a larger version of the roadmap graphic.

- 6. Timeliness and Flexibility
- 7. Resilience and Sustainability
- 8. Psychological and Emotional Recovery

More information about these principles:

National Disaster Recovery Framework: https://www.fema.gov/sites/default/files/2020-06/national_disaster_recovery_framework_2nd.pdf

Recovery Support Functions

FEMA has established a national standard for recovery coordination that comprises six Recovery Support Functions:

- 1. Community Planning and Capacity Building (CPCB) Recovery Support Function (PDF)
- 2. Economic Recovery Support Function (PDF)
- 3. Health and Social Services Recovery Support Function (PDF)
- 4. Housing Recovery Support Function (PDF)
- 5. Infrastructure Systems Recovery Support Function (PDF)
- 6. Natural and Cultural Resources Recovery Support Function (PDF)

Recovery Core Capabilities

Recovery core capabilities are designed to feature the objectives and tasks necessary to provide assistance quickly and efficiently to impacted communities. At the national level, FEMA has assigned leadership entities with expertise in the following areas to develop tools and resources to achieve the associated objectives.

- Planning. Convene the core of an inclusive whole community planning team, identified
 pre-disaster, that will oversee the disaster recovery planning process and activities to
 reduce recovery risk and increase resilience.
- Public Information and Warning. Manage expectations through clarity, accuracy, and transparency.
- Operational Coordination. Lead, coordinate, and drive the recovery process.
- Economic Recovery. Share, aggregate, and integrate economic impact data to assess economic issues and identify potential inhibitors to fostering stabilization of the affected communities.
- Health and Social Services. Identify affected populations, groups, and key partners in recovery.

- Housing. Assess preliminary housing impacts and pre- and post-disaster needs, identify available options for temporary housing, and support the local development of the plan for permanent housing.
- Infrastructure Systems. Facilitate the restoration of and sustain essential services (public and private) to maintain community functionality.
- Natural and Cultural Resources. Implement measures to protect and stabilize records and culturally significant documents, objects, and structures.

For more information:

Recovery Core Capabilities: https://www.fema.gov/emergency-managers/national-preparedness/mission-core-capabilities/development-sheets

Community Lifelines

A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security. Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function. When disrupted, decisive intervention (e.g., rapid re-establishment or employment of contingency response solutions) is required to stabilize the incident.

- Safety and Security Law Enforcement/Security, Fire Service, Search and Rescue, Government Service, Community Safety
- Food, Water, Shelter Food, Water, Shelter, Agriculture
- Health and Medical Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management
- Energy Power Grid, Fuel
- Communications Infrastructure, Responder Communications, Alerts, Warnings, and Messages, Finance, 911, and Dispatch
- Transportation Highway/Roadway/Motor Vehicle, Mass Transit, Railway, Aviation, Maritime
- Hazardous Material Facilities, HAZMAT, Pollutants, Contaminants

For more information:

• FEMA Community Lifelines Toolkit: https://www.fema.gov/emergency-managers/practitioners/lifelines

Recovery Toolkit

FEMA developed a Recovery Toolkit which provided a structure of a three-part recovery process. This document integrates all of these resilient recovery concepts into a single roadmap utilizing the three parts as the framework roadmap. The best practices and recommended activities from the roadmap were integrated as a guide and reference for users to assess their current capabilities and identify targets for development

Part 1: Organizing

Part 2: Planning

Part 3: Managing

For more information:

• Community Recovery Management Toolkit: https://www.fema.gov/emergency-managers/national-preparedness/frameworks/community-recovery-management-toolkit

Recovery Roadmap Phases

Part 1: Organizing

The first thing that a recovery program needs is organization. Often, a dispersed group of well-meaning leaders operates in silos, resulting in program overlaps and needs gaps. A resilient community takes stock and gets organized before embarking on the development of a strong recovery program. It requires the leadership team to collaborate, engage with the whole community, and create coordination groups or committees. The end result will be a much smoother process as you build and grow the recovery program.



Organize Local Leadership



Long-lasting local resilience requires champions to continuously gather and encourage the development and growth of resiliency among the community. Ideally, these champions are in positions of formal and informal leadership in the community—individuals and groups that have a stake in the long-term success and resilience of the community they live in. Gather these local leaders into a team, a committee, a workgroup, or some other form of stakeholder-driven collaboration, with a local government leader as a chair or leader of the group. Some local

governments have a specific employee designated as the Local Disaster Recovery Manager/Coordinator/Specialist who is responsible for leading the effort and bringing together the local leadership.

For more information:

 Local Disaster Recovery Manager Guidance: https://www.fema.gov/sites/default/files/2020-07/fema_ldrm-guidance-for-local-government.pdf

Involve the Whole Community

Just as leadership is an important pillar for long-term success, so is a fully involved community, with representatives from the whole community, which can include, but are not limited to:

- All levels of government, including state, local, tribal, territorial, and federal partners;
- Businesses:
- Faith-based and community organizations;



- Nonprofit groups;
- Schools and academia;
- Media outlets:
- Individuals and families, including those with access and functional needs; and
- Representation from various cultural, social, and economic backgrounds.

The community representatives' perspectives provide context to the needs and requirements of the community before, during, and after a disaster. Knowing what those needs will be, anticipating the requests, and accounting for them in the response and recovery planning and operational efforts will go a long way in building a resilient community. Recruit a planning group that represents all stakeholders and mirrors the diversity of the community.

