



Berkeley-Dorchester Hazard Mitigation Plan

2010 Update

BCD Council of Governments

Serving Berkeley, Charleston and Dorchester Counties, South Carolina

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EXECUTIVE SUMMARY

Berkeley and Dorchester counties are threatened by various natural hazards. These hazards endanger the health and safety of the population of the counties, jeopardize the economic vitality, and imperil the quality of the environment. Because of the importance of mitigating the loss of life and property, the Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) facilitates a comprehensive planning process for Berkeley and Dorchester counties and local governments located within them. This “The Berkeley-Dorchester Hazard Mitigation Plan, 2010 Update” documents the process for local governments as well as South Carolina’s Emergency Management Department, which will incorporate the bi-county plan into its statewide hazard mitigation plan.

BCDCOG staff has conducted detailed analysis to identify the hazards threatening the jurisdictions of Berkeley and Dorchester counties to estimate the relative risks posed by those hazards. Staff collected data sets of hazard events from the Hazards Research Laboratory of the University of South Carolina. Staff used these data sets to assess the vulnerabilities of infrastructure, critical facilities, and socially vulnerable communities to impacts of future hazard events.

BCDCOG convened a committee of stakeholders – local government planners, emergency managers, administrators, emergency responders, and mayors as well as a Santee-Cooper representative – to steer the planning process. This planning committee has worked with BCDCOG staff to identify projects and programs that will avoid or reduce these vulnerabilities and make the communities of Berkeley and Dorchester counties more resistant to the impacts of future hazard events.

The projects and programs designed to reduce the impacts of future hazard event are entered into “mitigation action plans” in this document. Mitigation action plans have been developed by each jurisdiction for implementation whenever the resources to do so become available. These mitigation action plans intend to make the communities of Berkeley and Dorchester Counties more “disaster resistant.”

This document details the work of the BCDCOG and the Hazard Mitigation Planning Committee in 2009 to develop the planning organization, undertake the required technical analyses, and coordinate the mitigation initiatives proposed by the participating jurisdictions. The 2009 document is an update to the original Berkeley-Dorchester Hazard Mitigation Plan, which was approved by the Federal Emergency Management Agency and adopted by local governments in 2005. When implemented, this local mitigation plan will make the people, neighborhoods, businesses and institutions of Berkeley and Dorchester counties safer from the impacts of future hazard events.

I. Introduction

A natural hazard may strike at any time and has the potential to cause enormous loss of life and property. Although a community cannot predict when and where a hazard will occur, it can plan ways to reduce both structural and nonstructural damage during a hazard event. “Local hazard mitigation planning” can save a community from loss of life, property, natural resources, and money.

A. Background

The Federal Emergency Management Agency (FEMA) defines local mitigation planning as:

“The representation of the jurisdiction’s commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards.” (FEMA Interim Rule)

The Disaster Mitigation Act of 2000 amends the Stafford Act and requires that local jurisdictions and states must have an FEMA-approved hazard mitigation plan to receive funding from the Hazard Mitigation Grant Program, which is implemented under Section 404 of the Stafford Act. This amendment shifts emergency management programs away from the response and recovery role and encourages “the identification of hazard before they occur, preventing future losses, and minimizing the impacts of disasters.” (FEMA How-To Guide – Getting Started)

BCDCOG coordinated the first Berkeley-Dorchester Hazard Mitigation Plan (BDHMP) between 2003 and 2005 on behalf of its member local governments to achieve the requirements of the Disaster Mitigation Act. The Act further requires local governments to update their hazard mitigation plans every five years. The federal deadline for local governments operating under the original BDHMP is March 27, 2010. By this date, SC EMD will submit the BDHMP update as part of the statewide plan to FEMA. Once federal approval is achieved, BCDCOG staff will facilitate adoption of the 2010 BDHMP by local governments within Berkeley and Dorchester counties.

BCDCOG has secured funding from FEMA through the South Carolina Emergency Management Division (SCEMD) to facilitate a hazard mitigation planning process and coordinate the multi-jurisdictional plan. Funding became available July 14, 2009, at which point BCDCOG staff began organizing resources and contacting local governments.

