

# BUILDING ECONOMIC RESILIENCE IN THE KERR-TAR REGION

Recommendations for Linking Comprehensive Economic Development Strategies  
and Hazard Mitigation Plans



Winter 2015



## ACKNOWLEDGMENTS

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## EXECUTIVE SUMMARY

Hazard mitigation and economic development activities—both critical to the long-term prosperity of regions and communities across the country—are often conducted separately. As a result, hazard mitigation plans and economic development strategies can be disconnected, making it difficult to ensure that businesses and regional economies are prepared for natural disasters and able to recover quickly. However, history has shown that a region’s success is inherently linked to its economic resilience—in other words, its ability to anticipate, withstand, and bounce back from any shocks to its businesses and overall economy, whether those stem from natural hazards, climate change, or shifting economic or market conditions. Considering hazard mitigation and economic development planning as interrelated processes is a necessary step toward building economic resilience.

This report summarizes the findings from a technical assistance project conducted by the National Association of Development Organizations Research Foundation and the University of Louisville Center for Hazard Research and Policy Development for the Kerr-Tar Regional Council of Governments in North Carolina. The purpose of the project was to assist the Kerr-Tar Regional Council of Governments, which serves as an U.S. Economic Development Administration-designated Economic Development District, with identifying ways to align its Comprehensive Economic Development Strategy (CEDS) and its hazard mitigation plans (HMPs).

The report outlines the four essential elements of the CEDS and HMPs (see elements in diagrams below), demonstrates how they can inform each other, and highlights opportunities for incorporating economic development information into HMPs and hazard information into the CEDS. Additionally, specific recommendations for the Kerr-Tar Regional Council of Governments suggest approaches to strengthen and align its CEDS and HMPs by:

- Engaging new stakeholders,
- deepening analyses,
- selecting projects for implementation based on an inclusive set of economic, environmental, social, and resilience criteria, and
- through other means.

The appendix contains further information and resources, including a full resilience assessment that was conducted for Person County, a sample SWOT analysis, and a listing of planning guidelines, data sources, examples, and other helpful materials related to hazard mitigation and economic development planning.

Though this report was developed for the Kerr-Tar Regional Council of Governments and its local government partners, the concepts and approaches might also be helpful to economic developers, mitigation planners, emergency managers, and other staff of regional development organizations, cities, and counties across the U.S. who are working to coordinate economic development and hazard mitigation efforts.

The page headers use the below format to indicate the element of the plan - either the CEDS or the HMP - currently being referenced.



### BACKGROUND

In regions and communities across the country, managing and mitigating natural hazard events and planning for long-term economic growth do not typically go hand-in-hand. As a result, hazard mitigation plans and economic development strategies are often disconnected, making it difficult to ensure that businesses and regional economies are prepared for natural disasters and able to recover quickly. However, history has shown that a region's long-term prosperity is inherently linked to its economic resilience—in other words, its ability to anticipate, withstand, and bounce back from any shocks to its businesses and overall economy, whether those stem from natural hazards, climate change, or shifting economic or market conditions. Considering hazard mitigation and economic development planning as interrelated processes is a critical step toward building economic resilience.

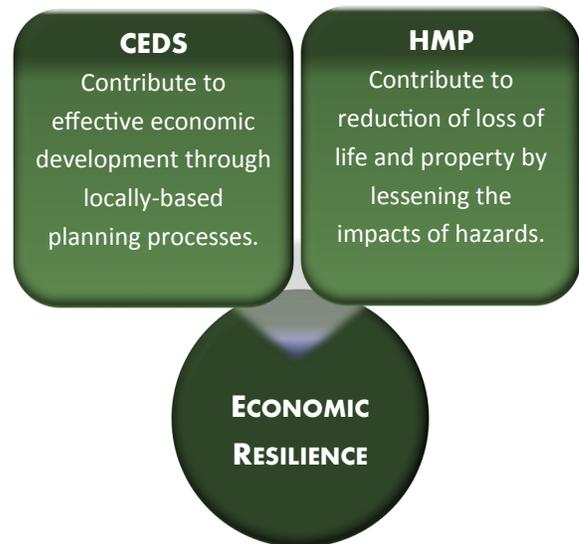
Many regions are experiencing more frequent and more severe natural disasters and are reexamining how they ready themselves for those events. They are looking for tools and resources that will help them prepare their businesses, infrastructure, services, and the other interlocking components that make up their regional economies. As regional development organizations<sup>1</sup> are often responsible for the preparation of both the Comprehensive Economic Development Strategy (CEDs) and Hazard Mitigation Plans (HMP), they are well-positioned to fill this need by finding alignments between the two. Additionally, new U.S. Economic Development Administration (EDA) guidelines are requiring the agency's designated Economic Development Districts (EDDs) to incorporate economic resilience into their CEDs. Driven by all of these forces, there is an increasing need and desire to coordinate the CEDs and HMPs.

This report summarizes the findings from a technical assistance project conducted by the National Association of Development Organizations (NADO) Research Foundation and the University of Louisville Center for Hazard Research and Policy Development (CHR) for the Kerr-Tar Regional Council of Governments (Kerr-Tar Regional COG). The Kerr-Tar Regional COG covers North Carolina's predominantly rural Region K, which includes

### What is Economic Resilience?

Economic Resilience is the ability of a region or community to anticipate, withstand, and bounce back from any shocks to its businesses and overall economy, including:

- Natural disasters or hazards;
- The closure of a large employer;
- The decline of an important industry;
- Changes in the workforce; and
- Climate change.



Franklin, Granville, Person, Vance, and Warren Counties. The purpose of the project was to help the Kerr-Tar Regional COG, which serves as the area's EDD, identify ways to align its CEDs and HMPs and incorporate economic resilience into the CEDs. The project took place in the fall-winter of 2014, and included background research on hazards, economic development, and planning in the Kerr-Tar region; a 1.5-day site visit during which the NADO Research Foundation and CHR met with key stakeholders throughout the region and presented to the CEDS committee; and close collaboration via phone and email with Kerr-Tar Regional COG staff.

## HOW TO USE THIS REPORT

### AUDIENCE

This report was developed specifically for the Kerr-Tar Regional COG and its local government partners, and the suggested strategies are customized to Region K's specific conditions, needs, and plans. However, regional development organization staff, economic developers, mitigation planners, emergency managers, and other local government representatives from elsewhere in the country who are working to coordinate economic development and hazard mitigation efforts might find the overarching concepts and approaches helpful as well.



### ORGANIZATION

This report is organized to demonstrate opportunities for aligning the CEDS and the multi-jurisdictional HMPs for the Kerr-Tar region. Both the CEDS and HMPs have four essential elements that can inform each other. Descriptions of each element (listed on the right in 'Table of Contents') outline their purpose and content and demonstrate their relationships to each other. Opportunities for incorporating economic development information into HMPs and hazard information into the CEDS are discussed. Next, recommendations for the Kerr-Tar Regional COG suggest specific approaches to strengthen and align the CEDS and HMPs in Region K. This report focuses primarily on the intersection of economic development and hazard mitigation in the CEDS and HMPs; however, several additional recommendations for strengthening each document on its own are also featured.

The report's appendix contains additional information and resources, including a full resilience assessment that was conducted for Person County, a sample SWOT analysis, and a listing of further resources such as planning guidelines, data sources, examples, and other material related to hazard mitigation and economic development planning.

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## WHY MITIGATION AGAINST HAZARDS?

Natural disasters can cause loss of life, inflict damage to buildings and infrastructure, and have devastating consequences for a region's economic, social, and environmental well-being. Without infrastructure investment, proactive partnerships, and preparation, communities face greater risks from hazard events. Successful hazard mitigation planning helps reduce risk and create safer, more resilient communities and regions, which are also more economically stable and prosperous.

Hazard mitigation is a crucial step to:

- Protecting public safety to prevent loss of life and injury;
- Reducing harm to existing and future development;
- Preventing damage to a community's unique economic, cultural, and environmental assets;
- Minimizing operational downtime and accelerating recovery of government and business after disasters;
- Reducing the costs of disaster response and recovery and the exposure to risk for first responders; and
- Accomplishing other community objectives, such as leveraging capital improvements, enhancing infrastructure, and preserving open space.

## WHAT IS A HMP?

The federal government recognized the importance of mitigation for effective disaster management with the passage of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (1988), as amended by the Disaster Mitigation Act of 2000. This Act established mitigation planning as a precondition for receiving Federal Emergency Management Agency (FEMA) mitigation project grants. In order to be eligible for these funds, communities are tasked with developing a detailed Hazard Mitigation Plan.

The purpose of mitigation planning is to identify risks and develop policies and actions that can be implemented over the long term to reduce risk from future hazards. Mitigation planning not only reduces the economic, social, and environmental costs of disasters, it also achieves positive secondary benefits such as:

- Identifying, analyzing, and increasing awareness of local and regional risks and vulnerabilities;
- Identifying and building consensus around actions for risk reduction;

## What elements are included in a HMP?

A well-constructed HMP should include the following elements:

- An inclusive **Planning Process** that allows for equitable representation by diverse community groups;
- A **Risk Assessment** conducted to determine the potential impacts of hazard to the people, economy, built, and natural environments of the community;
- A **Mitigation Strategy** that contains an action plan for how the community will reduce potential losses as identified in the risk assessment; and
- A **Plan Maintenance** process that establishes an approach to track the plan's implementation progress.

**"After a disaster, economic resiliency drives a community's recovery. Each has specific economic drivers that are important to understand when planning to reduce the impacts of hazards and disasters to the local economy. Economic assets can be described in terms of direct or indirect losses; for example, building or inventory damage is direct, but functional downtime and loss of employment wages are indirect losses ... In addition to the primary economic sectors ... such as manufacturing, agricultural, or service sectors, major employers and commercial centers also support the local economy."**

*FEMA Local Mitigation Planning Handbook, page 5-10*

- Building partnerships by engaging citizens, organizations, and businesses;
- Communicating local priorities to state and federal officials and ensuring that funding decisions support those priorities;
- Aligning risk reduction with other community objectives; and
- Allowing regions to become more resilient after disasters by providing a comprehensive, recovery plan to follow during rebuilding.

## WHAT IS A CEDS?

A Comprehensive Economic Development Strategy (CEDS) is designed to bring together the public and private sectors in the creation of an economic roadmap to diversify and strengthen regional economies. Required by EDA, CEDS allow EDDs to qualify for EDA assistance under its public works, economic adjustment, and planning programs. Constructing a CEDS should be a locally-driven exercise resulting in a strategic blueprint for regional collaboration and prosperity with buy-in from the public and private sectors and key stakeholders throughout the region.

## REGIONAL STAKEHOLDER INVOLVEMENT

EDDs should develop the CEDS with the assistance of a CEDS strategy committee and comprehensively update it every five years in accordance with EDA's summary of requirements and content guidelines. The strategy committee should represent the main economic interests of the region and include a diverse set of stakeholders such as private sector representatives, public officials, representatives of workforce development boards, institutions of higher education, and labor groups.<sup>2</sup>

As of January 2015, the revised CEDS guidelines are available for download at [www.eda.gov/ceds](http://www.eda.gov/ceds)

## What elements are included in a CEDS?

A well-constructed CEDS should include the following elements:

- A **summary background** explaining the current economic condition of the region and potential for future development activities;
- A **SWOT analysis** that identifies and analyzes the region's strengths, weaknesses, opportunities, and threats;
- A **strategic direction and action plan** with detailed goals, objectives, and proposed projects built off of the summary background and SWOT analysis; and
- An **evaluation framework** guiding the implementation of the strategy.

## UPDATED GUIDELINES

In order to help EDDs craft more impactful CEDS, EDA has undertaken a comprehensive revision of the CEDS content guidelines.<sup>3</sup> The new content guidelines replace the existing CEDS Summary of Requirements, offer more suggestions on the content that should be included in each of the required sections, and provide recommended tools, resources, and examples to help guide the development of the CEDS document.