. Consider the following in your engagement strategy:

- Design the public engagement process with the end in mind.
- Select tactics that invite a broad range of stakeholders to participate—what's the approach?
- Framing and reframing—what are our shared interests?
- You've been heard and here are the results—what's the status of implementation?

For more information and resources on involving the whole community:

- A Whole Community Approach to Emergency Management: https://www.fema.gov/sites/default/files/2020-07/whole community dec2011 2.pdf
- Planning for Post-Disaster Recovery: Public Engagement in Recovery Planning: https://planning-org-uploaded-media.s3.amazonaws.com/document/post-disaster-paper-1-public-engagement.pdf

Establish Coordination Methods

One of the methods for providing consistent direction and coordination for community stakeholders is to form a Long-Term Recovery Committee, Local Emergency Planning Committee, or a Community Resilience Committee. Scheduling regular meetings or adding an agenda item to existing community meetings helps to build momentum and establish a consistent forum for addressing recovery issues.



Regardless of the method or structure, it is still a good practice to incorporate the recovery support functions into the committees and workgroups to create a seamless integration for collaborating with state and federal support personnel.

Long-Term Recovery Groups can take many forms and should use connections familiar and specific to the community to be most effective. Three successful committees currently found in various communities include Long-Term Recovery Committees, Local Emergency Planning Committees, and Community Resilience Committees.

Long-Term Recovery Committees

Long-Term Recovery Committees have previously been established for a variety of incidents in many communities. Best practices and guidance for forming groups of this nature have been created by such entities as National Voluntary Organizations Active in Disaster (NVOAD), the Center for Disaster Philanthropy, and the Institute for Building Technology and Safety. Other best practices and resources may be found at the state and local levels. Resources have been created by communities who have been impacted by large-scale disasters.

Topics covered by the NVOAD Long-Term Recovery Guide include the following:

- Long-Term Recovery Administration
- Disaster Case Management in Long-Term Recovery
- Construction Management in Long-Term Recovery
- Volunteer Management in Long-Term Recovery
- Communications In Long-Term Recovery
- Donations Management in Long-Term Recovery
- Spiritual Care in Long-Term Recovery
- Financial Controls and Reporting

For more information on NVOAD and Long-Term Recovery Committees:

Long-Term Recovery Guide: <u>longtermrecoveryguide-final2012.pdf</u> (nvoad.org)

Local Emergency Planning Committees

Local Emergency Planning Committees (LEPCs) were established out of a legal requirement meant to address concerns around emergency preparedness surrounding hazardous chemicals. As such committees are mandated in most communities, addressing long-term recovery during regularly scheduled stakeholder meetings may be worthwhile.

For more information on LEPCs:

- Local Emergency Planning Committees | US EPA
- National LEPC-TEPC Handbook | US EPA

Community Resilience Committees

A growing number of communities are developing community or regional resilience committees around housing, schools, criminal justice, and community. These groups focus on more than recovery, but many include disaster recovery as a focus of their efforts.

The following are a few resources in the Community Resilience arena:

- Community Resilience Framework: <u>Community Resilience Framework | Center for Community Resilience | Milken Institute School of Public Health | The George Washington University (gwu.edu)</u>
- The Building Community Resilience (BCR) Approach: <u>The BCR Approach | Center for Community Resilience | Milken Institute School of Public Health | The George Washington University (gwu.edu)</u>

Additionally, the following organizations provide information on developing resilient communities in relation to recovery.

The Center for Disaster Philanthropy

With a focus on ensuring an effective and equitable philanthropic response, the Center for Disaster Philanthropy Guidance includes information on such topics as financial administration and funding trends.

For more information:

Long-Term Recovery Groups - Center for Disaster Philanthropy

The Institute for Building Technology and Safety

The Institute for Building Technology and Safety views long-term recovery through the lenses of the building community. This includes best practices for the creation and sustainment of Long-Term Recovery Groups.

For more information:

- Tips: Best Practices for Long-Term Recovery Groups IBTS OnHAND
- Experience Gained: Building a Strong Long-Term Recovery Group IBTS OnHAN

Part 2: Recovery Planning

After a strong coalition of partners and stakeholders has been formed, a community can move towards planning.

Assess Capabilities and Threats

The first step in planning (after building a team) is assessing capabilities, determining potential community impacts to their community from hazards, and analyzing the capability gaps and emergency needs of the community.



Stakeholder Preparedness Review

The SPR is a self-assessment of a jurisdiction's current capability levels against identified threats. Jurisdictions identify their current capabilities and how those capabilities changed over the last year, including capabilities lost, sustained, and built. Jurisdictions also identify capability gaps related to planning, organization, equipment, training, and exercises, and indicate their intended approaches to addressing those gaps while also maintaining their current capabilities.

Threat and Hazard Identification and Risk Assessment

FEMA's THIRA process is a formal process for assessing needs and identifying the best way to help a community recover after a disaster.

The THIRA process includes the following:

- Step 1. Involvement Across the Planning Area
- Step 2. Threat and Hazard Identification
- Step 3. Risk Assessment THIRA
- Step 4. Develop Capability Targets THIRA
- Step 5. Identify Gaps SPR
- Step 6. Develop, Prioritize, and Operationalize Strategies SPR
- Step 7. Monitor and Adjust THIRA/SPR Process



More information on the THIRA/SPR Process:

 Threat and Hazard Identification and Risk Assessment (THIRA) and Stakeholder Preparedness Review (SPR) Guide Comprehensive Preparedness Guide (CPG) 201: www.fema.gov/sites/default/files/2020-04/CPG201Final20180525.pdf

Hazard Vulnerability Assessment

There are some similarities and differences between the hazard vulnerability assessment performed during mitigation planning and the THIRA/SPR process. Integrating the two planning

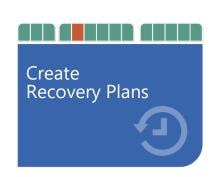
efforts into a single assessment offers an optional approach to streamlining a community's submissions of the mitigation plan and the THIRA/SPR. This integrated approach is designed to help recovery planning teams better understand threats and hazards, assess risks, build and sustain capabilities, reduce vulnerability, increase resilience, and avoid duplication of effort. Using an integrated approach will be discussed further in the section on integrating mitigation planning.