The planning process for this document includes a comprehensive evaluation of the vulnerabilities of Berkeley and Dorchester counties to natural hazards in order to identify ways to make these counties and communities therein more resistant to the impacts of natural hazards. FEMA concludes that hazard mitigation planning is:

“a process of determining how to reduce or eliminate the loss of life and property damage resulting from natural and human-caused hazards.” (FEMA How-To Guide – Getting Started)

Berkeley County, located in the South Carolina Lowcountry, has a population of 142,651 according to the 2000 US Census. The County is susceptible to a number of hazard events and has features that make it more susceptible to certain types of hazards. The Francis Marion National Forest and the dams of three reservoirs – Lake Marion, Lake Moultrie, and the Goose Creek Reservoir – introduce potential hazards of wildfires and flooding due to dam failure, respectively. Berkeley County may also feel the effects of hazard that directly or indirectly impact its geography, such as earthquakes and hurricanes. Berkeley County and its characteristics will be further discussed in the Community Vulnerability Assessment.

Dorchester County, which abuts Berkeley County to the west, recorded a population of 96,413 in the 2000 US Census. Dorchester County is more susceptible to earthquakes than nearby counties due to its geology. It, too, is susceptible to hurricanes, wildfires, and other hazards analyzed during the planning process. Dorchester County and its characteristics will be further discussed in the Community Vulnerability Assessment

B. Related Planning Efforts

Through BCDCOG, the local governments of Berkeley and Dorchester counties are involved in two efforts studying the resiliency of the Charleston metropolitan area. BCDCOG is an active partner of both, Creating Resilient Communities and CARRI (Community and Regional Resilience Initiative). A grant from the David and Lucille Packard Foundation funds the former, while the latter enjoys funding through the United States Department of Homeland Security.

Creating Resilient Communities

“A resilient coastal community is one in which residents understand coastal hazards and potential impacts and are prepared to respond to these factors with timely and holistic management strategies” (www.resilient-communities.org, PlaceMatters, 2007). The purpose of Creating Resilient Communities, in the words of PlaceMatters, is this:

This initiative offers citizens a unique opportunity to build on current planning activities and integrate the results in a more holistic vision of our communities and region —and to identify management strategies responsive and adaptive to future challenges —key elements of resilient communities.

We know that our coastal communities are vulnerable to hazards such as hurricanes, storm surge and flooding. In the future, climate change may make impacts from these hazards even worse. We also know that our region is growing very rapidly. To guide future population growth and land development, and to maintain the overall health of our region, we need to protect our neighborhoods

and important natural areas, and to avoid developing in areas vulnerable to natural hazards.

This initiative will help communities in our region prepare to resist damages from hurricanes, storm surge and floods, including loss of property, income and lives. The project will help area residents make informed decisions about where land should be developed to avoid putting people and property at risk. And it will help communities take action to conserve natural areas, like marshes and floodplains, so they can continue to protect our coastal neighborhoods, regional economy and quality of life.

An integral component of PlaceMatters' project is its coordination with "Our Region, Our Plan," a regional land-use planning initiative of BCDCOG. The regional land-use plan employs a scenario-based approach, wherein several disparate growth scenarios are evaluated. The evaluation is based on performance, including measures of cost effectiveness, public service efficiency, and environmental sensitivity, among others.

The PlaceMatters team will prepare one of the scenarios, based on minimizing or mitigating natural hazards and natural resource degradation, for evaluation. PlaceMatters has assembled a diverse team of respected professionals from public and private sectors: PlaceWays, Nature Serve, The Nature Conservancy, the Michaux Conservancy, and NOAA's Coastal Services Center. Their metrics will influence the analysis of all the scenarios.

"Our Region, Our Plan" will culminate in a regional land-use plan and set of strategies to implement that plan. PlaceMatters and its team will provide direct input into the plan and strategies so that the region will grow more resilient to natural hazards.

Community and Regional Resilience Initiative

The US Department of Homeland Security chose the Berkeley-Charleston-Dorchester Region as one of three locations for funding of a CARRI (Community and Regional Resilience Initiative) program because the region has demonstrated a tremendously high resilience to disasters in its history. The BCD Region thrives today despite British occupation, Union bombardment, a major earthquake in 1886, the collapse of the rice industry in the first quarter of the 20th century due to hurricanes, Hurricane Hugo in 1989, and the economic disaster of the closure of the Charleston Navy Base.

CARRI investigators sought to glean lessons from this resilience for transfer to other communities, but more importantly to determine what additional measures are needed to protect or improve the region's resilience into the 21st century. The CARRI team identified two key areas: transportation and communications. An earthquake would significantly incapacitate the region's transportation network. Investigators also found that post-disaster communication could be improved with better coordination between the region's counties now.