At their core, the new guidelines emphasize linking the sections to improve the focus and impact of the overall strategy. Some specific recommendations include:

- The summary background should only include relevant regional information that informs the SWOT analysis and overall strategic direction of the plan.
- The strategic direction and associated action plan should logically flow from the critical internal and external factors that speak to the region's assets and limitations (as identified in the SWOT analysis) and its role in capacity building.<sup>4</sup>
- The evaluation framework, with its associated measures and timelines, should directly correspond to the strategic direction and action plan to create a cohesive, targeted economic vision for the region moving forward.<sup>5</sup>

## ECONOMIC RESILIENCE REQUIREMENT

Perhaps the most significant change to the CEDS content guidelines is the requirement to incorporate **economic resilience** into the overall strategy. EDA recognizes that economic prosperity is linked to a region's ability to withstand, prevent, and quickly recover from major disruptions or shocks to its underlying economic base.<sup>6</sup> Economic resilience can mean many different things to different regions. Whether it's a region's ability to withstand the loss of a major employer, to prevent outmigration and the decline of the region's available workforce, or to quickly recover from a natural disaster – resilience can be infused into most aspects of the CEDS regardless of the current economic conditions, geography, or climatic conditions of a region.

Many EDDs, especially those heavily impacted by recent natural disasters, have already begun incorporating economic resilience into their CEDS. Most often, EDDs highlight past disruptions in the summary background, identify regional vulnerabilities in the SWOT analysis, or incorporate language from existing regional and local planning efforts that are related to being better prepared for disruptions.<sup>7</sup>

Because EDDs often lead or support the development and implementation of other regional plans, including long range transportation plans, comprehensive land use plans, and multi-jurisdictional hazard mitigation plans, they are well-positioned to coordinate these efforts and promote development and investments that simultaneously enhance economic competitiveness, quality of life, and community resilience. In fact, the forthcoming CEDS content guidelines specifically encourage the alignment of the CEDS with other types of regional plans in order to leverage scarce planning resources, avoid duplication, and maximize efforts.<sup>8</sup>

**"Another way of looking at resilience is the ability not only to bounce back but also to 'bounce forward' – to recover and at the same time to enhance the capacities of the community or organization to better withstand future stresses."**

*Urban Land Institute, After Sandy: Advancing Strategies for Long-Term Resilience & Adaptability*



When a shock occurs, the ability for large industries to continue operations and the level of support to assist the region with response and recovery can have a large influence on a community's level of economic resilience.

*Location: Iams Plant, Henderson. Photo Source: Flickr User John Romero*

### WHY COORDINATE PLANNING EFFORTS?

In regions across the country, EDDs and other regional planning entities are often responsible for developing and implementing a variety of planning documents including multi-jurisdictional HMPs and CEDS, yet these planning efforts are often disconnected. This siloed approach can result in economic development programs and priorities that exacerbate the region's vulnerabilities to natural hazards and hazard mitigation investments that contradict economic development goals, such as:

- Focusing business recruitment efforts on sectors that are particularly vulnerable to common regional hazards;
- Building infrastructure for economic activity such as roads, railways, water and sewer lines, and industrial parks in places that are prone to flooding or other natural hazards; and
- Failing to provide businesses with the necessary resources for risk management such as continuity training, information about hazards and emergency procedures, and incentives for facility improvements that build resilience.

However, with more frequent and more severe natural disasters, EDA's new EDA requirements for EDDs to incorporate economic resilience into their CEDS, more widespread awareness of the impacts hazardous events can have on local businesses and regional economies, and stretched local and regional budgets, there is an increasing desire to coordinate these plans.

### IDENTIFYING PLAN SIMILARITIES

This report reviews the parallels between the CEDS and HMPs and attempts to identify ways for the Kerr-Tar Regional COG to align the two planning processes. Both plans require a summation of data about the community, an assessment of risk (or SWOT), and the creation of a strategy built off of that information that reduces the impacts of the identified risks and vulnerabilities and, in doing so, makes the region stronger and better able to withstand shocks, both

**The following sections of this guidebook** are intended to walk through the required elements of each planning effort, provide background on what is typically included in well-prepared CEDS and HMPs, highlight the similarities of the planning requirements, and suggest strategies for linking the efforts in the Kerr-Tar region.

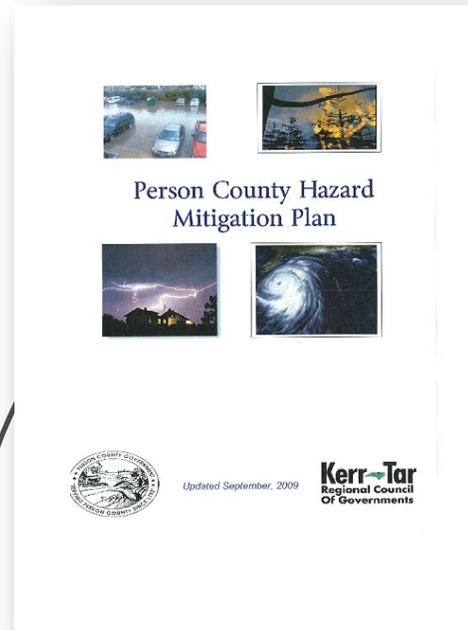
### HMPs and CEDS that are aligned can result in:

- Businesses and business districts located in safe areas;
- Commercial buildings built to standards that allow them to withstand storms;
- Businesses that continue operating or reopen quickly after severe weather events;
- Critical facilities and infrastructure that continue serving key employers and the public during and after severe weather events;
- Prioritized business reentry for key economic drivers;
- Open space and natural resource preservation that reduces hazard impacts and attracts tourism;
- Diversified economies that reduce reliance on sectors that are particularly vulnerable to hazards and climate change;
- Marketability of the region to businesses and investors looking to locate in communities that are safe and well-prepared for disasters;
- Job market stability as a result of businesses being better prepared for disasters; and
- Stable tax revenue streams for local governments when businesses are able to continue operating during and after severe weather events and workers are able to continue working.

### IDENTIFYING PLAN SIMILARITIES, CONT'D

natural and man-made, in the future. Not only can the risk assessment and the accompanying mitigation strategy of an HMP inform the resilience component of the CEDs, but the summary background, SWOT analysis, and overall economic vision included in a CEDs can aid in the development of an HMP that is stronger and more comprehensive due to its consideration of the regional economy as well.

The following sections of this guidebook are intended to walk through the required elements of each planning effort, provide background on what is typically included in well-prepared CEDs and HMPs, highlight the similarities of the planning requirements, and suggest strategies for linking the efforts in the Kerr-Tar region. The alignment of the four required elements of each plan allows for each to inform the other and for the entire process to be layered so that each subsequent element is informed and strengthened by the research, analysis, and information provided in the preceding ones. This layering ultimately creates a more cohesive and comprehensive document on both sides and, in turn, makes the region better able to withstand, prepare for, and quickly recover from natural hazards and economic shocks.



Many opportunities to align HMPs and CEDs exist in the Kerr-Tar region.

*Image Sources: Person County Hazard Mitigation Plan 2009, Kerr-Tar Regional Council of Governments CEDs 2013-2017*

PLANNING PROCESS

RISK ASSESSMENT

MITIGATION STRATEGY

PLAN MAINTENANCE

FEMA requires the Hazard Mitigation Plan include a written record of the planning process and a description of how the plan was prepared for each jurisdiction including the schedule and activities that resulted in the plan’s development, as well as the regional and local stakeholders that were involved throughout the process.

To determine the best approach to developing the plan, consider who has an interest and resources to be involved in all or part of the process. In multi-jurisdictional plans, each jurisdiction identifies a lead representative to coordinate their community’s involvement and participate in the core planning team (see figure below). In the Kerr-Tar region, each jurisdiction should send at least one representative to participate in the core team. That representative should coordinate meetings with additional stakeholders within their locality in order to gather local input and report out at various points in the planning process.

Local emergency managers are critical partners in HMP development and often take a leading role in the process. They have detailed understanding of local hazards, risks, and historic disaster impacts, as well as experience working with state and federal agencies to implement mitigation projects. Economic developers can also bring unique perspectives and expertise to the process. They are well-versed in community and economic development initiatives, federal programs to support those efforts, long-term planning and funding mechanisms, and best practices in public outreach, education, and marketing.

**“Involving economic development officials, the local chamber of commerce, and business leaders in the planning process and educating them about local risks and vulnerabilities can make them partners in future mitigation initiatives.”**

*FEMA Local Mitigation Planning Handbook, page 3-2*

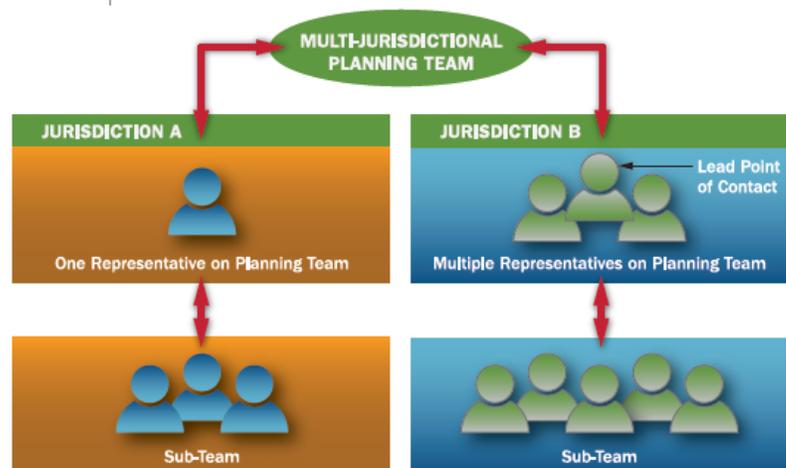
**Who should be involved?**

Economic development and business partners to consider engaging in mitigation planning include:

- City and county economic developers;
- Owners/managers of small, medium, and large businesses;
- Chamber of Commerce representatives;
- Business continuity professionals;
- Small business development professionals; and
- Insurance providers.

For a multi-jurisdictional plan, creating a planning team structure that allows for coordination and accountability among and within the jurisdictions is important. Each jurisdiction will have at least one representative on the planning team that will need to report back to their community on a regular basis, as well as gather feedback and input for the plan.

Figure Source: FEMA Local Mitigation Planning Handbook, March 2013.



PLANNING PROCESS

RISK ASSESSMENT

MITIGATION STRATEGY

PLAN MAINTENANCE

It is beneficial to include at least one economic development practitioner or business owner on the core planning team; however, many economic development and business leaders will have limited time to spend on this effort. As a result, it will most likely be preferable to consult with those partners in a more targeted manner. The core planning team could hold meetings with groups of economic development stakeholders at one or two key points during the planning process, or the jurisdictional representatives could meet with economic development representatives from their localities and share their feedback with the core planning team.

Activities at these meetings could include presenting the results of the risk assessment, conducting a SWOT analysis focused on natural hazards and economic development, collecting qualitative information about the impacts of previous hazard events on businesses and the economy, and gathering input on mitigation strategies. The robust involvement of the economic development and business community in the development of the HMP will have the additional benefit of engaging this key constituency as partners in the implementation of the plan. Stakeholders who have been part of the development of mitigation strategies are more likely to take ownership and devote time and resources to them.



At meetings, activities can be supplemented by printed maps can help to identify areas in need of mitigation.

Photo Source: CHR

It might also be helpful to dovetail HMP development with other ongoing planning efforts, if any exist. For example, if the CEDS is being updated at the same time, joint meetings could be held for the CEDS strategy committee and the HMP core planning team to discuss economic vulnerabilities and how to address them. This approach will save time, promote cross-pollination between experts who might not interact regularly, and uncover perspectives and issues that might not have been revealed otherwise.

Below is an example of planning process meetings to give a general feel for the length of time and major tasks to be accomplished by the multi-jurisdictional planning team or “Steering Committee” as listed below.