For more information:

 Increasing Resilience Using THIRA/SPR and Mitigation Planning: https://www.fema.gov/sites/default/files/2020-09/fema_thira-hmp_jobaid.pdf

Create Recovery Plans

There are distinct advantages for communities that take time to plan for and assess their recovery needs ahead of an actual event. It has shown to support building a local culture of disaster awareness, providing a focus for pre-disaster exercises, establishing clear lines of responsibility, considering and reviewing financial needs, and assessing overall preparedness.



Recovery Planning

FEMA has developed an extensive guide specific to Pre-Disaster Recovery Planning for Local Governments. It lays out some common industry best practices and lessons learned, including:

- Disaster Recovery Planning Is a Broad, Inclusive Process
- Recovery Planning Builds Upon and Is Integrated with Other Community Plans
- Recovery Planning Is Closely Aligned with Hazard Mitigation
- Recovery Planning Is Goal Oriented
- Recovery Planning Is Scalable
- Recovery Activities Are Comprehensive and Long-Term
- Resilience and Scalability

For more information:

 FEMA Pre-Disaster Recovery Planning Guide for Local Governments: https://www.fema.gov/sites/default/files/2020-07/pre-disaster-recovery-planning-guide-local-governments.pdf

Centralina, through the RRC program, developed a step-by-step guide for recovery planning. This resource and the accompanying template can be used as foundational elements on which to begin the planning effort.

For more information: Pre-Disaster Recovery Plan Development Guide: https://centralina.org/wp-content/uploads/2022/11/Pre-

Measuring Success

The planning process should include developing a methodology for measuring success. It should include:

- Identifying standards and metrics for assessing the effectiveness of recovery efforts, which is a major challenge;
- Using a preexisting disaster recovery plan to identify indicators and metrics for measuring recovery; and
- Using metrics to capture important differences in both the magnitude and speed of recovery for socially vulnerable populations.

Some recommended considerations that are applicable for developing metrics include:

- **Baseline Impact Assessment**. Helps illustrate and clarify the extent and dimensions of the impacts of a disaster in order to chart a path to a realistic recovery end state.
- **Desired Outcome Analysis**. Focuses on recovery outcomes and overall results, not just target numbers (e.g., number of families in permanent housing versus number of housing units constructed). The overall goals that the community, state, or jurisdiction is looking to achieve should drive the metrics for success.
- Cross-Cutting Sector Issue Assessment. Tracks progress across all sectors, including but not limited to housing, environmental, business, employment, infrastructure, health (including behavioral health) and social services, and overall community accessibility.

For more information:

• <u>Planning for Post-Disaster Recovery Briefing Papers 2: Measuring Success in Recovery (planning-org-uploaded-media.s3.amazonaws.com)</u>

Goal Setting

The Planning for Post-Disaster Recovery: Next Generation report includes three primary goals that inform almost all recovery plans:

- Increase the speed of recovery.
- Use resources effectively.
- Increase opportunities for community betterment.

Planning for recovery may occur before or after a disaster occurs. The three types of plans include Operational (limited pre-disaster), Policy (pre-disaster), or Recovery (post-disaster).

For more information:

 Planning Advisory Service - Report 576 https://www.planning.org/publications/report/9026899/

Integrate Hazard Mitigation with Recovery

Hazard mitigation is any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards (44 CFR 201.2). Hazard mitigation activities may be implemented before, during, or after an event. However, it has been demonstrated that hazard mitigation is most effective when based on an inclusive, comprehensive, long-term plan that is developed before a disaster occurs.

As mentioned earlier, the hazard mitigation risk assessment provides the factual basis for activities proposed in the strategies being developed that will reduce losses from identified hazards. A quality risk assessment makes a clear connection between the community's vulnerability and the hazard mitigation actions. In other words, it provides sufficient information to enable the jurisdiction(s) to identify and prioritize appropriate hazard mitigation actions. The process for prioritization is discussed in the following section.



Mitigation activities and recovery programs have a natural and mutually beneficial overlap that creates an ideal environment for integrating efforts. The primary types of mitigation actions that have been identified to reduce long-term vulnerability include:

- Local plans and regulations;
- Structural projects;
- Natural systems protection;
- Education programs; and
- Preparedness and response actions.

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. Effective hazard mitigation 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 leads to rebuilding more resiliently and safely. A variety of funding sources that support hazard mitigation and recovery programs become available following a disaster.

For more information:

- Local Mitigation Plan Review Guide: https://www.fema.gov/sites/default/files/2020-06/fema-local-mitigation-plan-review-guide 09 30 2011.pdf
- <u>Planning for Post-Disaster Recovery Briefing Papers 11: Hazard Mitigation in Disaster</u> Recovery (planning-org-uploaded-media.s3.amazonaws.com)

Prioritize Projects

The planning process will identify and highlight a variety of projects and activities that can be undertaken to build a resilient community through an effective recovery program. Most communities will not have the resources to implement all of these projects simultaneously and will need to prioritize the projects and activities that best align with their highest vulnerabilities, current goals and efforts, and financial opportunities. Following the process outlined in the FEMA Recovery Planning Guide and the Centralina Recovery Planning Guide will take a community through this process. This section will highlight some additional opportunities to build a more resilient approach to recovery.