Since the BCDCOG (the staff behind this plan) serves the tri-county area as its regional transportation planning agency, the initiative is now housed at BCDCOG with support from the newly established Community and Regional Resilience Institute at the College of Charleston. More information, from the CARRI website – www.resilientus.org – follows:

CARRI is developing a common framework including processes and tools that communities and regions can use to assess their resilience, determine a resilience vision and take concrete actions that will have positive economic and social results. The framework will be a national framework usable across the country but flexible enough to recognize the great diversity of the United States, its citizens, institutions, governments and organizations. CARRI believes that such a common framework is best done in partnership, at the local, grass-roots level in a broad-based manner that is inclusive of all the elements of the community fabric – government, private business, associational, non-profit and faith-based – rather than top-driven from the federal government. For this reason, the framework is being developed cooperatively and collaboratively with practitioners in partner communities and with other organizations that have similar goals.

The Community and Regional Resilience Institute is a major effort of [The Southeast Region Research Initiative \(SERRI\)](#) supported by the [U.S. Department of Homeland Security](#) and operated by the Department of Energy's [Oak Ridge National Laboratory](#), in conjunction with a variety of other federal, regional, state, and local partners.

The Community and Regional Resilience Institute (CARRI) is dedicated to research and practical application across the full continuum of prevention, protection, response and recovery to enhance the resilience of communities and regions. CARRI seeks to assist the nation in developing an accepted, common framework for community and regional resilience that integrates the full suite of community resources into a coherent resilience pathway so that the community can get back on its feet following a natural or man-made disaster as quickly as possible.

CARRI began as an “initiative” in 2007 and is a collaborative effort between the Department of Homeland Security (Science and Technology Directorate), Oak Ridge National Laboratory, Savannah River National Laboratory, and a number of academic institutions. Early CARRI activities included the engagement of a diverse collection of individuals, organizations, and government entities – with a charge to learn all that we could about the condition and path of community resiliency. While our efforts were productive and worthwhile we soon recognized that an accurate understanding of the interdependencies and connections between communities could not be achieved without the involvement of actual communities. Three communities in the Southeastern United States joined the CARRI team and brought with them an abundance of knowledge, first-hand experience, and remarkable compassion for their societies and citizens. CARRI is designed to combine community engagement activities with research activities; our Research Team is diverse and generates an interdisciplinary array of knowledge that is unsurpassed.

The CARRI Process is, by design, a community-driven effort. By drawing together all aspects of the community – from the leadership to the grassroots, from the public sector and non-governmental organizations – the CARRI organizing team asked the Charleston Tri-County Area to identify their strengths as well as their vulnerabilities. After nearly a year of research, assessment, and engagement, the community identified 12 themes and named 5 priority areas. The Charleston Tri-County Area has taken on the challenge of moving forward on the lessons learned through the CARRI Process; priorities for immediate roadmap development are underway for 2 of the 5 priority focus areas (transportation and mobility and communication and information sharing). The Charleston Tri-County area knows how to get businesses back up and running after a disaster. They have a history of pulling together broad cross-sector representation and working together as needed. The (BCD) Council of Governments is the “owning” organization for the implementation of recommendations from the Charleston Tri-County CARRI Advisory Group.

Resilient communities are our objective and research combined with practical experience is critical to ensure CARRI's expertise is based on knowledge and evidence.

C. Purpose

According to FEMA, the benefits of mitigation planning are these:

- Leads to cost-effective selection of risk reduction actions
- Builds partnerships
- Contributes to sustainable communities
- Establishes funding priorities

The purpose of the BDHMP is to:

Provide a Methodical, Substantive Approach to Mitigation Planning

The approach utilized for the BDHMP relies on the application of sound planning concepts in a methodical process to identify vulnerabilities to future disasters and to propose the mitigation initiatives necessary to avoid or minimize those vulnerabilities. Each step in the planning process builds upon the previous, so that there is a high level of assurance that the mitigation initiatives proposed by the participants have a valid basis for their justification and priority for implementation. One key purpose of this plan is to document that process and to present its results to the community.

Enhance Public Awareness and Understanding

BCDCOG is interested in finding ways to make the community more aware of the natural, technological and societal hazards that threaten the public health and safety, the economic vitality of businesses, and the operational capability of the government. The plan identifies the hazards threatening Berkeley and Dorchester counties and provides an assessment of

the relative level of risk they pose. The plan also includes a number of proposals to avoid or minimize those vulnerabilities. This information will be helpful to individuals that wish to understand how the community could become safer from the impacts of future disasters.

Create a Decision Tool for Management

The Berkeley-Dorchester Hazard Mitigation Plan provides information needed by the managers and leaders of local government, business and industry, community associations and other key institutions and organizations to take actions to address vulnerabilities to future hazards. It also provides proposals for specific projects and programs that are needed to eliminate or minimize those vulnerabilities.