Planning Process Steps	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14
<b>Planning Process</b>													
Steering Committee Meeting #1 <i>Purpose: Kick-off and data collection</i>	06/25												
Steering Committee Meeting #2 <i>Purpose: Risk assessment data collection</i>					10/29								
Steering Committee Meeting #3 <i>Purpose: Risk Assessment Results, mit. strategy</i>										03/27			
Steering Committee Meeting #4 <i>Purpose: Mitigation strategy development</i>											04/23		
Steering Committee Meeting #5 <i>Purpose: Draft plan review, plan maintenance</i>													06/26
Individual Stakeholder Meetings <i>Purpose: Data collection, mitigation strategy</i>	06/03			09/10				01/31					

Table Source: Local Mitigation Plan Development Timeline, CHR.

### Planning Process Recommendations for the Kerr-Tar Regional COG

1. Invite at least one economic development or business leader to participate in the core planning team meetings held throughout future mitigation planning processes for Franklin, Granville, Vance, and Warren Counties. If possible, this should be someone involved in the development of the CEDS in order to encourage linkages between the two plans. However, if participating in both processes is too onerous for one person, a different participant could be selected.
2. Invite a representative of the Roxboro/Person County HMP core planning team to present the results of their risk assessment at a CEDS strategy committee meeting. This presentation should take place before the committee conducts its SWOT analysis, in order to inform that discussion. It could also serve to collect additional input on economic vulnerabilities and previous disaster impacts on the economy for the risk assessment.
3. Invite a CEDS strategy committee representative to present the results of the SWOT analysis, draft CEDS strategies, and/or other general information about the regional economy and economic development efforts at a HMP development meeting for Franklin, Granville, Vance, and Warren Counties. This presentation should help to inform discussions of the mitigation strategies.
4. Review the CEDS and other economic development plans, projects, and programs—such as the NC Lakes District Regional Bike Plan—to identify potential linkages between economic development and hazard mitigation efforts. This review could uncover new partners to engage in HMP development, concerns to incorporate into the risk assessment, economic development activities that also advance mitigation goals and could be folded into the mitigation strategies, and other potential areas of alignment.
5. Coordinate future HMPs developed for Franklin, Granville, Vance, and Warren Counties, with the Roxboro/Person County HMP, which is almost finalized. For instance, the core planning team from Roxboro/Person County could meet with the new team(s) as they kick off their process, or Kerr-Tar Regional COG staff could share the key pieces of the Roxboro/Person County plan. Aligning strategies when possible will promote consistent approaches to mitigation across the region, ensure that activities in one jurisdiction do not have unintended consequences on its neighbors, and encourage regional collaboration around mitigation and resilience.
6. Establish a Regional Resilience Council, an interdisciplinary group that would include disaster management, economic development, and other partners involved in promoting regional resilience to natural disasters and other shocks. This group would meet regularly and serve as a forum for discussion of CEDS and HMP development as well as broader resilience-related work.

## SUMMARY BACKGROUND

## SWOT ANALYSIS

## STRATEGY

## EVALUATION FRAMEWORK

The summary background of the CEDS is intended to provide a brief description of the economic conditions in the region. This section sets the foundation for the region's economic vision and goals by clearly describing its existing economic identity. Information and analysis should be presented in a clear and concise manner that can be easily understood by the general public. Rather than listing every possible data point in a tabular format, it can be much more impactful to select the information that is most relevant to the strategy's overall direction and present it visually through graphics or maps.<sup>9</sup> Most importantly, the data and analysis included in this section should be directly connected to the accompanying SWOT analysis and strategic direction.

Although the summary background is typically the introduction to the CEDS, it is recommended that this section be written after performing the SWOT analysis and developing the economic vision for the region. If written first, it is easy to include unrelated and irrelevant information instead of targeting the data to the strategic direction and plan of action.

In addition, referencing related planning efforts may aid in the development of the summary background as information collected through these efforts can inform the analysis of the region's existing economic conditions. For example, because there are similarities between the data analyzed in a CEDS summary background and an HMP risk assessment (demographic, socioeconomic, environmental, geographic, and climatic data), the research conducted for each element can reinforce the other. If relevant, the summary background can point to the key findings of the risk assessment, highlighting the potential impacts of natural hazards on regional economic drivers. Conversely, the description of economic assets such as major industry clusters, important centers of economic activity, and the regional economy's relationship with the larger area or state's economy commonly found in the CEDS summary background can improve the analysis of economic vulnerabilities presented in the HMP's risk assessment.

**The summary background could include the following, as applicable<sup>10</sup>:**

- Demographic and/or socioeconomic data;
- Environmental, geographic, climatic, cultural, and/or natural resource profiles;
- Infrastructure assets that relate to economic development including water, sewer, communications, energy distribution, and transportation systems;
- Emerging or declining clusters and their past, present, and projected impacts on the region's competitive advantage and economic development capacity;
- The relationship of the regional economy to the economy of the broader area or state, with particular regard to local advantages and disadvantages;
- Factors that directly affect economic performance in the region such as workforce availability and preparedness, state and local laws, financial resources, energy costs, and land use patterns; and
- Other factors that relate to economic performance such as housing, health services, public safety, and educational, cultural, and recreational resources.



Kerr Lake is a natural and recreational asset of the Kerr-Tar Region.

*Photo Source: Flickr User Terps Travel*

### Summary Background Recommendations for the Kerr-Tar Regional COG

1. Re-format the summary background to include stronger visual representations of the data presented. Rather than the tabular format currently used in the CEDS, think about ways the same data can be presented in maps, charts, or infographics.
2. Use the findings of the SWOT analysis and HMP risk assessment (see Element 2), and the resulting economic development vision statement, goals, and objectives, to target the summary background. Performing these steps prior to crafting the summary background will help tailor it to the overall strategy for the region.
3. Include data and information on economic and workforce conditions in the Kerr-Tar region and each of its counties and, where relevant, compare it to statewide and national averages. Some metrics to consider including are:
  - ◇ Relevant demographic trends such as population change over time, median age, and income;
  - ◇ Job creation by sector and/or job type;
  - ◇ Current employment by sector and change over time;
  - ◇ Identification of major regional employers;
  - ◇ Identification of and performance analysis of major industry clusters;
  - ◇ Average wage by sector and/or industry cluster;
  - ◇ Unemployment rate;
  - ◇ Percentage of residents working outside the region;
  - ◇ Location of centers of economic activity (i.e. workplace by industry cluster); and
  - ◇ Location of critical infrastructure for economic development, including major transportation routes such as highways and rail lines, airports, water and wastewater facilities, communication infrastructure, and energy distribution systems.<sup>11</sup>
4. Take advantage of data collected from the statewide NC Tomorrow initiative and explore whether NC Tomorrow's summary background and vision can inform the Kerr-Tar region's CEDS or address issues in the region.

The mitigation planning team conducts a risk assessment to determine the potential impacts of hazards on the residents, economy, and built and natural environments of the community. The risk assessment provides the foundation for the rest of the mitigation planning process, which is focused on identifying and prioritizing actions to reduce risk. In addition to informing the mitigation strategy, the risk assessment also can be used to establish emergency preparedness and response priorities, inform land use and economic development planning, and support decision making by elected officials, city and county departments, businesses, and other organizations.

**Risk**, for the purpose of hazard mitigation planning, is the potential for damage, loss, or other impacts created by the interaction of natural hazards with community assets. The exposure of people, property, businesses, infrastructure, and other community assets to natural hazards can result in disasters depending on the level of impact. The type and severity of impacts are based on the extent of the hazard and the vulnerability of the asset, as well as the community’s capabilities to mitigate, prepare for, respond to, and recover from events. The below figure illustrates the concept of risk as the relationship, or overlap, between hazards and community assets. The smaller the overlap, the lower the risk.

**Risk Assessment Terminology<sup>12</sup>**

**Natural Hazard** - source of harm or difficulty created by a meteorological, environmental, or geological event.

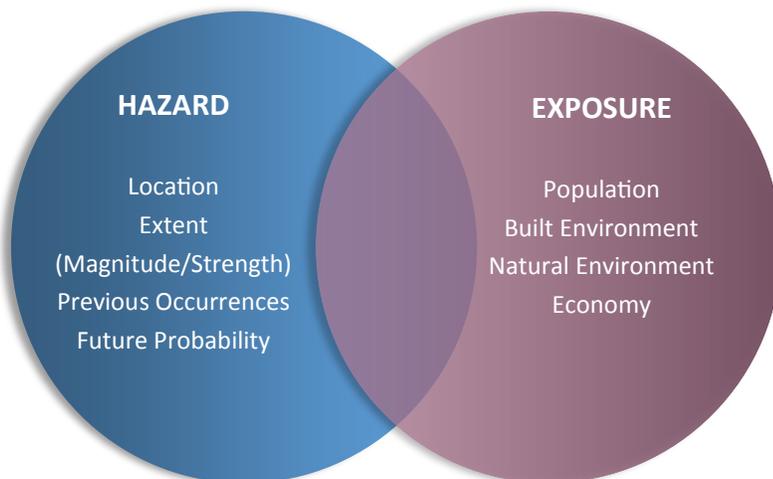
**Exposure** - the people, structures, facilities, and systems that have value to the community

**Vulnerability** - characteristics of community assets that make them susceptible to damage from a given hazard.

**Impact** - the consequences or effects of a hazard on the community and its assets.

**Risk** - the potential for damage, loss, or other impacts created by the interaction of natural hazards with community assets.

**Risk Assessment** - product or process that collects information and assigns values to risks for the purpose of informing priorities, developing or comparing courses of action, and informing decision making.



Risk is the relationship, or overlap, between hazards and community assets.

*Figure Source: Modified from FEMA Local Mitigation Planning Handbook as adapted from U.S. Geological Survey and Oregon Partnership for Disaster Resilience Models.*

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The risk assessment can be greatly strengthened by incorporating an analysis of potential hazard impacts on businesses and the regional economy. A key step in the risk assessment process is asset identification. Economic assets should be included in this exercise. The planning team should identify major employers, industry clusters, and commercial centers whose loss or inoperability would have severe impacts on the community and its ability to recover from a disaster. These assets are typically described in the CEDS summary background and/or SWOT sections; economic development partners can also help to identify them. Businesses that have the resources and capacity to offer disaster management support could also be listed, such as those with vehicle fleets, refrigeration units, and cleanup and debris removal expertise. The asset identification step typically incorporates critical facilities and infrastructure as well; the planning team should ensure that facilities and infrastructure that are most important for business operations are included.<sup>13</sup> These could include highways, rail lines, airports, power plants, and public and private utilities.

For a more in-depth analysis of the economic impacts of hazards, the HMP planning team can work with economic development stakeholders to estimate the potential loss of employment and wages, loss of sales revenue, building and inventory damage, decrease in tax revenue, and ripple effects through supply chains resulting from different disaster scenarios.

Many approaches to developing a risk assessment are possible, depending on available data, technology, resources, and the end results desired. Key initial steps are to define the planning area (county level, census tract level, or other scales such as the one kilometer grid that was used for Person County in the figure below), identify the data that will be input into the model, and define the desired end result. The result of the typical risk assessment is an analysis of vulnerability to natural hazards. However, HMP teams can also choose to measure their community's resilience to hazards. A risk assessment measuring resilience was conducted for

### Economic Indicators to Consider

Economic indicators that could be mapped and incorporated into the risk assessment:

- Business locations;
- Centers of economic activity;
- Critical infrastructure for economic development; and
- Age of commercial building stock.

Person County; the full assessment is included in Appendix A. This model quantifies resilience using a "Hazard Resilience Score." In other words,

$$\text{Hazard Resilience Score} = \text{Socioeconomic Resilience Score} + \text{Hazard Vulnerability Score}$$

In order to define the Hazard Resilience Score for each square kilometer of Person County, Socioeconomic Resilience Scores and Hazard Vulnerability Scores were developed for each. The **Socioeconomic Resilience Score** aggregates demographic characteristics that indicate individuals' and the overall community's ability to prepare for, respond to, and recover from hazard events. This score is comprised of 16 variables including age, income, educational attainment, employment, retail sales, housing type, availability of healthcare, and others. For Person County, the areas with the highest socioeconomic resilience are generally found in the south; those with the lowest socioeconomic resilience are in the central and northern areas.