Prioritize

Projects

Recovery planning, mitigation planning, and improvement planning all contain a process in which projects, activities, and recommendations are assessed, prioritized, and assigned responsibility. The planning team needs to agree upon the criteria that will be used to analyze and prioritize projects.

Determining Recovery Priorities

Emergency Management Institute (EMI) course IS-558, Public Works and Disaster Recovery, provides the following considerations for project prioritization:

- Critical Infrastructure
 - Critical infrastructure and key resources (CIKR) are the components that are necessary for the health and welfare of your community. Many CIKR fall under the scope of public works, which may have the lead on many of the projects identified during the recovery planning phase. Restoration of essential services and the repair and rebuilding of key assets are high priorities for any community's recovery (e.g., reconstructing a bridge).
- Economic Impact
 - Each hazard can have a different economic impact on a community. For example, when a storm disrupts power in a commercial district, restoring that power is essential for the economic recovery of those businesses and the community.
- Community Needs
 - When creating the recovery plan, consider the number of households that could be displaced by a disaster, the number of individuals who may need public shelters, and the need for social services, such as counseling or financial assistance. Public Works

should be aware that they may be called upon to support things such as public shelters with the installation of generators or locating Port-A-Let's. Keep in mind that plans for recovery actions may change when actual information about community needs is available after a disaster, causing a need for your plan to be updated.

- Public Health Concerns
 - Public health concerns are also an important consideration for public works and other agencies during recovery. The recovery plan should cover keeping essential services operational. For example, the interruption of such services as routine household solid waste collection, a wastewater treatment facility, or a water treatment plant could have negative effects on public health.

For more information:

• FEMA EMI: https://training.fema.gov/is/courseoverview.aspx?code=is-558&lang=en

Additional Prioritization Considerations

Mitigation planning offers some additional criteria and questions to evaluate each project:

- Life safety How effectively will the action protect lives and prevent injuries?
- **Property protection** How significant will the action be at eliminating or reducing damage to structures and infrastructure?
- **Technical** Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.
- **Political** Does the public support the mitigation action? Is there the political will to support it?
- **Legal** Does the community have the authority to implement the action?
- **Environmental** What are the potential environmental impacts of the action? Will it comply with environmental regulations?
- **Social** Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?
- **Administrative** Does the community have the personnel and administrative capabilities to implement the action and maintain it, or will outside help be necessary?
- **Local champion** Is there a strong advocate for the action or project among local departments and agencies who will support the action's implementation?
- Other community objectives Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation? Does it support the policies of the comprehensive plan?

For more information:

• Selecting Mitigation Actions: https://mitigationguide.org/task-6/selecting-mitigation-actions/

Implement Resilient Systems

A series of studies from Planning for Post-Disaster Recovery: Next Generation discusses ways to build resilient systems. It describes a community as an urban system of systems, a network of networks. It explains that these systems are expected to function efficiently, but that a great deal of thoughtful design and engineering is required to ensure that they are resilient and function effectively during a crisis or natural disaster. It provides a list of characteristics found in resilient systems as defined by Jamais Cascio²:



- **Diversity** Avoid a single point of failure or reliance on a single solution.
- **Redundancy** Have more than one path of escape.
- **Decentralization** Centralized systems look strong, but the failure may be catastrophic when they fail.
- **Transparency** Systems should not be hidden. Transparency makes it easier to determine where a problem may lie. Sharing plans and preparations lets others find the flaws.
- **Collaboration** Working together helps systems become stronger.
- **Failing gracefully** Failure happens. A system goal is for a failure state that will not make things worse.
- **Flexibility** Do not anticipate stability. Be ready to change when the system is not working.
- Foresight Monitor change, analyze trends, and identify emerging vulnerabilities.

For more information:

 Planning for Post-Disaster Recovery: Next Generation: https://www.planning.org/publications/report/9026899/

² Jamais Cascio, "The Next Big Thing: Resilience," *Foreign Policy Magazine*, September 2009, https://foreignpolicy.com/2009/09/28/the-next-big-thing-resilience/

Integrated Approach to Recovery Programs

As a community is developing and implementing its recoveryrelated programs, it should look at ways to integrate vulnerable sectors of the community to reinforce the resilient systems approach.

Following are a few areas in which to look for opportunities to integrate resilient recovery activities during the planning process. Each area offers suggestions and a link to a briefing paper that provides additional detail and recommendations.



• Resilient Infrastructure

- Understand the risks to infrastructure. Communities should perform in-depth risk analysis for all key infrastructure systems, assessing a full range of hazards and severity of risk, using root-cause analysis.
- Identify projects to reduce risk. For critical infrastructure assets at greatest risk, identify mitigation actions and study their implementation feasibility to understand functional benefits, costs, and impacts.
- Seek out funding opportunities for mitigation planning and projects. For projects that can demonstrably mitigate risk, seek funding opportunities under state and federal grant programs and seek cooperative partnerships with utilities.
- Achieving infrastructure resilience is a continuous learning process. Reducing infrastructure risk requires ongoing initiative to refine and adjust mitigation actions to be increasingly effective and reliable, recognizing that hazards are variable and mitigation technologies are evolving.
- For more information:
 - <u>Planning for Post-Disaster Recovery Briefing Papers 3: Planning Resilient Infrastructure (planning-org-uploaded-media.s3.amazonaws.com)</u>

• Affordable Housing

- Low-income households are vulnerable to displacement and are least able to access safe and affordable housing after a disaster.
- Displaced low-income households must be quickly rehoused in temporary, safe housing while communities plan for permanent, sustainable housing.
- Extensive community engagement contributes to a shared vision of recovery and fosters broad support for rebuilding affordable housing.
- Partnerships are key to funding and building the capacity of affordable housing providers to be more resilient in future disasters.