These proposals, called “action plans” herein, were created by each participating jurisdiction and include strategies ranked as high-, medium- or low-priority. These action plans are for community leaders roadmaps for the allocation of resources, when available, for hazard mitigation.

Promote Compliance with State and Federal Program Requirements

A number of state and federal grant programs, policies, and regulations encourage or mandate local governments to develop and maintain comprehensive hazard mitigation plans. This planning process specifically intends to assist each participating local government in complying with these requirements and to enable them to more fully and quickly respond to state and federal funding opportunities for mitigation-related projects. Because the plan defines, justifies, and prioritizes mitigation initiatives that have been formulated through a technically valid hazard analysis and vulnerability assessment process, the participating organizations are better prepared to more quickly and easily develop the necessary grant application content for seeking state and federal funding.

Enhance Local Policies for Hazard Mitigation Capability

A component of the hazard mitigation planning process conducted by BCDCOG staff is the analysis of the existing policy, program, and regulatory basis for management of growth and development. This process involves cataloging the current mitigation-related policies of local governments so that they can be compared to hazards that threaten the jurisdiction and the relative risks they pose to the community. When the risks posed to the community by a specific hazard are not adequately addressed in the community’s policy or regulatory framework, the impacts of hazard events can be more severe.

Assure Inter-Jurisdictional Coordination of Mitigation-Related Programming

A key purpose of the planning process is to ensure that proposals for mitigation initiatives are reviewed and coordinated among the participating jurisdictions within the counties. In this way, there is a high level of confidence that mitigation initiatives proposed by one

jurisdiction or participating organization, when implemented, will be compatible with the interests of adjacent jurisdictions and even mutually beneficial.

The following sections of the multi-jurisdictional hazard mitigation plan present the detailed information to support these purposes. The remainder of the plan describes the planning process developed by BCDCOG staff. It then summarizes the results of the hazard identification and vulnerability assessment process and addresses the current policy basis for hazard management by the participating jurisdictions and organizations. The plan also documents the structural and non-structural mitigation initiatives proposed by the participating jurisdiction to address the identified vulnerabilities.

D. Scope

The BDHMP has been created and will be maintained to address the hazards determined to affect Berkeley and Dorchester counties. Other hazards may be considered and defined, but will not be fully assessed in this plan. The geographic scope of the BDHMP includes all participating jurisdictions within Berkeley and Dorchester counties, as follows:

Berkeley County	Dorchester County
Town of Bonneau	Town of Harleyville
City of Goose Creek	Town of Reevesville
City of Hanahan	Town of Ridgeville
Town of Jamestown	Town of St. George
Town of Moncks Corner	Town of Summerville
Town of St. Stephen	

Both of these counties include portions of the cities of Charleston and North Charleston. The municipal governments of Charleston and North Charleston participated in the Charleston County Hazard Mitigation Plan.

E. Authority

The BDHMP was developed in accordance with the current regulations governing local hazard mitigation. The Plan is monitored and updated to ensure compliance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended by the Disaster Mitigation Act of 2000 (Public Law 106-390, October 30, 2000).

F. Participants in Planning Process

This section describes the local jurisdictions and organizations participating in the Berkeley-Dorchester Hazard Mitigation Plan and discusses the organizational structure used to guide the planning process.

The BCDCOG Board consists of 49 members that are appointed by their jurisdictional delegation to serve on the regional governing body of the BCDCOG (Appendix B lists the

members and the jurisdictions that they represent). The Board represents all thirteen (13) of the local jurisdictions participating in the planning process, and is the group that makes the official decisions regarding the planning process. The Board will act to approve the final draft of the BDHMP.

A Planning Committee, to which BCDCOG staff provides technical support and professional assistance, led the hazard mitigation planning process for 2009. The Planning Committee members were volunteers, appointed by local governments to guide the planning process for the BDHMP participants. As public-sector planners and administrators and private-sector stakeholders, Planning Committee members are a representative cross-section of Berkeley and Dorchester counties with regard to hazard mitigation.