The **Hazard Vulnerability Score** is based on two variables, exposure and hazard. The exposure variable defines the assets that are present, including population, property, critical facilities, infrastructure, and businesses. The areas with the greatest numbers of assets—and thus the highest exposure—in Person County are found in the central part of the county. The hazard variable indicates

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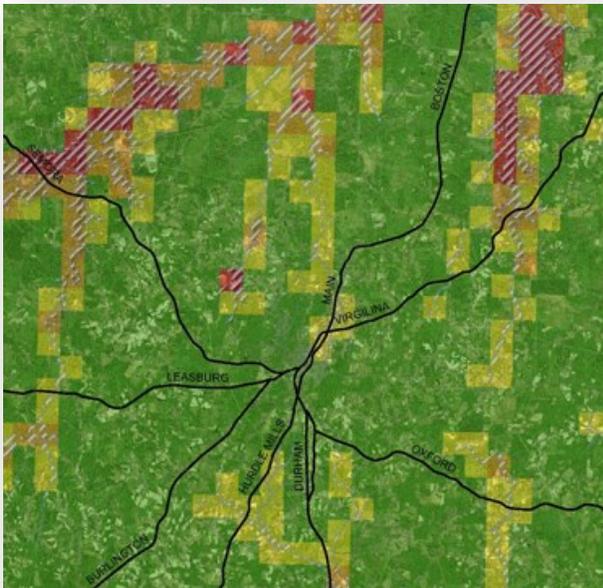
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the location of all identified hazards—such as flood zones and flooding hotspots outside of flood zones—and their potential impacts. A robust hazard variable was developed for the eight major hazards that could affect Person County: dam failures, floods, earthquakes, hail, severe storms, tornadoes, tropical storms, and wildfires. Combining the exposure and hazard variables within the model produces the Hazard Vulnerability Score, showing where assets and hazards intersect to form highly vulnerable areas.

To determine the Hazard Resilience Score for each square kilometer, the Socioeconomic Resilience Scores and Hazard Vulnerability Scores are combined. This shows the areas that have lower resilience levels and high hazard vulnerabilities. The resulting maps should be used to inform the development and implementation of mitigation strategies, shape economic development and other types of planning, and as supporting documentation for grant and funding opportunities.



#### Person County Flood Hazard Score:

Person County's vulnerability to flooding was determined by first calculating the Flood Hazard Score. Red on the above map indicates a high vulnerability to flooding, while green is the lowest. For Person County's full Resilience Assessment, see Appendix A.



#### Person County Business Assets:

The above map displays the density of businesses in Person County, and can help to indicate vulnerable areas and areas in need of mitigation investments.

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### Risk Assessment Recommendations for the Kerr-Tar Regional COG

1. Incorporate economic variables into the risk assessment model, including indicators analyzed in the CEDS, when applicable. Overlaying economic and hazard data makes it possible to identify economic and business vulnerabilities as well as safe areas for the expansion of economic development activities. If using the Hazard Resilience Score model described above, economic variables could be integrated into the Socioeconomic Resilience Score and/or the exposure component of the Hazard Vulnerability Score. These economic variables could include the following:
  - ◇ Business locations: Determining where businesses and business districts are located is critical to understanding the potential impacts of hazards on the economy. Business location data can be mapped and overlaid with hazard data to indicate the vulnerability of businesses. When possible, it is helpful to break down the data by sector, number of employees, and other variables in order to understand potential hazard impacts on different categories of businesses; however, this more detailed information may be more difficult to obtain and less reliable.
  - ◇ Centers of economic activity (i.e. employment, workplace by industry cluster);
  - ◇ Centers of employment relative to population centers;
  - ◇ Critical infrastructure for economic development, including major transportation routes such as highways and rail lines, airports, water and wastewater facilities, communication infrastructure, and energy distribution systems; and
  - ◇ Age of commercial building stock.<sup>14</sup>
2. Supplement the risk assessment with a qualitative analysis of economic risks. This will leverage the knowledge of economic development and business stakeholders to capture potential impacts that are not described by the quantitative data.
  - ◇ Gather feedback from economic development and business stakeholders on the economic impacts of previous natural disasters, such as Hurricanes Floyd, Isabel, and Irene, the 2007-2008 drought, and the 2011 and 2014 ice storms. This data can supplement the risk assessment model, as hazard impact data from local businesses is not always properly captured.
  - ◇ Brainstorm with these same partners about potential impacts from future events for which no historical information is available. A scenario exercise could be helpful here, during which participants run through a hypothetical disaster, discuss the effects, and share ways the region could be better prepared.
  - ◇ Gather information on specific risks to major industry clusters identified in the CEDS, small businesses, and other components of the regional economy that could help target mitigation efforts or post-disaster support.

The SWOT analysis is an in-depth evaluation of a region’s **strengths, weaknesses, opportunities, and threats**, particularly as they relate to the regional economy. It identifies the region’s assets and competitive advantages as well as the internal or external factors that could keep it from realizing its potential. The four components of the SWOT analysis are generally defined as follows:

- Strengths are the region’s assets and competitive advantages;
- Weaknesses are the region’s relative competitive disadvantages;
- Opportunities are ongoing or upcoming chances for regional improvement or progress; and
- Threats are looming chances for negative impacts on the region or regional decline.

SWOT analyses are often conducted as group discussions or interactive exercises with the CEDS strategy committee and other stakeholder groups, and can be supplemented with research and data assessment. They are usually presented as succinct lists or charts in the body or appendix of the CEDS. It is helpful to conduct the SWOT analysis early in the CEDS planning process, as the findings are critical to shaping summary background, strategy, and evaluation framework sections that are concise, cohesive, and tailored to the region’s most pressing needs.

Economic resilience is a natural theme of SWOT analyses, as it requires an understanding of potential threats and shocks. In many regions, these threats include natural disasters and the impacts of climate change. Those should be included in the SWOT analysis where relevant, along with more specific threats posed by their interaction with the unique business and economic environment of the region. The risk assessment of the HMP provides targeted risk information that can directly inform the SWOT, such as mapped hazard locations and the vulnerability of economic assets, the workforce, and critical infrastructure. However, this information should not simply be restated in the SWOT analysis. Rather, it should be used to investigate the risks facing the regional economy more deeply – not just the easily-identifiable issues, but also the secondary and tertiary impacts hazards can have on an economy such as supply chain and workforce issues and future business attraction challenges.

Additionally, CEDS strategy committees should incorporate any other shocks and disruptions that could impact the economy in the next 10-15 years (or whatever the chosen planning horizon is), including the decline of an important industry, the closure of a large employer, and changes in the workforce. Opportunities that stem from regional resilience can also be

	Helpful	Harmful
Internal Origin	Strengths	Weaknesses
External Origin	Opportunities	Threats

**One Way to Chart a SWOT Analysis**

To the left is an example of a chart that could be used to conceptualize the various aspects of the SWOT, whether they are internal or external in origin, and harmful or helpful to the community and region.

*Chart Source: Adapted from Community Planning Guidance for Pandemic Flu Preparedness, Department of Homeland Security, 2011.<sup>15</sup>*

## SUMMARY BACKGROUND

## SWOT ANALYSIS

## STRATEGY

## EVALUATION FRAMEWORK

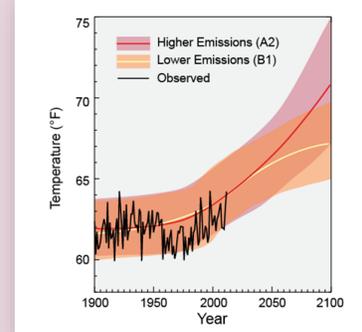
considered, such as business attraction and marketing opportunities arising from strong mitigation actions. This will result in a robust SWOT analysis leading to economic development and hazard mitigation strategies that are more likely to minimize the economic fallout from disruptive events.

A sample SWOT analysis for the Kerr-Tar region is included in Appendix B; this can be used to inform the analysis conducted by the Kerr-Tar Regional COG. A comprehensive SWOT analysis with a strong resilience focus should be incorporated into Kerr-Tar's next CEDS.

### SWOT Analysis Recommendations for the Kerr-Tar Regional COG

1. Conduct one or more SWOT analyses with key stakeholder groups. These groups could include:
  - ◇ The CEDS strategy committee;
  - ◇ City and county economic development staff, Chamber of Commerce representatives, key employers, and others from the economic development and business community; and
  - ◇ Local emergency managers, land use planners, and others familiar with critical infrastructure and hazards.
2. Use the HMP risk assessment to identify natural hazard threats to include in the SWOT analysis. According to the risk assessment conducted by CHR for the Kerr-Tar region, these should include floods, earthquakes, wildfires, hail, severe storms, tornadoes, tropical storms, and dam failure.
  - ◇ Use risk assessment maps as visual aids to inform discussions during the SWOT analysis process (see risk assessment in Appendix A).
3. Consider threats related to the impacts of climate change on the region. These will include increasing temperatures and associated increases in frequency, intensity, and duration of extreme heat events; decreased water availability; and the intensification of other natural hazards.<sup>16</sup>
4. Consider the secondary and tertiary threats related to the interaction of natural hazards and climate change with the Kerr-Tar region's economy.<sup>17</sup> For example, severe storms and tornadoes could lead to businesses closing temporarily or permanently, ripple effects to related businesses within supply chains, and the loss of income and tax revenue. These can also include industry-specific threats and weaknesses. For example, the Kerr-Tar region is reliant upon distribution and electronic commerce, a sector that depends on the functionality of transportation infrastructure to meet its tight supply chain timelines and that could be severely impacted by infrastructure failure resulting from floods or storms.<sup>18</sup> Additionally, climate change will increasingly impact agriculture and forestry. The Kerr-Tar region is predominantly rural and many counties are working to expand agriculture-related sectors such as agritourism and sustainable and organic farming. Because heat stress is projected to reduce crop productivity and adversely affect dairy and livestock production, businesses in these sectors will need to find ways to adapt.<sup>19</sup> Climate change could also cause sectors such as construction, utilities, transportation, agriculture, and manufacturing to experience a decrease in labor productivity of up to 3.1 percent by the end of the century in the southeastern U.S., and lower-risk sectors like retail trade and professional services could see a smaller but still noticeable impact on labor productivity.<sup>20</sup>
5. Include strengths and opportunities related to resilience as well, such as the fact that relative to many other locations, the Kerr-Tar region is currently affected by relatively few extreme hazards.

Southeast Temperature: Observed and Projected



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The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose of the planning process. It is an action plan for implementation made up of mitigation goals and mitigation actions, which provide the framework to identify, prioritize, and implement strategies to reduce risk.

Mitigation **goals** are general guidelines that explain what the community wants to achieve with the plan. They are usually broad, long-term policy statements, and they represent overarching visions for reducing or avoiding losses from the identified hazards. Sample mitigation goals include:

- Minimize new development in hazard-prone areas;
- Minimize disruptions and economic losses to the agriculture, manufacturing, and other important sectors;
- Increase collaboration among businesses, economic development organizations, and local and state agencies around mitigation planning and implementation;
- Increase awareness of mitigation efforts among public and private-sector partners and the general public; and
- Preserve and enhance the region's natural resources that protect communities from hazards while supporting tourism and recreation.

The **action plan** describes in detail how the goals will be achieved by listing specific and measurable mitigation projects and activities and identifying how those will be prioritized, funded, administered, and incorporated into other plans and procedures. In a multi-jurisdictional plan, each jurisdiction must have an action plan that addresses its unique vulnerabilities. The Sample Action Items on the following page show various types of actions that a community may choose to commit to.