- For more information:
 - Planning for Post-Disaster Recovery Briefing Papers 4: Affordable Housing (planning-org-uploaded-media.s3.amazonaws.com)

Economic Recovery for Manufacturing

- Develop formal disaster response plans for helping manufacturers.
- Facilitate communications between businesses and resource providers.
- Provide training and consultation for businesses on disaster response.
- Help manufacturers develop business continuity plans.
- For more information:
 - Planning for Post-Disaster Recovery Briefing Papers 5: Economic Recovery for Manufacturing (planning-org-uploaded-media.s3.amazonaws.com)

Flood Insurance and Design Requirements

- Rather than waiting to react to a disaster, plan for a successful rebuilding approach to reduce current and future flood risk.
- Ensure key post-disaster National Flood Insurance Program (NFIP) requirements are met.
- Rebuild for long-term resilience. Incorporate a variety of measures to reduce future flood losses
- For more information:
 - Planning for Post-Disaster Recovery Briefing Papers 6: Flood Insurance and Design Requirements (planning-org-uploaded-media.s3.amazonaws.com)

Adoption of Pre-Event Recovery Ordinances

- The Pre-Event Recovery Ordinance creates overall guidance for local post-disaster recovery facilitation and intervention on behalf of planned outcomes.
- The ordinance authorizes a recovery management organization designed to cooperate with federal, state, and local emergency management and stakeholder entities.
- The ordinance guides preparation of short-term and pre-disaster recovery plans in concert with local emergency management and community stakeholder organizations.
- Most importantly, the ordinance establishes emergency powers for facilitating shortterm recovery, intervening in matters affecting private property and public safety, and ensuring desired recovery outcomes.

- For more information:
 - Planning for Post-Disaster Recovery Briefing Papers 8: Adopt a Pre-Event Recovery Ordinance (planning-org-uploaded-media.s3.amazonaws.com)

• Financial Programs

- Know the various kinds of funding available for post-disaster recovery and how to obtain it.
- Understand the overall damage the fiscal and economic impacts of the disaster on the entire community.
- Develop a comprehensive disaster recovery financing strategy.
- Ensure transparent and accountable approaches to local recovery financing.
- For more information:
 - Planning for Post-Disaster Recovery Briefing Papers 9: Financial Recovery (planning-org-uploaded-media.s3.amazonaws.com)

• Green Infrastructure

- Green infrastructure reduces damage from storm surge and flooding and plays a role in other types of disasters.
- Resilience to natural disasters is one of a broad array of benefits provided by green infrastructure.
- Particularly in urban contexts, green infrastructure must be combined with gray infrastructure to effectively reduce damage from natural disasters.
- Green infrastructure resources can suffer severe damage from disasters, which in the absence of preplanning can be exacerbated in the short-term recovery response.
- For more information:
 - Planning for Post-Disaster Recovery Briefing Papers 10: Green Infrastructure and Post-Disaster Recovery (planning-org-uploaded-media.s3.amazonaws.com)

Part 3: Managing Recovery Programs

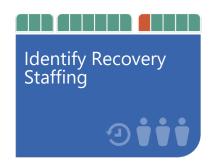
Recovery is a not a one and done effort. It requires continuous engagement, monitoring, and improvement to build an effective recovery program. A resilient community looks for ways to strengthen the program and expand recovery capabilities. The following sections will discuss the management and growth of recovery programs and provide resources to help guide that growth.



Recovery Staffing

Managing recovery programs is not something recommended to be an "additional duty as assigned." If the option exists, consider designating at least one of your personnel as the Recovery Coordinator/Manager. During a post-disaster recovery operation, the Recovery Manager, and hopefully a supporting staff of Recovery Coordinators, will help the staff stay informed about the myriad of grant programs and recovery projects that will result from the disaster. The Recovery Manager can also help to:

- Determine how decisions will be made and who leads which recovery programs;
- Clearly define the organizational structure for local recovery management;
- Legalize the authorities for local recovery management; and
- Formalize and engage partnerships into local recovery management groups.



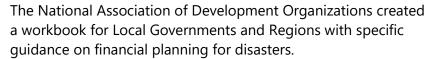
The kinds of roles needed for any specific disaster recovery may vary, but the LMI Research Institute has developed position descriptions related to long-term recovery that align with the National Disaster Recovery Framework and include processes for effective staffing. The positions are correlated to the recovery activities, includes expected duties and required skills, and a listing of potential positions.

For more information:

Disaster Recovery Positions Library: https://www.lmi.org/report/disaster-recovery-positions-library

Financial Management

Financial planning for natural disasters can be one of the more challenging and yet crucial elements of recovery programs. A well-funded recovery program that maximizes the effectiveness of every dollar can turn a standard recovery effort into an incredible opportunity for the community.