The Planning Committee coordinates the actual technical analyses and planning activities that are fundamental to development of this plan. These activities include conducting the hazard identification and vulnerability assessment processes, as well as receiving and coordinating the mitigation initiatives from the participating jurisdictions for incorporation into this plan. This group was also responsible for updating the mitigation goals and objective for the 2010 update of the BDHMP. The members of the Committee include:

Name	Position	Organization
Eric Greenway	Planning & Zoning Administrator	Berkeley County Government
Tom Smith	Emergency Preparedness Director	Berkeley County Government
Greg Rines	GIS	Berkeley County Government
Megan Barkes	Executive Director	Michaux Conservancy
Monica Eustace	Senior Planner	Dorchester County Government
Jason Ward	County Administrator	Dorchester County Government
Dennis Clark	Emergency Management Director	Dorchester County Government
Robert Moyers	Emergency Planner	Dorchester County Government
Doug Tompkins	Engineer	Berkeley County Water & Sanitation Authority
Rick Williams	Fire Department	City of North Charleston
Johnny Cribb	City Administrator	City of Hanahan
Ann Sports	DHEC Region 7	SC Dep't of Health & Environmental Control
John Simkovich	DHEC Region 7	SC Dep't of Health & Environmental Control
Daniel Ben-Yisrael	Planning Director	City of Goose Creek
Susan Kammeraad-Campbell	Research Associate	Community and Regional Resilience Institute
Frank Fuda	Fire Chief	Town of Bonneau
Roy Pipkin	Mayor	Town of Jamestown
James Williams	Mayor	Town of Ridgeville (also representing towns of Harleyville and Reevesville)
Johnny Broome	Public Works Director	Town of St. Stephen
David Miller	Fire Chief	Town of Moncks Corner
Shea McMakin	Engineer	Santee Cooper
Madelyn Robinson	Planning Director	Town of Summerville

There are no new jurisdictions participating in the planning process. All thirteen local jurisdictions continue to participate on an ongoing basis. Twelve of the jurisdictions participate in the NFIP. The Town of Bonneau is not currently participating in the NFIP, having been sanctioned in 2004, prior to approval of the plan.

The planning team reviewed and analyzed each section of the plan, incorporating elements of prior planning efforts while adding or revising elements that had changed over time or had grown in terms of public awareness or priority. The introduction of new technical information, excerpts from plans, studies and reports were discussed by team members.

G. Public Participation

BCDCOG staff conducted three phases of outreach for the 2010: 1) an inclusive planning committee, 2) a project web page, and 3) public presentations. Identifying and assembling stakeholders was an early step in the hazard mitigation planning process. Staff contacted those persons (or organizations thereof) who participated in the 2005 BDHMP and identified additional stakeholders to participate based upon their involvement with prior, similar initiatives.

Contact was made with local government staff, including planners, emergency managers, and emergency responders from both Berkeley and Dorchester counties, and all 13 municipalities located within those two counties. Representatives of the Coastal Conservation League, the Community and Regional Resilience Institute of the College of Charleston, and the Michaux Conservancy, a partner in *Creating Resilient Communities*, were also invited to participate.

The general public was made aware of the hazard mitigation planning process, and how they may participate, through community calendar and public announcements published by various local media. All meetings and agenda topics of the BCDCOG Board of Directors are announced in advance and open to the general public.

All meetings of the BDHMP Planning Committee are conducted in the BCDCOG Boardroom and are open to the public. Meetings times and dates were announced to the BCDCOG Board at its regular meeting and posted to a special BCDCOG web page dedicated to the 2010 BDHMP Update.

Four planning and public meetings were held throughout the hazard mitigation planning process, as detailed in the project timeline in Section I.I and the table below. B-D Hazard Mitigation Planning Committee members who were unable to attend working sessions were contacted by BCDCOG Staff, individually interviewed, given and made aware of additional online resources. All stakeholders were represented at each of two public meetings, attended by the BCDCOG Board of Directors.

Meeting Date	Place	Meeting Purpose	Attending
July 21, 2009	BCDCOG Conference Room	Initial scoping meeting with SCEMD Staff	Regional and State EMD Staff
July 27, 2009	BCDCOG Conference Room North Charleston, SC	Planning Team Working Session #1	B-D Hazard Mitigation Planning Committee
August 24, 2009	BCDCOG Conference Room	Plan Presentation and Public Hearing	General Public and BCD Board
September 21, 2009	BCDCOG Conference Room North Charleston, SC	Planning Team Working Session #2	B-D Hazard Mitigation Planning Committee
December 04, 2009	BCDCOG Conference Room	Plan Presentation and Public Hearing	General Public and BCD Board
December 14, 2009	Berkeley County Council Chambers	Plan Presentation and Public Hearing	General Public and Elected Officials
January 04, 2010	Dorchester County Council Chambers, Summerville, SC	Plan Presentation and Public Hearing	General Public and Elected Officials

All Planning Committee meeting materials, including slideshows and the 2005 BDHMP, appear on the website hosted by the Berkeley-Charleston-Dorchester Council of Governments, www.BCDCOG.com. The website includes contact links for key BCDCOG staff members working on the project.