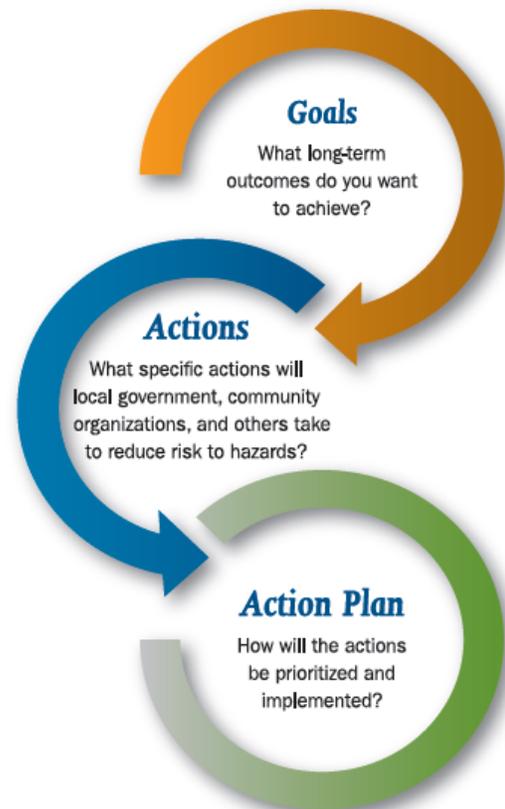


Figure Source: FEMA Local Mitigation Planning Handbook, page 6-10

Cross-referencing the CEDS summary background, SWOT analysis, and HMP risk assessment can uncover mitigation strategies that simultaneously increase regional resilience to hazards and advance economic development goals. If applicable, these strategies could be incorporated into both the CEDS and the HMP; at the very least, this comparison will ensure that CEDS and HMP goals and strategies do not contradict each other. Aligning mitigation and economic development strategies can also promote collaboration among emergency managers and economic development partners, identifying actions they can help to implement in each other's plans. Additionally, this coordination can encourage creative thinking about funding sources to support both sets of strategies.

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**Sample Action Items**

- **Local plans and regulations:** Actions include the creation or enhancement of policies or codes that influence the way land and buildings are developed and built, such as:
  - ◇ Limit the extension of public infrastructure in high hazard areas;
  - ◇ Update and enforce building codes to increase protection from wind/severe storms; and
  - ◇ Ensure that investments made through capital improvement programs are resilient to the impacts of hazards.
- **Structure and infrastructure projects:** Actions involve modifying existing structures and infrastructure to protect them from hazards or remove them from hazard areas. These actions can apply to both public and private structures as well as critical facilities and infrastructure. Examples include:
  - ◇ Elevate major roadways in floodprone areas; and
  - ◇ Enhance and improve the underground utilities infrastructure.

**Sample Action Items**

- **Natural systems protection:** Actions minimize damage and losses to natural resources and preserve or restore the functions of natural systems. Examples include:
  - ◇ Restore and preserve wetlands that provide protection from hazards to developed areas; and
  - ◇ Encourage conservation easements in areas that mitigate flooding.
- **Education and awareness:** Actions inform and educate citizens, elected officials, property owners, the business community, and other stakeholders about hazards and potential ways to mitigate them. Examples include:
  - ◇ Provide information to homebuilders about residential floodproofing and the construction of tornado safe rooms; and
  - ◇ Conduct presentations for economic development practitioners on natural hazards and the vulnerabilities of businesses and the regional economy.

Action	Timeframe	Hazards Addressed	Description	Offices Responsible	Funding Consideration
1.2.1	Ongoing	Flood	Conduct outreach with the land use planning and development community for the purpose of incorporating mitigative building and development best practices into existing plans, policies, and procedures.	Emergency Management Code Enforcement Planning Building Inspection Homebuilder's Association	Internal

The above table is an example of the tabular format that can be used to organize mitigation action items. FEMA requires that HMPs list timeframes for each action item, the type of hazard addressed, responsible entities, and funding considerations.<sup>21</sup>

Table Source: Lexington-Fayette Urban County Government Hazard Mitigation Plan, 2011.

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### Mitigation Strategy Recommendations for the Kerr-Tar Regional COG

1. Use the maps from the risk assessments as decision-making tools when developing mitigation strategies. These maps visually display risks, vulnerabilities, and hazard hotspots that should be addressed by mitigation strategies. For the Roxboro/Person County Hazard Mitigation Plan, see the maps created in Appendix A.
2. Incorporate goals into the Roxboro/Person County and future hazard mitigation plans that address the vulnerabilities and build on the strengths identified in the risk assessment and SWOT analysis, such as:
  - ◇ Minimize disruptions and economic losses to the tourism, manufacturing, distribution and electronic commerce, agriculture, and other important sectors;
  - ◇ Increase collaboration among businesses, economic development organizations, and local and state agencies around mitigation planning and implementation; and
  - ◇ Preserve and enhance the region’s natural resources that protect communities from hazards while supporting tourism and recreation.
3. Incorporate strategies into the Roxboro/Person County and future hazard mitigation plans that accomplish both mitigation and economic development goals, such as:
  - ◇ Target new development to low-risk areas. For example, many of the Kerr-Tar region’s historic downtowns and main streets are primarily located outside of flood zones and are valuable assets, exemplifying the region’s small town character and appealing to young people, visitors, and small businesses. New development should be targeted in or adjacent to these areas when safe and appropriate.
  - ◇ Preserve and enhance the open space, shorelines, and other natural resources that define the region as the Lakes District while providing critical mitigation benefits. Cross-reference the NC Lakes District Regional Bike Plan, the CEDS, and the mitigation plans (including risk assessment maps) to identify hazard areas that are suitable for bike paths and trails, greenways, other recreational uses, and associated green infrastructure. Mitigation strategies could then be targeted to preserve open space, restore or protect wetlands and stream corridors, and implement conservation easements in key locations. The Kerr-Tar Regional COG should also consider other actions that achieve overlapping mitigation and economic development objectives while building the region’s identity as the Lakes District. For example, expanding greenways/bikeways to connect the lakes to downtowns and other regional destinations, enhancing and promoting the East Coast Greenway, and installing green infrastructure and educational signage on main streets can reinforce the Lakes District “brand” while providing many economic, environmental, and community benefits.
  - ◇ Adopt and enforce building codes and development standards that ensure that commercial structures are able to withstand wind/strong storms and flooding.<sup>22</sup>
  - ◇ Retrofit or elevate major roadways and bridges in floodprone areas.
  - ◇ Install back-up power generation at critical facilities throughout the region. Where possible, rely on renewable energy technology such as solar panels or wind turbines. Encourage the development of the emerging local renewable energy industry by working with local business to install and maintain these systems.

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### Mitigation Strategy Recommendations for the Kerr-Tar Regional COG

- ◇ Provide information to agricultural entrepreneurs, extension agents, and small business development specialists who work with new farmers about crop insurance that can help cover potential losses due to drought.
- 4. Work with local emergency managers, Chambers of Commerce, and Small Business Development Centers to offer hazard vulnerability audits to small businesses in hazard areas. These audits can provide business owners and managers with tailored information about how hazards could impact them, how they can prepare, and where they can find additional information and resources.
- 5. Use the existing programs and networks of the local Chambers of Commerce and Small Business Development Centers to facilitate business-to-business mitigation mentoring. This effort could connect similar businesses or match large companies with smaller enterprises that have fewer resources to devote to business continuity planning. It could take the form of a workshop, one-on-one meetings, and/or information sharing via email and phone.
- 6. Implement good floodplain management techniques that exceed minimum requirements to help minimize flood losses and encourage smart growth.
- 7. Develop agreements with alternative water providers for use of secondary water sources that may be used during drought conditions.
- 8. Promote compliance with National Flood Insurance Program (NFIP) standards.
- 9. Offer expanded development rights to developers and building owners in hazard areas for performing mitigation retrofits.

As the heart and soul of a region's CEDS, the strategic direction and corresponding action plan should answer the broad questions of "Where do we want the region to go?" and "How are we going to get there?" It is incredibly important to formulate the strategic direction and action plan from the conclusions obtained through the SWOT analysis, risk assessment, and the relevant data provided in the summary background. This section should logically flow from the determination of the critical factors affecting the region's assets and limitations.

A successful strategic direction includes three components: a **vision statement**, **goals**, and **objectives**. All of these components should be focused on regionally-driven priorities that build upon gathered data and comprehensive analysis in order to respond to the region's economic development potential and limitations.

Flowing from the strategic direction, the action plan should distill the vision, goals, and objectives into concrete, itemized actions that can be realistically achieved by the region. Goals should be "S.M.A.R.T." - specific, measurable, achievable, relevant, and time-based. Additionally, a successful action plan should not list projects that exclusively reflect activities EDA and other federal agencies could potentially fund. Rather, it should explicitly describe how regional stakeholders will work together to achieve the priorities that the region, as a whole, has agreed upon.

In today's world of limited financial resource availability, EDA stresses the importance of coordinating the CEDS strategic direction and action plan with other relevant state, regional, and local planning efforts. Finding ways to align efforts allows for federal funding to be maximized and provides the region with the opportunity to accomplish multiple goals at once. For this reason, it is especially important to identify and prioritize projects with coordination and alignment in mind. Objectives and actions that contribute to the overall economic resilience of the region often offer fiscal, economic, environmental, and other community benefits.

EDDs can play a key role in coordinating planning efforts and implementing projects that can achieve multiple benefits for the region. Because EDDs are responsible



Table Source: Diagram modified from FEMA Local Mitigation Planning Handbook for CEDS applicability.

#### Descriptions of each activity within the action plan should include:

- An outline of required steps to successfully complete the action;
- A roster of key individuals/institutions responsible for implementation;
- An estimation of the costs associated with implementation;
- A listing of integrated funding sources that could support the costs (public, private, and non-profit); and
- A realistic timeframe for implementation including relevant benchmarks and performance measures.

for the development of a wide variety of regional plans, they have the ability to find alignments between goals and strategies in different documents, convene the interdisciplinary stakeholders needed to collaborate, and provide the capacity and logistical assistance to coordinate efforts.

Although there are ways to align projects between the CEDS action plan and the HMP mitigation strategy that build economic resilience and make the region better prepared to withstand future shocks and disruptions, it is important to note that the goal is not to completely integrate the two strategies. HMP mitigation strategies will have specific action items that only relate to

mitigation and CEDS action plans will include strategies that are specifically focused on economic development. Aligning these efforts should find synergies and opportunities for coordination where possible, but also attempt to avoid contradicting each other. For example, the CEDS action plan should not include projects to build in hazard areas identified in the HMP and the HMP's mitigation strategy should not prioritize the relocation of location-dependent economic development activities from vulnerable areas without first considering potential mitigation options.

### Strategy Recommendations for the Kerr-Tar Regional COG

1. Develop a vision statement for the Kerr-Tar region. A vision statement thoughtfully crafted with the participation of the CEDS strategy committee and other stakeholders representative of the region would help to strengthen the regional identity that residents and leaders are seeking. The Kerr-Tar region's vision statement should become a prominent feature of the CEDS and the centerpiece for the region's economic development efforts, including branding, marketing, business attraction, small business development, and tourism development.
  - ◇ Since the lakes, river, and other natural amenities seem to be such a key piece of the region's identity, those assets and the opportunities they represent could be incorporated into the vision statement.
2. Refine the existing CEDS action plan to reduce the number of activities to an achievable number and prioritize them by highest potential for regional impact. Focus on actions that are specific and measurable, benefit or engage the region as a whole, accomplish multiple goals, and whose implementation requires a clear role for the Kerr-Tar Regional COG.
3. Modify actions from the existing CEDS to align with hazard mitigation planning goals when appropriate. This would help to support economic development and mitigation goals simultaneously. For example:
  - ◇ Look for ways to align the NC Lakes District Regional Bike Plan with hazard mitigation goals and strategies. See the Mitigation Strategy element above for further recommendations.
  - ◇ Expand the existing complete streets actions (under Goal Two, Objective One) to encompass green infrastructure that will help to manage stormwater runoff and protect water quality, potentially opening up FEMA funding sources. Prioritize streets in flood-prone areas and those with more foot and bicycle traffic (such as in downtowns) in order to capitalize on the water management, beautification, economic, and educational opportunities green streets can bring.
  - ◇ Add an action under Goal Two ("Establish and maintain a robust regional infrastructure") to increase the resilience of vulnerable roads, bridges, and critical facilities that are necessary for key business operations. For example, roads and bridges in flood-prone areas could be upgraded and back-up generators at water/wastewater plants could be installed. There are some actions related to infrastructure under Goal Three—these should be moved to Goal Two.
  - ◇ Incorporate hazard information into the suitability maps and scenarios being developed for Goal Three,

### Strategy Recommendations for the Kerr-Tar Regional COG

Objective One (“Create revitalized and vibrant communities,” “ensure land use policies and regulations advance the region”). The maps from the Roxboro/Person County risk assessment in Appendix A might be useful here.