 Financial Planning for Natural Disasters: A Workbook for Local Governments and Regions: https://www.nado.org/wp-content/uploads/2014/01/FINAL Workbook.pdf

Financial management of a recovery program involves developing a plan to address how to finance the recovery effort, identify what the strategies, milestones, and timetables are for the prioritized projects, assess the legal considerations, and establish criteria for measuring a successful financial implementation.

For more information:

• Planning for Recovery Management

Supporting Whole Community Financial Resilience

Just as your jurisdiction is developing plans and implementing projects, the community members and public sector are also in need of financial resources to implement programs that will enhance their resilience.

The professional city and county managers association, ICMA, presents six perspectives on disaster recovery based on experiences they have had in recent years. Each of these perspectives is presented and includes links to additional research and resources.

• ICMA Blog: https://icma.org/blog-posts/6-perspectives-how-communities-can-recover-after-disaster

The National Association of Development Organizations in partnership with the Rural Policy Research Institute created a webinar and workbook focusing on how regions and communities can prepare their public sectors to be more financially resilient to future disasters:

• Financial Planning for Disasters Webinar and Workbook: https://www.nado.org/financial-resiliency-in-the-face-of-disasters-webinar-now-available-for-download/

The Council on Foundations has a collection of resources related for establishing grants to help the community, including:

- Disaster Relief: A Practical Guide for Foundations and Corporations:
 https://cof.org/content/disaster-relief-practical-guide-foundations-and-corporations
- Disaster Grantmaking Topics: https://cof.org/topic/disaster-grantmaking-other

Leverage Available Resources

Before looking for external resources and expending the time and funds in pursuing those resources, it is a good practice to review and assess what existing resources and capabilities are already available in your community.

The following are some additional management practices that researchers have recommended after studying many disasteraffected communities³:



- Employ systems thinking, recognizing that recovery tasks are interconnected and that a systems approach to institutional management can enhance adaptability and add capacity.
- Focus on enhancing "horizontal organizational integration," ensuring that key departments are well linked through the flow of information, communication, shared resources, and similarity of practices.
- Decentralize implementation by granting considerable decision-making authority to departments to carry out recovery operations but also ensuring transparency and accountability in decision making.
- Leverage existing agencies and familiar routines and programs to accomplish much of the work of recovery. Especially in major disasters, it may be time consuming and difficult to innovate and implement new programs and schemes, and the outcomes are likely to be more uncertain.
- Employ personnel management techniques for high-pressure and high-demand situations, which can include redeploying ordinary "non-disaster" resources in innovative ways for recovery, adding temporary staff, and seeking specialized technical assistance to ensure that skilled staff are available to deal with the added demands of post-disaster recovery.

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³ PAS Report 576: Planning for Post-Disaster Recovery: Next Generation. American Planning Association. 2014. https://www.planning.org/publications/report/9026899/. (login required)

Pursue Grant Opportunities

There are many opportunities to pursue grants that can support the prioritized projects identified in the recovery plan. Review the grants and look for ones that align with the community's eligibility, the project eligibility, and the funding levels of the grant as well as the match requirements. Sometimes you will have to be flexible as to which project is funded first as grant funding comes available. Just because another project is a higher priority



for your community, it may not be the best fit to be competitive when a notice of funding (NOFO) is released. A great starting place would be to review the Roadmap to Federal Resources for Disaster Recovery and identify at least one opportunity that might be a good fit.

Roadmap to Federal Resources for Disaster Recovery:
 https://www.fema.gov/sites/default/files/documents/fema_roadmap-federal-resources-for-disaster-recovery.pdf

FEMA Grant Lifecycle

FEMA has a Grants Management Technical Assistance (GMTA) Program that administers a resource center for state, tribal, territorial, and local governments receiving federal financial assistance. This program identifies the following stages of a grant lifecycle:

- Pre-Award
 - Foundations
 - Application, Submission, and Review
- Award
 - Award Determinations and Obligation
- Post Award
 - Program Implementation and Management
 - Evaluation and Closeout

FEMA grants management and technical assistance can be found here: <u>Grants Management</u> (<u>fema.gov</u>)

FEMA Grant Application Process

During the COVID-19 response, FEMA developed the Local Government Solutions for COVID-19 and Beyond: Grants Management Capacity Guide. The guide covers seven steps of grants management:

- 1. Project Development
- 2. Funding Identification

- 3. Proposal Preparation
- 4. Proposal Submission
- 5. Award Acceptance
- 6. Award Management
- 7. Award Closeout

More information from this guide can be found here: <u>LSG Grants Management Capacity</u> (fema.gov)

FEMA Grant Opportunities

The previously mentioned Roadmap to Federal Resources for Disaster Recovery is an extensive collection of grant opportunities. Below are some more in-depth references on a few of the major programs that are utilized the most frequently.

- Public Assistance funding, which provides federal assistance for disaster-affected local governments: https://www.fema.gov/sites/default/files/documents/fema_pappg-v4-updated-links_policy_6-1-2020.pdf
- Individual and Household Assistance Program funding, which provides grants directly to renters and homeowners: https://www.fema.gov/assistance/individual/program
- Hazard Mitigation Grant Program funding, which provides funding for hazard mitigation planning and projects: https://www.fema.gov/grants/mitigation
- Community Disaster Loan Program funding, which provides federal loans to assist local government with providing essential services: https://www.fema.gov/assistance/public/community-disaster-loan
- Community Development Block Grant Disaster Recovery (CDBG-DR) funding, which
 provides funds for the most impacted and distressed areas for disaster relief, long-term
 recovery, restoration of infrastructure, housing, and economic revitalization:
 https://www.hudexchange.info/programs/cdbg-dr/
- Community Development Block Grant Mitigation funding, which is like CDBG-DR funds, except these funds may only be used to mitigate disaster risks and reduce future losses: CDBG-MIT: Community Development Block Grant Mitigation Funds - HUD Exchange

Other Grant Opportunities

The United States Economic Development Administration partnering with the International Economic Development Council provides best practices in post-disaster economic recovery. These resources can be found at the following link:

Disaster Economic Recovery and Resilience Webinar Series:
 https://restoreyoureconomy.org/index.php?src=gendocs&ref=360&category=Main

Regularly Assess Progress and Implement Improvements

As mentioned earlier in this document, a resilient recovery program develops metrics to assess how effective the various projects and overall program are in accomplishing their stated goals.