BCDCOG staff conducted two public hearings in the BCDCOG Boardroom, as well as one with each County Council – Berkeley and Dorchester. The first of these public meetings occurred August 24, 2009, in advance of plan document preparation. BCDCOG Board members and citizens in attendance were offered the opportunity to provide input. December 4, 2009, was the date of the second public meeting at BCDCOG. At this meeting, the first draft of the BDHMP 2010 Update was available for inspection. Staff made a presentation summarizing the plan and opened the floor to Board members and the public at large for questions. Notice of these meetings reached media outlets throughout the BCD Region, as listed in Appendix I: Public Notifications.

BCDCOG staff coordinated public hearings for the BDHMP 2010 Update at county council chambers of both counties, Berkeley and Dorchester. The Berkeley County Council meeting occurred December 14, 2009, while the second meeting was convened at Dorchester County Council January 4, 2010. The first draft of the BDHMP 2010 Update was available for public inspection at the two Dorchester County Services buildings, in St. George and Summerville, and the Berkeley County Administration Center in Moncks Corner in advance of both meetings and available for public inspection.

H. Planning Process

Both counties and all thirteen (13) municipalities participated in a hazard mitigation planning process that incorporated the following steps:

1. Hazard Identification and Analysis
2. Community Hazard Vulnerability Assessment
3. Mitigation Capabilities Assessment
4. Community Goals
5. Mitigation Action Plans

Step 1 – The **Hazard Identification and Analysis** identifies the natural hazards events that occur in Berkeley and Dorchester counties. It includes historical data on past hazard events and establishes hazard profiles for each hazard event. Members of the Planning Committee reviewed the NCDC Storm Event Database for their respective jurisdictions and revised the list of hazard events accordingly. No significant revisions were identified.

Step 2 – After identifying natural hazards, participating communities assessed the vulnerability of their jurisdiction using a new methodology. The methodology for the **Community Hazard Vulnerability Assessment** for the BDHMP was created by the University of South Carolina Hazards Research Lab.

This new assessment process provides the community an objective way to look at hazard preparedness, as well as establish a basis for hazard mitigation. It also provides the existing conditions of hazards and the population and property at-risk in the community.

The hazard vulnerability assessment addresses the biophysical vulnerability and the social vulnerability for each county. The assessment utilizes geographical, economic, demographic data and development trends to determine the characteristics of the community and how those characteristics may affect the community’s hazard vulnerability. The assessment also generates clear, geographic depictions of the hazard vulnerability in Berkeley and Dorchester counties, which are published in this BDHMP Update. This revision is a significant improvement to the mitigation plan.

Step 3 – The **Mitigation Capabilities Assessment** examines the existing capability of Berkeley and Dorchester Counties to address hazard vulnerability and hazard mitigation. The Planning Committee evaluated their current regulations and adopted plans for their jurisdictions in terms of suitable mitigation activities and other pertinent considerations. This assessment process identified any local mitigation activities and policies that may be further developed to make their communities more hazard-resistant. These included suitable amendment and adoption of local building codes, zoning ordinances, flood plain regulations, comprehensive plans, and capital improvement programs; among other local planning, programming and budgeting tools available to public officials (see Step 5).

The above three assessments form the base of knowledge required to design the hazard mitigation strategies of Berkeley and Dorchester counties. These assessments are included as appendices to the BDHMP.

Step 4 – The **Community Goals** have been created and updated by the Planning Committee for the BDHMP. For the original Berkeley-Dorchester Hazard Mitigation Plan,

the Committee utilized the goals suggested by Mitigation 20/20 software. These 2005 goals were prioritized by stakeholders, including public officials, in a “Mitigation Goals Survey.” In the Summer of 2009, an updated Mitigation Goals Survey was distributed to all elected and public works officials within Berkeley and Dorchester counties to solicit their participation and educate them about hazard mitigation planning. A copy of the Mitigation Goals Survey may be found in Appendix C. The priority ranking of BDHMP goals were found to be consistent from 2005 to the 2010 Plan Update.

Step 5 - The Mitigation Action Plans were created by each participating jurisdiction. These action plans represent a full spectrum of activities that a jurisdiction could undertake to mitigate loss during a disaster, if funding for the activity becomes available. The activities included in each jurisdictions’ action plans achieve one or more of the goals or objectives of the BDHMP. The inclusion of an action plan is one of the requirements for a jurisdiction for satisfactory participation in the BDHMP.