- ◇ Add an action under Goal Three, Objective One to target future economic development to suitable safe and less hazard-prone areas. For example, the region’s historic downtowns and main streets are primarily located outside of flood zones and new development should be targeted in, or adjacent to, these areas whenever possible.
  - ◇ Require a business continuity element or add a business continuity planning category to the business plan competitions described under Goal Three. This would help to increase the preparedness of regional businesses while educating business owners and students about the potential impacts of natural hazards and the benefits of business continuity planning.
4. Consider adding actions that enhance and connect economic development efforts in the region, such as:
- ◇ Identify and promote top economic sectors on which the region has a competitive advantage. Prioritized sectors should be suitable for the Kerr-Tar regional context, even when accounting for natural hazards and climate change impacts. Industries that are currently emerging, such as renewable energy, advanced manufacturing, and organic/sustainable agriculture/agritourism should be explored. The CEDS summary background, SWOT analysis, and HMP risk assessment should inform this effort.
  - ◇ Create a regional economic development coordination committee that is broader than the CEDS committee and serves as a forum for connecting the many ongoing economic development efforts, building partnerships, and producing innovative new ideas. Members could include local economic development staff, Chamber of Commerce representatives, small business development specialists, business owners and managers, and others. The Kerr-Tar Regional COG could convene this group for quarterly meetings, invite one representative to present his/her work at each meeting, and suggest projects or themes for members to collaborate on each year, starting with an easy catalytic and noncontroversial project.
  - ◇ Create a young leaders networking group to bring together the many young people working for city and county government, the COG, nonprofit organizations, and other entities in the region. The Kerr-Tar Regional COG could coordinate a bimonthly or quarterly happy hour, lunch, breakfast, or some other informal event.
  - ◇ Promote the regional “brand” described in the CEDS vision statement. The brand and message can be adapted for multiple audiences, including residents, visitors, and businesses and investors outside the region.
  - ◇ Connect and coordinate existing local-level efforts aimed at strengthening and revitalizing the region’s many historic downtowns. This could include convening partners through the regional economic development coordination committee, an email list or newsletter, or in some other way; developing a downtown trail, passport, photo contest, website/guide/map, regional downtown festival, or some other means of marketing the network of downtowns to residents and visitors; helping downtowns participate in the North Carolina Main Street Program if they don’t already; and working with regional or state tourism agencies to promote the downtowns.
  - ◇ Align with relevant local, regional, and statewide planning efforts such as NC Tomorrow.

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MITIGATION STRATEGY

PLAN MAINTENANCE

Once adopted, the mitigation plan is a living document that guides action over time. As conditions change, new information becomes available, and actions progress over the life of the plan, adjustments may be necessary to maintain its relevance.

- Plan maintenance is the process the planning team establishes to track implementation progress and to inform the updates. The plan must include a description of the method and schedule for monitoring, evaluating, and updating it within a five-year cycle. These procedures help to:
- Ensure the mitigation strategy is implemented according to the plan;
- Provide the foundation for an ongoing mitigation program in the community;
- Standardize long-term monitoring of hazard-related activities;
- Integrate mitigation principles into community officials' daily responsibilities and department roles; and
- Maintain momentum through continued engagement and accountability in the plan's progress.

### Plan Maintenance Terminology

- **Monitoring:** Tracking the implementation of the plan over time.
- **Evaluating:** Assessing the effectiveness of the plan at achieving its stated purpose and goals.
- **Updating:** Reviewing and revising the plan at least once every 5 years.



Convening a steering committee to ensure plan implementation and identify areas of continued collaboration will be helpful for maintaining the HMPs within the Kerr-Tar Region.

*Photo Source: CHR*

### Plan Maintenance Recommendations for the Kerr-Tar Regional COG

1. Form an implementation steering committee that includes at least one economic development representative to monitor and encourage continued progress on local mitigation actions.
2. Continue to seek opportunities to coordinate the CEDS and HMPs through the maintenance process. For instance, the implementation steering committee could meet with the CEDS strategy committee once each year during the annual CEDS update process in order to share progress, discuss challenges, and identify opportunities for alignment in the revised plans.
3. If possible, align the five-year update cycles for the HMPs and the CEDS so they are on the same schedule.
4. Create a database to track progress on mitigation actions and projects. This database could also be expanded to track progress on strategies from economic development, land use, and other plans. This enables the Kerr-Tar Regional COG and its local partners to monitor progress on multiple plans in one central location and facilitates coordination between initiatives.

The evaluation framework of the CEDS contains performance measures that gauge progress on achieving the vision, goals, and objectives of the plan, answering the questions “How are we doing?” and “What can we do better?” When identifying which performance measures to use, EDDs should look beyond the traditional economic development metric of jobs created and/or retained, businesses attracted, private investment captured, and grant funding received to performance metrics that evaluate quality of life, demographic mix, educational attainment, innovation and entrepreneurship, arts and culture, recreation, healthcare, knowledge, and skill assets. Inclusion of these non-traditional metrics can better assess the overall “wealth” of the region which is represented through much more than standard economic indicators.<sup>23</sup>

Specific performance measurements used in the evaluation framework should cascade from the strategic direction and action plan, which, in turn, flow from the SWOT analysis and summary background. Most importantly, they should be based upon what is important to the region; what conditions the region needs to reverse or opportunities it needs to create; and what regional assets can be leveraged for the successful implementation of the strategic plan and prosperity of the region.

Building off of the “S.M.A.R.T.” goals defined in the strategic plan, the evaluation framework should include correlating measures to track the implementation of the goal’s objectives and actions.<sup>24</sup> These measures should be able to be evaluated in an objective, timely, and cost-effective fashion. They should be focused on outcomes or results (i.e. increased wages) rather than outputs or activities (i.e. number of grants obtained). They should be challenging but attainable, and should make clear what constitutes satisfactory performance. Key stakeholders should be engaged in the selection of measures and targets, especially those who will be responsible for implementation.<sup>25</sup>

Tracking these measures will keep the implementation of the CEDS on target, signal when goals are reached,



*Graphic Source: Bing Clip Art*

and identify weak points where more effort or different approaches are needed.

The evaluation framework should incorporate one or more measures of economic resilience. These should address the vulnerabilities and weaknesses identified in the SWOT analysis and pulled from the HMP risk assessment that will support the implementation of the strategies. For instance, measures could specify targets for income, wages, diversification, educational attainment, population, and infrastructure.

These measures could also evaluate the regional economy’s vulnerability to natural hazards by setting targets for the percentage of establishments or employment in at-risk locations, percentage of employment in particularly vulnerable sectors, critical facilities without access to backup power generation, and other metrics.

### Evaluation Framework Recommendations for the Kerr-Tar Regional COG

1. Include performance metrics that correspond to the S.M.A.R.T. goals and strategies and actions identified in the strategic plan. Recommended focus areas include wages, income, educational attainment, youth population, and small business development. Metrics tracking the growth of key sectors could also be incorporated. Examples include:
  - ◇ Increase median annual income for people with bachelor's degrees from {salary} to {salary} by {year}.
  - ◇ Create {number} new jobs at {salary} average wage by {year}.
  - ◇ Increase the wages of {number} existing jobs by \$5,000 per year.
  - ◇ Increase the proportion of the population with associate's degrees/some college or technical certificates by {percentage} by {year}.
  - ◇ Increase the on-time graduation rate for public high school students from {percentage} to {percentage} by {year}.
  - ◇ Increase the proportion of 25–34 year-olds from {percentage} to {percentage} of the total population by {year}.
  - ◇ Increase the percentage of the population with access to broadband from {percentage} to {percentage} by 2020.
  - ◇ Produce {megawatts} of locally-generated solar power per year.
2. Use information from the SWOT analysis and HMP risk assessment to identify at least one measurement of economic resilience relevant to the Kerr-Tar region. Examples include:
  - ◇ Increase in establishments or employment in lower-risk, more sustainable locations, specifically the historic downtowns throughout the region from {percentage} to {percentage} by {year}.
  - ◇ Increase in workforce remaining within the region for employment from {percentage} to {percentage} by {year}.
  - ◇ Increase in young adult population remaining in the region, or returning to the region after receiving higher education {percentage}.
  - ◇ Increase in the installation of backup power generation at critical facilities and central business locations throughout the region {percentage}.

## CONCLUSION



As shown in this report, many opportunities exist for the Kerr-Tar Regional COG to coordinate hazard mitigation and economic development plans. The comparable structure of HMPs and the CEDS, along with the parallels in the planning processes and the similar analyses that are required, make it possible to align the two plans and facilitate hazard mitigation and economic development efforts that build on and strengthen each other. The Kerr-Tar Regional COG can leverage its lead role in developing both the HMPs and the CEDS to engage a diverse set of stakeholders, perform a comprehensive SWOT analysis and risk assessment, select strategies that achieve multiple benefits, and use other approaches to infuse hazard mitigation into the economic development document and vice versa.

As the impacts of climate change are increasingly felt and natural disasters become more frequent and more severe, it will only become more critical to integrate hazard vulnerability and mitigation considerations into other plans. Coordinating HMPs and the CEDS can help to ensure that businesses and the infrastructure that serves them can continue operating during and after severe weather events; promote the location of business districts in safe areas; preserve natural resources that absorb hazard impacts and attract tourism; diversify economies and reduce reliance on sectors that are particularly vulnerable to hazards and climate change; allow marketing to businesses and investors looking to locate in communities that are safe and well-prepared for disasters; and avoid costly interruptions in employment and tax revenues.

It is hoped that the recommendations in this report help the Kerr-Tar Regional COG and other regional development organizations and local governments around the country achieve these objectives and build economies that are resilient, competitive, and



*Photo Sources: Top Left: Lake Gaston sunset, Flickr user David Biesack; Top Right: Palace Theatre Roxboro, Flickr user, Andy Callahan; Bottom Right: Granville County sunset, Flickr user Moose Hart.*

<sup>1</sup>The term “regional development organization” refers to the multi-jurisdictional regional planning and development organizations that exist throughout the country and are known by various names in different states, including councils of government, regional councils, economic development districts, local development districts, and planning and development councils. These public-based entities play an invaluable role in fostering intergovernmental collaboration among federal, state, and local officials; deliver and manage federal and state programs; and work to solve area-wide issues and to address the fundamental building blocks required for competitive and sustainable communities and economies.

<sup>2</sup>U.S. Department of Commerce, Economic Development Administration (2015). “Comprehensive Economic Development Strategy Content Guidelines. 2015. ([www.eda.gov/ceds](http://www.eda.gov/ceds)).

<sup>3</sup>U.S. Department of Commerce, Economic Development Administration (2015). “Comprehensive Economic Development Strategy Content Guidelines. 2015. ([www.eda.gov/ceds](http://www.eda.gov/ceds)).

<sup>4</sup>Ives, David. “CEDS Content Guidelines.” 2014 NADO Washington Policy Conference Presentation (March 26, 2014) ([www.nado.org/wp-content/uploads/2014/03/CEDS-Content-Guidelines\\_NADO\\_032614.pdf](http://www.nado.org/wp-content/uploads/2014/03/CEDS-Content-Guidelines_NADO_032614.pdf)).