Improvement Process

FEMA has a technical assistance resource called the Continuous Improvement Program (CIP) that can help with improvement planning. The CIP builds preparedness through consistent, agencywide assessment, program consulting and support, and corrective action tracking. This program can provide technical assistance through its Continuous Improvement Technical Assistance Program (CITAP). CITAP offers guidance, tools, templates, training, and customized engagements. This program identifies the following four improvement phases:



- 1. Discovery Collecting information from an incident that will be used later to identify strengths, areas for improvement, potential best practices, and mission-critical issues.
- 2. Validation Checking the accuracy, completeness, and quality of data. During validation, personnel analyze the collected data to identify and ensure the accuracy of observations and potential recommended actions.
- 3. Resolution Finalizing, tracking, and implementing the recommended actions that were drafted during the observation development process in the validation phase.
- 4. Evaluation Measuring the effects of completed recommended actions to determine the extent they have strengthened the organization, institutionalized best practices, addressed areas for improvement, and/or resolved mission-critical issues.

For more information:

FEMA Preparedness Toolkit: https://preptoolkit.fema.gov/web/cip-citap/community-home

Determine Success Factors

The NDRF recognizes that no single definition fits all situations; however, the framework does describe some conditions that successfully recovered communities share:

- The community successfully overcomes the physical, emotional, and environmental impacts of the disaster.
- It reestablishes an economic and social base that instills confidence in the community members and businesses regarding community viability.
- It rebuilds by integrating the functional needs of all residents and reducing its vulnerability to all hazards facing it.

• The entire community demonstrates a capability to be prepared, responsive, and resilient in dealing with the consequences of disasters.

In relation to the planning process, the NDRF selected the following nine factors of success for recovery planning:

- **Comprehensive Scope**, which includes the need to plan and operate recovery programs and organizations with the understanding that efforts serve people, their culture, and their place. Recovery efforts must address a continuum that includes individual survivor needs as well as the needs of the community and surrounding environment.
- **Effective Decision Making and Coordination,** which includes characteristics such as defining stakeholder roles and responsibilities; coordinating response activities with corresponding recovery functions; examining recovery alternatives, addressing conflicts, and making informed and timely decisions; and establishing ways to measure and track progress, ensure accountability, make adjustments, and reinforce realistic expectations.
- Integration of Community Recovery Planning Processes, which includes characteristics such as linking recovery planning to other planning efforts and developing processes and criteria for identifying and prioritizing key recovery actions and projects.
- Well-Managed Recovery, which includes characteristics such as developing pre-disaster
 partnerships at all levels of government, with the private sector, and with
 nongovernmental organizations (NGOs); effectively leveraging resources; seeking out
 and successfully using outside resources; establishing guidance for the transition from
 response to recovery; and planning for surging personnel demands post disaster.
- Proactive Community Engagement, Public Participation, and Public Awareness,
 which includes characteristics such as stakeholders working together to maximize the
 use of available resources; creating post-disaster recovery plans that can be
 implemented quickly; and making sure public information is actionable, effective, and
 accessible to keep everyone informed throughout the recovery process.
- **Effective Financial and Program Management**, which includes characteristics such as understanding which funding sources could finance recovery; knowing how to administer external funding programs; having a system of internal financial and procurement controls and external audits; and maximizing the use of local businesses to aid recovery of the local economy.
- **Organizational Flexibility,** which includes characteristics such as having recovery structures at all government levels that evolve, adapt, and develop new skills and capabilities to address changing recovery needs; facilitating compliance with laws, regulations, and policies; and ensuring flexible staffing and management structures.
- **Resilient Rebuilding,** which includes characteristics such as taking into account ecological, environmental, and local capacity; adopting sustainable and inclusive building techniques, building codes, and land use ordinances; and incorporating risk reduction strategies into local governance and decision making.

• **Health Integration**, which includes characteristics such as including health considerations and implications in recovery decision making.

For more information:

• FEMA National Disaster Recovery Framework: https://www.fema.gov/emergency-managers/national-preparedness/frameworks/recovery

Next Steps



Figure 2. Roadmap to Resilient Recovery

This document provides an overview and a roadmap for establishing and maintaining a resilient recovery program for the local communities in the Centralina Region. This roadmap is only a guide for the local communities to help begin or grow their recovery programs. The next step is to conduct a self-assessment to see where your jurisdiction stands in relation to the roadmap. An assessment tool is provided below in the attachment to help facilitate this process. Once you have a clear picture of the current status, then select one to three undeveloped or underdeveloped areas of the recovery program to establish improvement/growth targets. Thereafter, annually assess the development and effectiveness of the recovery program in comparison to the roadmap and the established targets. Ideally you will see a continuous pattern of development and increased resilience in your community.

Be sure to continue to engage and participate in the RRC as collaboration and accountability will help you to stay on track in your recovery program's development targets.