The planning process included a review of all existing planning documents for the associated jurisdictions, summarized in the matrix below:

Jurisdiction	Comprehensive Plan	Capital Improvements Program	Regional Development Plan	Transportation Improvements	Water and Sewer Construction	Building Code Enforcement	Zoning Ordinance	Floodplain Ordinance	Subdivision Regulations
Berkeley County	●	●	●	●	●	●	●	●	●
Bonneau	●		●	●		●	●		●
Charleston	●	●	●	●	●	●	●	●	●
Goose Creek	●	●	●	●	●	●	●	●	●
Hanahan	●		●	●		●	●	●	●
Jamestown	●		●	●		●	●	●	●
Moncks Corner	●	●	●	●	●	●	●	●	●
St. Stephen	●		●	●		●	●	●	●
Summerville	●	●	●	●	●	●	●	●	●
Dorchester County	●	●	●	●	●	●	●	●	●
Harleyville	●		●	●	●	●	●	●	●
North Charleston	●	●	●	●	●	●	●	●	●
Reevesville	●		●	●		●	●	●	●
Ridgeville	●		●	●		●	●	●	●
St. George	●		●	●	●	●	●		●
Summerville	●	●	●	●	●	●	●	●	●

The goals and priorities of existing plans and policies provided guidance for the goals and actions associated with this plan. Documents that provided pertinent information and guidance include emergency operations plans, comprehensive plans, redevelopment plans (including tax-increment financing districts), capital improvement programs, zoning ordinances, land development regulations, and stormwater management ordinances.

The FEMA-approved hazard mitigation plans adopted by Hyde County, North Carolina; Jefferson County, West Virginia; and Charleston County, South Carolina, were utilized to determine the organization and flow of the 2005 BDHMP. These documents were also utilized to determine the level of detail that should be included in the 2010 BDHMP Update. Like its predecessor, the 2010 BDHMP closely follows the format of the Hyde County (NC) Hazard Mitigation Plan.

I. Project Timeline

The work flow and milestones that demarcate the planning process for the 2010 BDHMP 2010 are described herein.

Organize Resources: July 2009

Funding for the 2010 BDHMP Update became available through South Emergency Management Division July 14, 2009. BCDCOG staff convened a planning committee, as described in previous sections, and assembled data sets and resources necessary to update the 2005 BDHMP.

- BCDCOG staff met with SCEMD staff to execute funding arrangement July 21, 2009.
 - BCDCOG staff inquired about resources available to the region to support the 2010 BDHMP Update. SC EMD staff directed BCDCOG staff to the University of South Carolina Hazards & Vulnerability Research Institute.
 - SC EMD staff reiterated that a completed product was expected to SC EMD offices September 27, 2009, 4 ½ months in advance of the region's federal deadline.
- BCDCOG established a web page dedicated to the 2010 BDHMP Update on its website, www.bcdcog.com. The 2005 Plan was posted on this page, as eventually were all resources related to the 2010 Plan Update and drafts of the Plan Update itself.
- BCDCOG identified stakeholders and called the first meeting of the Berkeley-Dorchester Hazard Mitigation Planning Committee July 27, 2009. A list of participants in the Planning Committee appears on page I-8.
 - Public notice was made in accordance with BCDCOG procedures for notification. Notice was provided to media outlets, as listed in Appendix I.
 - The first Planning Committee meeting entailed a brief review of the 2005 Plan and a discussion of the 2010 Update process.

- Representatives of CARRI and Creating Resilient Communities, with whom BCDCOG partners, discussed the resources and benefits their organizations bring to hazard preparedness and resiliency in the region.