<sup>5</sup>Ibid.

<sup>6</sup>U.S. Department of Commerce, Economic Development Administration (2015). “Comprehensive Economic Development Strategy Content Guidelines. 2015. ([www.eda.gov/ceds](http://www.eda.gov/ceds)).

<sup>7</sup>For examples of CEDS that incorporate economic resilience themes see the NADO Research Foundation’s “CEDS Resilience Library”. ([www.nado.org/resources/ceds-library](http://www.nado.org/resources/ceds-library)).

<sup>8</sup>Ives, David. “CEDS Content Guidelines.” 2014 NADO Washington Policy Conference Presentation (March 26, 2014) ([www.nado.org/wp-content/uploads/2014/03/CEDS-Content-Guidelines\\_NADO\\_032614.pdf](http://www.nado.org/wp-content/uploads/2014/03/CEDS-Content-Guidelines_NADO_032614.pdf)).

<sup>9</sup>For examples of well-crafted CEDS summary backgrounds, please refer to Appendix C: Resources Index.

<sup>10</sup>U.S. Department of Commerce, Economic Development Administration (2015). “Comprehensive Economic Development Strategy Content Guidelines. 2015. ([www.eda.gov/ceds](http://www.eda.gov/ceds)).

<sup>11</sup>For information about data sources and other useful resources, please refer to Appendix C: Resources Index.

<sup>12</sup>Federal Emergency Management Agency (March 2013). “Local Mitigation Planning Handbook.” Page 5-11. 2013. ([http://www.fema.gov/media-library-data/20130726-1910-25045-9160/fema\\_local\\_mitigation\\_handbook.pdf](http://www.fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf)).

<sup>13</sup>Federal Emergency Management Agency (April 2012). “Threat and Hazard Identification and Risk Assessment Guide: Comprehensive Preparedness Guide (CPG) 201.” ([www.fema.gov/media-library/assets/documents/26335](http://www.fema.gov/media-library/assets/documents/26335)).

<sup>14</sup>For information about data sources and other useful resources, please refer to Appendix C: Resources Index.

<sup>15</sup>Center for Hazards Research and Policy Development (2013). “Community Planning Series for Pandemic Influenza Preparedness: A Series of Multi-Sector Collaborative Plan Development Sessions for Local Communities.” ([http://www.hazardcenter.louisville.edu/wp-content/uploads/2013/06/2.0-Session-Lesson-Plan\\_FINAL.pdf](http://www.hazardcenter.louisville.edu/wp-content/uploads/2013/06/2.0-Session-Lesson-Plan_FINAL.pdf)).

<sup>16</sup>Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe, Eds. (2014) “Climate Change Impacts in the United States: The Third National Climate Assessment.” U.S. Global Change Research Program. p. 841 ([www.nca2014.globalchange.gov](http://www.nca2014.globalchange.gov)).

<sup>17</sup>National Oceanic and Atmospheric Administration (2014). “Climate Change Impacts in the United States: The Third National Climate Assessment.” 2014. (<http://data.globalchange.gov/report/nca3>).

<sup>18</sup>Porter, M. “U.S. Cluster Mapping: Mapping a Nation of Regional Clusters.” Harvard Business School: Institute for Strategy & Competitiveness. ([www.clustermapping.us](http://www.clustermapping.us)).

<sup>19</sup>Ibid.

<sup>20</sup>Risky Business Project. (2014) “Risky Business: The Economic Risks of Climate Change in the United States.” ([www.riskybusiness.org/report/overview/regions/southeast](http://www.riskybusiness.org/report/overview/regions/southeast)).

<sup>21</sup>Federal Emergency Management Agency (October 11, 2011). “Local Mitigation Plan Review Guide.” 2011. ([http://www.fema.gov/media-library-data/20130726-1809-25045-7498/plan\\_review\\_guide\\_final\\_9\\_30\\_11.pdf](http://www.fema.gov/media-library-data/20130726-1809-25045-7498/plan_review_guide_final_9_30_11.pdf)).

<sup>22</sup>For more information on building codes and development standards refer to the many resources available on the Insurance Institute for Business & Home Safety’s website: ([www.disastersafety.org](http://www.disastersafety.org)).

<sup>23</sup>For an explanation of regional wealth and tools and resources for building and measuring regional wealth refer to: ([www.wealthworks.org](http://www.wealthworks.org)).

<sup>24</sup>Kelsey, B. “CEDS 101 or: How I Learned to Stop Worrying and Love the CEDS.” 2014 EDA Chicago Conference Presentation (Sept. 30, 2014) ([www.nado.org/wp-content/uploads/2014/10/Kelsey-CEDS-101.pdf](http://www.nado.org/wp-content/uploads/2014/10/Kelsey-CEDS-101.pdf)).

<sup>25</sup>VITAL Economy Alliance and the NADO Research Foundation. (2012) “Performance Metrics Matter: Go Beyond Counting Jobs to Create a Highly Effective Comprehensive Economic Development Strategy.” ([www.nado.org/performance-metrics-matter](http://www.nado.org/performance-metrics-matter)).

### Hazard Resilience Assessment Model

Person County North Carolina  
University of Louisville  
Center for Hazards Research and  
Policy Development

The University of Louisville Center for Hazards Research and Policy Development (CHR) along with the National Association of Development Organizations (NADO) worked with the Kerr Tar Regional Council of Governments to link Hazard Mitigation Plans (HMP) and Comprehensive Economic Development Strategies (CEDS) planning. During this process CHR wanted to develop a comprehensive Resilience Assessment that captured resiliency from both a hazard and economic position.

Using their extensive experience of creating Risk and Vulnerability assessments for HMPs, CHR created a specific model for Person County that reworked their standard Risk Assessment model to capture more economic and social variables that reflect data captured within the Summary Background section of a CEDS plan. This created a model that not only depicts areas of high vulnerability to specific hazards but also represent areas of socioeconomic activity. It is important to note that this model was also developed to be reproduced for the other areas within the Kerr Tar region.

For the full Resilience Assessment, see separate file titled "Appendix A\_Resilience Assessment."

## APPENDIX B: SWOT ANALYSIS

After visiting Region K and meeting with Vance, Warren, Person, and Franklin County staff; the Kerr-Tar Regional COG's CEDS committee; and other local and regional stakeholders, the NADO Research Foundation and the University of Louisville Center for Hazards Research and Policy Development distilled the findings from their site visit into the following strengths, weaknesses, opportunities, and threats (SWOT) analysis for the Kerr-Tar region. This SWOT analysis is intended as an example for the Kerr-Tar Regional COG to reference and a starting point for a more robust and inclusive assessment. For example, it could be presented at a CEDS committee meeting to kick off a SWOT discussion, or the CEDS committee could create its own SWOT analysis and compare it to the one provided below to identify potential gaps and additions. No matter how this sample is used, the project team recommends that the Kerr-Tar Regional COG conduct a SWOT analysis with its CEDS committee and additional stakeholders in order to shape the economic vision for the region and enhance Kerr-Tar's CEDS and other planning efforts.

### STRENGTHS

- Relatively low vulnerability to natural hazards;
- Unique and beautiful natural resources and amenities, including lakes, rivers, and open space;
- Plentiful clean water;
- Attractive historic main streets, downtowns, and architectural assets;
- Small town character, quality of life, and social fabric;
- Connected regional transportation infrastructure, including highways, rail lines, and a regional airport;
- Proximity to Raleigh, Durham, and the Research Triangle;
- Local colleges;
- Active economic development organizations such as the Chambers of Commerce and small business centers;
- Strong EMTs and volunteer fire departments;
- Enthusiastic and engaged young leaders at the local and regional levels; and
- Growing energy, optimism, and innovative thinking about the region's future.

### WEAKNESSES

- Lack of regional economic identity and brand that are agreed upon by stakeholders and promoted both within and outside the region;
- Low job creation;
- Low wages compared to national averages;
- High unemployment rate compared to state and national averages;
- Workforce skills misalignment with jobs in emerging sectors;
- High percentage of residents commuting outside the region to work;
- Lack of broadband;
- Lack of public transit;
- Need for additional support for and prioritization of small business development and entrepreneurship; and
- Lack of amenities and services attractive to young people.

## APPENDIX B: SWOT ANALYSIS

### OPPORTUNITIES

- North Carolina Lakes District Regional Bike Plan, the East Coast Greenway, and other emerging efforts to capitalize on the region’s natural beauty and potential as a recreation destination;
- Tourism, including the lakes and other natural amenities, downtowns and associated cultural opportunities, and other distinctive assets that could draw visitors from outside the region;
- The attractive “bones” of the region’s downtowns, including their architecture, walkable streets, historic theaters and homes; the growing momentum behind revitalization with efforts such as “Alive After Five” and the façade improvement grant program; and the possibility of connecting those efforts and building a strong regional network of vibrant downtowns;
- Strong and evolving agriculture sector, including traditional farming, sustainable/organic agriculture, agritourism, and creative ventures to supplement farm revenue such as renewable energy installations;
- Growing advanced manufacturing sector;
- Triangle North business parks;
- Desire of businesses to be close to Research Triangle Park;
- Potential to increase regional resilience by enhancing and linking economic development, hazard mitigation, emergency operations, economic recovery, and other plans; and
- Opportunity to strengthen regional collaboration and innovation by bringing partners together and connecting ongoing efforts.

### THREATS

- Lack of strong economic vision to drive planning, business recruitment, small business development, and other program and policy decisions;
- Lack of broadband hindering economic development;
- Youth outmigration;
- Education and training challenges impacting future workforce;
- Natural hazards, including floods, earthquakes, wildfires, hail, severe storms, tornadoes, tropical storms, and dam failure;
- Climate change impacts, including increasing temperatures; increases in frequency, intensity, and duration of extreme heat events; and decreased water availability;
- Vulnerability of critical facilities and infrastructure—such as water/wastewater plants and public buildings housing emergency operations and 911 centers—to natural disasters and other disruptions;
- Coal ash spills affecting water quality; and
- Distance of some parts of the region to major economic centers.

## APPENDIX C: SUPPLEMENTAL RESOURCES

### HAZARD MITIGATION RESOURCES

- **FEMA Local Mitigation Planning Handbook (March 2013)**
    - ◇ The Local Mitigation Planning Handbook is the official guide for local governments to develop, update and implement local mitigation plans. The Handbook provides guidance to local governments on developing or updating hazard mitigation plans to meet the requirements under the Code of Federal Regulations (CFR) Title 44 – Emergency Management and Assistance §201.6.
      - ⇒ Available at: [www.fema.gov/media-library-data/20130726-1910-25045-9160/fema\\_local\\_mitigation\\_handbook.pdf](http://www.fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf)
  - **FEMA Local Mitigation Plan Review Guide (Oct. 2011)**
    - ◇ The Local Mitigation Plan Review Guide provides guidance for Federal and State officials responsible for reviewing Local Mitigation Plans in a fair and consistent manner, and to ensure approved Local Mitigation Plans meet the requirements of the Stafford Act and Title 44 Code of Federal Regulations (CFR) §201.6.1. This guide is FEMA's official source for defining the requirements of original and updated Local Mitigation Plans.
      - ⇒ Available at: [www.fema.gov/media-library-data/20130726-1809-25045-7498/plan\\_review\\_guide\\_final\\_9\\_30\\_11.pdf](http://www.fema.gov/media-library-data/20130726-1809-25045-7498/plan_review_guide_final_9_30_11.pdf)
- FEMA Threat and Hazard Identification and Risk Assessment Guide: Comprehensive Preparedness Guide (CPG 201) (April 2012)**
- ◇ CPG 201 provides a five-step process for conducting a Threat and Hazard Identification and Risk Assessment. Developing an understanding of its risks from natural, technological, and human-caused threats and hazards, allows a community to make informed decisions about how to manage risk and develop needed capabilities.
    - ⇒ Available at: [www.fema.gov/media-library-data/8ca0a9e54dc8b037a55b402b2a269e94/CPG201\\_htirag\\_2nd\\_edition.pdf](http://www.fema.gov/media-library-data/8ca0a9e54dc8b037a55b402b2a269e94/CPG201_htirag_2nd_edition.pdf)