For more information: https://centralina.org/regional-collaboration/resilience/

Attachment: Resilient Recovery Roadmap Self-Assessment

Self-Assessment Matrix

The self-assessment matrix in Table 1 is designed to create a high-level picture of the jurisdiction's current recovery program level of activity. It does not assess the effectiveness of the program, only whether or not recommended activities and suggested elements exist and are active in the jurisdiction. The intended use is for the jurisdiction to establish a baseline understanding of where they are within the roadmap guidance.

How to Self-Assess

For each suggested element, review the section of this document that addresses that part of the roadmap, then indicate the level of activity in the appropriate column. Be sure to write down the same number as the column value (see example below). Next, add up the value of all of the indicated elements and divide that number by the total number of elements (the current draft has 27 elements). This will provide a score between 0 and 4. A score of 2 indicates an ideal active recovery program. Many, if not most, jurisdictions may find that their initial baseline is less than 2. This does not indicate that its current recovery program is doing poorly, or that the responsible party is not effectively managing the program. The score indicates areas of programmatic strengths and areas for growth. It should be used to help shape development targets and an improvement plan. It is a tool that provides those with responsibility over the recovery program a mechanism for measuring growth.

Table 1: Self-Assessment Matrix

			Program Implementation Self-Assessment						
	Resilient Recove	ery Roadmap	Not Identifiable	Limited Activity	Active Program	Robust Program	Best Practice		
Roadmap	Recommended Activities	Suggested Elements	0	1	2	3	4		
	Organize Local Leadership	Champions identified and engaged in program				3			
Part 1:	Involve the Whole Community	Whole Community representatives identified and engaged					4		
Organizing	Establish Coordination Methods	Voluntary Organizations Active in Disaster (VOAD) developed and engaged			2				
		Local Emergency Planning Committees			2				
		Community Resilience Committees		1					
		Stakeholder Preparedness Review (SPR)			2				
	Assess Capabilities and Threats	Threat and Hazard Identification and Risk Assessment (THIRA)			2				
		Hazard Vulnerability Assessment			2				
		Pre-Disaster Recovery Plan developed		1					
Part 2: Recovery	Create Recovery Plans	Metrics for successful recovery established		1					
Planning	Rec	Recovery goals determined		1					
	Integrate Hazard Mitigation with Recovery	Mitigation actions integrated with recovery programs	0						
	Duis viting Duningto	Recovery priorities determined			2				
	Prioritize Projects	Additional prioritization considerations				3			
	Implement Resilient Systems	Implementing resilient systems approach			2				

			Program Implementation Self-Assessment						
	Resilient Recovery Roadmap			Limited Activity	Active Program	Robust Program	Best Practice		
Roadmap	Recommended Activities	Suggested Elements	0	1	2	3	4		
	Integrate Approach to Recovery Programs	Implementing integrated recovery approach		1					
	Identify Recovery Staffing	Recovery staffing identified			2				
		Finance Department engaged in recovery programs				3			
	Manage Financials	Recovery financial plan developed		1					
		Supporting Whole Community financial resilience	0						
Part 3: Managing	Leverage Available Resources	Existing recovery resources identified and engaged			2				
Recovery		FEMA grant opportunities assessed				3			
Programs	Pursue Grant Opportunities	Other grant opportunities assessed				3			
		Application developed/submitted			2		Practice		
		Improvement process implemented			2				
	Implement Improvement Process	Determined recovery program success factors				3			
		Regularly assess progress and implement improvements		1					
	Total:			7	22	18	4		
	Recovery Program Self-Assessment Score*						1.89		

^{*} A score of 2 indicates an active recovery program. The score is determined by adding up the value of all of the indicated elements and dividing that number by the total number of elements.

Development Targets and Improvement Plan

The improvement plan in Table 2 is a tool that provides those with responsibility over the recovery program a mechanism for establishing development targets. It outlines a high-level approach to accomplishing the target as well as the responsible organization, funding source, and target completion date. This tool also allows a jurisdiction to set priorities and adjust them during the annual assessment.

Table 2: Resilient Recovery Roadmap – Improvement Plan

Resilient Recovery Roadmap – Improvement Plan								
Jurisdiction:	County A	Assessment Completed By:	EMA Director	Date:	2022-12-01			
Roadmap Element	Improvement Target	Implementation Approach	Responsible Organization	Completion Target Date	Funding Source	Priority		
Integrate Mitigation Actions with Recovery Programs	Begin integrating the Hazard Mitigation Plan (HMP) and the Pre- Disaster Recovery Plan (LTRP) information to better align common efforts.	Review the HMP mitigation actions in a joint session with the Long-Term Recovery Committee (LTRC) and Local Emergency Planning Committee (LEPC). Identify common efforts and align priorities. Update the HMP and the LTRP accordingly.	EMA	2023-06-01	Hazard Mitigation Grant Program (HMGP)	1		
Support Whole Community Finance Resilience	Provide public training on resilient finance.	Bring in subject matter experts (SMEs) and facilitate a series of public training sessions for major businesses and organizations on disaster and recovery finance.	Finance	2024-12-01	Building Resilient Infrastructure and Communities (BRIC)	2		
						3		
						4		
						5		
						6		

	Resilient Recovery Roadmap – Improvement Plan								
Jurisdiction:	County A	Assessment Completed By:	EMA Director	Date:	2022-12-01				
Roadmap Element	Improvement Target	Implementation Approach	Responsible Organization	Completion Target Date	Funding Source	Priority			
						7			
						8			