### CEDS RESOURCES

- **EDA CEDS Content Guidelines: Recommendations for Creating an Impactful CEDS**
  - ◇ Revised as of January 2015, the CEDS Content Guidelines are intended to assist in efforts to develop the content of a CEDS document. They suggest how to develop the document's format and substance to make the strongest, most useful and effective CEDS possible. These new guidelines also elaborate on the new economic resilience requirement and present many examples and resources to assist in the development of the CEDS.
    - ⇒ Available at: [www.eda.gov/ceds](http://www.eda.gov/ceds)
- **"CEDS Content Guidelines" Presentation by Dave Ives, NADO 2014 Washington Policy Conference**
  - ◇ This presentation by Dave Ives, Sustainability/Planning Coordinator with the U.S. Economic Development Administration, provides additional information and background on the updated CEDS Content Guidelines.
    - ⇒ Available at: [www.nado.org/wp-content/uploads/2014/03/CEDS-Content-Guidelines\\_NADO\\_032614.pdf](http://www.nado.org/wp-content/uploads/2014/03/CEDS-Content-Guidelines_NADO_032614.pdf)

### CEDS RESOURCES, CONT'D

- ***“CEDS 101 or: How I Learned to Stop Worrying and Love the CEDS” Presentation by Brian Kelsey, 2014 EDA Chicago Conference***
  - ◇ This presentation by Brian Kelsey, NADO’s Director of Economic Development, provides in-depth training on how to develop and implement more effective CEDS. The presentation includes opportunities for rethinking the CEDS process, innovative ways of leveraging the new economic resilience requirement, and a detailed explanation of “S.M.A.R.T.” goals.
    - ⇒ Available at: [www.nado.org/wp-content/uploads/2014/10/Kelsey-CEDS-101.pdf](http://www.nado.org/wp-content/uploads/2014/10/Kelsey-CEDS-101.pdf)
- ***Performance Metrics Matter: Go Beyond Counting Jobs to Create a Highly Effective Comprehensive Economic Development Strategy***
  - ◇ This publication prepared by the ViTAL Economy Alliance for NADO, includes real-life examples of how performance metrics have been used by various Economic Development Districts (EDDs) and other regions to address unique conditions and transform their region’s economic performance. It also demonstrates how performance metrics are the first critical step in creating meaningful strategies in a CEDS.
    - ⇒ Available at: [www.nado.org/performance-metrics-matter](http://www.nado.org/performance-metrics-matter)
- ***CEDS Resilience Library***
  - ◇ For examples of CEDS that incorporate economic resilience themes see NADO Research Foundation’s “CEDS Resilience Library”
    - ⇒ Available at: [www.nado.org/resources/ceds-library](http://www.nado.org/resources/ceds-library)
- ***Examples of Successful CEDS***
  - ◇ Flint Hills Economic Development District, *New Horizons: Education, Entrepreneurship, and the Environment in the Flint Hills*
  - ◇ Includes a strong summary background section enhanced by relevant graphics and maps.
    - ⇒ Available at: [www.nado.org/wp-content/uploads/2014/08/KS-Flint-Hills-Regional-Council-2014.pdf](http://www.nado.org/wp-content/uploads/2014/08/KS-Flint-Hills-Regional-Council-2014.pdf)
- ***Northwest Oregon Regional Partnership, Comprehensive Economic Development Strategy***
  - ◇ Quantifies the region’s economic vulnerability by measuring the number of businesses and jobs located in flood zones, total and by industry, and the number of critical facilities in flood zones.
    - ⇒ Available at: [www.nado.org/wp-content/uploads/2014/08/OR-Northwest-Oregon-Regional-Partnership-2009-2013.pdf](http://www.nado.org/wp-content/uploads/2014/08/OR-Northwest-Oregon-Regional-Partnership-2009-2013.pdf)
- ***South Florida Regional Planning Council, South Florida Comprehensive Economic Development Strategy: 2012-2017***
  - ◇ Includes a comprehensive approach to economic and disaster resilience including an assessment of the threat climate change and sea level rise pose to the region.
    - ⇒ Available at: [www.nado.org/wp-content/uploads/2014/08/FL-South-Florida-Regional-Planning-Council-2012-2017.pdf](http://www.nado.org/wp-content/uploads/2014/08/FL-South-Florida-Regional-Planning-Council-2012-2017.pdf)
- ***Southeastern Vermont, SeVEDS: 2014 S.M.A.R.T. CEDS Report***
  - ◇ Includes a detailed, targeted summary background section and strategic use of S.M.A.R.T. goals.
    - ⇒ Available at: [www.nado.org/wp-content/uploads/2014/08/VT-Windham-Regional-Commission-2013.pdf](http://www.nado.org/wp-content/uploads/2014/08/VT-Windham-Regional-Commission-2013.pdf)

### ECONOMIC RESILIENCE RESOURCES

- ***Risky Business: The Economic Risks of Climate Change in the United States (2014)***
  - ◇ To date, there has been no comprehensive assessment of the economic risks our nation faces from the changing climate. This report uses a standard risk-assessment approach to determine the range of potential consequences for each region of the U.S.—as well as for selected sectors of the economy—if we continue on our current path.
    - ⇒ Available at: [www.riskybusiness.org](http://www.riskybusiness.org)
- ***Climate Change Impacts in the United States: The Third National Climate Assessment (2014)***
  - ◇ The full report of the U.S. Global Change Research Program’s National Climate Assessment provides an in-depth look at climate change impacts on the U.S. It details the multitude of ways climate change is already affecting and will increasingly affect the lives of Americans.
    - ⇒ Available at: [www.nca2014.globalchange.gov](http://www.nca2014.globalchange.gov)
- ***Resilient Regions: Integrating Economic Development Strategies, Sustainability Principles, and Hazard Mitigation Planning (2011)***
  - ◇ This NADO Research Foundation publication provides an in-depth look at the roles that regional planning and development organizations are taking to help local and regional economies re-build after natural disasters.
    - ⇒ Available at: [www.nado.org/wp-content/uploads/2011/07/NADOResilientReport.pdf](http://www.nado.org/wp-content/uploads/2011/07/NADOResilientReport.pdf)
- ***Regional Resilience: Research and Policy Brief (2012)***
  - ◇ Prepared with the assistance of the Rural Policy Research Institute (RUPRI) Rural Futures lab this issue brief summarizes recent research and practice on economic and community resiliency, including a potential framework for regional development organizations to use in preparing and responding to economic shocks.
    - ⇒ Available at: [www.nado.org/wp-content/uploads/2012/04/RUPRI-Regional-Resilience-Research-Policy-Brief.pdf](http://www.nado.org/wp-content/uploads/2012/04/RUPRI-Regional-Resilience-Research-Policy-Brief.pdf)
- ***Restore Your Economy: Disaster Preparedness & Economic Recovery***
  - ◇ RestoreYourEconomy.org provides resources and best practice information for public and private stakeholders seeking to rebuild their local economies after a disaster as well as assisting the business community in preparing for a disaster. It is a one-stop shop of disaster preparedness and post-disaster economic recovery resources, tools, event announcements as well as opportunities to connect with peers through social media groups.
    - ⇒ Available at: [www.restoreyoureconomy.org](http://www.restoreyoureconomy.org)
- ***The Insurance Institute for Business & Home Safety***
  - ◇ The Insurance Institute for Business & Home Safety’s mission is to conduct objective, scientific research to identify and promote effective actions that strengthen homes, businesses, and communities against natural disasters and other causes of loss. The Institute’s website provides a wealth of information about building resilience to a variety of natural hazards.
    - ⇒ Available at: [www.disastersafety.org](http://www.disastersafety.org)
- ***WealthWorks***
  - ◇ A set of national and regional partners are working together to define and develop the WealthWorks framework, an approach to economic development that connects a community’s assets to market de-

mand in ways that build livelihoods that last. The framework aims to advance a region's overall prosperity and self-reliance, strengthen existing and emerging sectors, and increase jobs and incomes for lower-income residents and firms. The goal is to build wealth that can benefit community residents today and for generations to come.

⇒ Available at: [www.wealthworks.org](http://www.wealthworks.org)

### DATA RESOURCES

- **U.S. Department of Commerce, Bureau of Economic Analysis (BEA)**
  - ◇ BEA is an agency of the Department of Commerce. Along with the Census Bureau, BEA is part of the Department's Economics and Statistics Administration. BEA produces economic accounts statistics that enable government and business decision-makers, researchers, and the American public to follow and understand the performance of the Nation's economy.
    - ⇒ Available at: [www.bea.gov](http://www.bea.gov)
- **U.S. Department of Labor, Bureau of Labor and Statistics (BLS)**
  - ◇ BLS is the principal Federal agency responsible for measuring labor market activity, working conditions, and price changes in the economy. Its mission is to collect, analyze, and disseminate essential economic information to support public and private decision-making.
    - ⇒ Available at: [www.bls.gov](http://www.bls.gov)
- **U.S. Census Bureau**
  - ◇ Longitudinal Employer-Household Dynamics (LEHD) Program
    - LEHD makes available several data products that may be used to research and characterize workforce dynamics for specific groups. These data products include online applications, public-use data, and restricted-use microdata.
    - ⇒ Available at: [www.lehd.ces.census.gov/data](http://www.lehd.ces.census.gov/data)
- **On the Map Tool**
  - ◇ A web-based mapping and reporting application that shows where workers are employed and where they live. It also provides companion reports on items such as age, earnings, industry distributions, and educational attainment.
    - ⇒ Available at: [www.onthemap.ces.census.gov](http://www.onthemap.ces.census.gov)
- **StatsAmerica**
  - ◇ Provides actionable data for economic developers to use in site requests, developing metrics, grant writing and strategic planning. Data profiles available include industry clusters, occupational clusters, and counties and states in profile. In addition, most EDD regions are pre-loaded into the database, which makes collecting and aggregating data for individual counties within a region unnecessary.
    - ⇒ Available at: [www.statsamerica.org](http://www.statsamerica.org)
- **Know Your Region: Exploring Regional Approaches to Economic Innovation**
  - ◇ This comprehensive project website explores regional and local approaches to economic innovation and competitiveness across the United States. The resources developed as part of the overall project curriculum, as well as the *Know Your Region* online clearinghouse, are intended to help local officials, economic development practitioners, community leaders and citizens assess local and regional assets, needs and visions in a global context, leading to long-term regional prosperity and sustainability.

### DATA RESOURCES, CONT'D

⇒ Available at: [www.knowyourregion.org](http://www.knowyourregion.org)

- ***U.S. Cluster Mapping Tool***

- ◇ Free online tool created by Michael Porter and the Harvard Business School's Institute for Strategy & Competitiveness allows users to create their own specific region to analyze the region's business environment and industry clusters.

⇒ Available at: [www.clustermapping.us](http://www.clustermapping.us)

- ***Economic Diversity in Appalachia: A Research Report and Economic Development Tool***

- ◇ Provides diversity and demographic data for all 3,100+ U.S. counties. The online tool is based on research for, and serves as a companion to, the report "Economic Diversity in Appalachia: Metrics, Tools, Strategies and Guides."

⇒ Available at: [www.economicdiversityinappalachia.creonline.org](http://www.economicdiversityinappalachia.creonline.org)

- ***Business-Specific Data Sources:***

- ◇ *infoUSA*

⇒ Available at: [www.infousa.com](http://www.infousa.com)

- ◇ *Dun & Bradstreet*

⇒ Available at: [www.dnb.com](http://www.dnb.com)

- ◇ *ESRI's Business Analyst*

⇒ Available at: [www.esri.com/software/businessanalyst](http://www.esri.com/software/businessanalyst)