Assess Risks and Develop a Mitigation Plan: August – September 2009

- BCDCOG staff conducted a public meeting for presentation of and input for the 2010 BDHMP Update at the BCDCOG Board of Directors meeting August 24, 2009.
 - Staff explained the purpose of the plan and the type of input sought from stakeholders.
 - No comments were made by the Board or the public in attendance.
- BCDCOG convened the Planning Committee’s second meeting August 24, 2009.
 - Staff advised the group regarding its progress toward updating the risks assessment using updated data sets from USC as well as a new data set (occurrences of wildfires) from Creating Resilient Communities.
 - The Planning Committee revisited each of the goals and objectives of the 2005 Plan for inclusion in the 2010 Plan Update. The group further discussed outreach efforts to elected officials, which entailed a survey asking elected officials to review and prioritize the Berkeley-Dorchester Hazard Mitigation planning goals. This outreach helped raise awareness of the ongoing plan, in advance of its imminent appearance on local government council agendas in 2010.
- SC EMD staff sent BCDCOG staff a “Crosswalk” document September 3, 2009, and requested its completion with the Hazard Mitigation Plan Update. The “Crosswalk” is a 19-page guide intended for document preparers to self-evaluate their product.
- The Planning Committee gathered again at BCDCOG offices for a third time on September 21, 2009.
 - The group reviewed BCDCOG staff’s completed risk assessment and received maps reporting the spatial analysis.
 - Staff guided the committee through the process and requirements for developing a local mitigation action plan, as required for plan participation. The presentation included a variety of innovative strategies underway throughout South Carolina that hazard mitigation grants could fund.
- BCDCOG staff compiled the first draft of the Berkeley-Dorchester Hazard Mitigation Plan, complete with revisions to local mitigation action plans from Planning Committee stakeholders, and sent the draft to SC EMD both by e-mail and postal mail on September 25, 2009, in advance of the state’s deadline for submittal.
- Due to the 75-day period allowed by state and federal deadlines to prepare the 2010 BDHMP Update, the second public meeting could not occur both, after document preparation and prior to the project deadline; therefore, BCDCOG conducted public input at its Board of Directors meeting December 4, 2009.
 - Public notice was made in accordance with BCDCOG procedures for notification. Notice was provided to media outlets, as listed in Appendix I.
 - Staff gave a full presentation, apprising the Board and the public at large of the risks assessment and possible innovative hazard mitigation measures.

- One measure – a public-private partnership to bury power lines – piqued the interest of the Board. A discussion ensued about where in South Carolina such programs existed.
- No comment was made by the public.

Revise the 2010 Mitigation Plan Update: October 2009 – April 2010

- BCDCOG staff learned October 14, 2009, that SC EMD staff would require BCDCOG staff to complete the “Crosswalk” prior to state review of the 2010 BDHMP Update. BCDCOG staff completed the “Crosswalk” and submitted it via e-mail to SC EMD October 23, 2009.
- October 28, 2009, SC EMD convened a teleconference between its staff and planners from councils of governments around the state working on hazard mitigation plan updates, including BCDCOG.
 - SC EMD staff discussed state and federal submittal requirements and review timelines for hazard mitigation plans.
 - Participants discussed funding arrangements between COGs and local governments to accomplish the local match required for Pre-Disaster Mitigation grants, under which the COGs are preparing hazard mitigation plans.
 - SC EMD assigned Regional Emergency Managers to work with COGs as resources for plan preparation.
- BCDCOG staff received a list of needed revisions to the 2010 BDHMP Update from SC EMD’s REM November 25, 2009. In addition to these, SC EMD staff indicated that BCDCOG Board of Directors meetings would not qualify as public meetings in accordance with federal requirements. BCDCOG staff therefore met with Berkeley County staff on the 25th to arrange an appearance before Berkeley County Council.
- BCDCOG once again called together the Hazard Mitigation Planning Committee, on December 7, 2009, to discuss final revisions to the document, including improvements to local mitigation action plans. This meeting was attended by the REM and representatives of three local governments.
- BCDCOG staff made a presentation about the 2010 BDHMP Update to Berkeley County Council December 14, 2009. No member of the public spoke to the plan.
- BCDCOG staff made a presentation about the 2010 BDHMP Update to Dorchester County Council January 4, 2010. Council expressed interest in the plan and asked for a return visit from staff with a presentation in greater depth. No member of the public spoke to the BDHMP.
- BCDCOG staff prepared a revised 2010 Berkeley-Dorchester Hazard Mitigation Plan Update and submitted it December 31, 2009, together with SC EMD’s required “Crosswalk” review document and a letter from the Executive Director of BCDCOG identifying the enclosed document as the 2010 BDHMP Update.
- A (second) Quarterly Report was submitted by the BCDCOG on January 11, 2010.
- BCDCOG staff received an updated “Crosswalk”, a list of needed revisions to the 2010 BDHMP Update, from SC EMD’s REM on February 02, 2010.

- A new BDHMP Project Manager was assigned by the BCDCOG, who began working with the SC EMD staff to remedy the deficiencies in the document.
- An inventory of Severe Repetitive Loss Properties was provided to the BCDCOG by the SC EMD on February 04, 2010.
- HAZUS software was employed by the BCDCOG to run models and generate outcomes that would further enhance the BDHMP Update (March 2010).
- A Third Draft of the BDHMP was completed and uploaded to the SC EMD .ftp site on March 23, 2010.
- An updated Crosswalk was prepared by the SC EMD and received by the BCDCOG on March 31, 2010. Additional local research, correspondence with Planning Committee members, and descriptive narrative was required to satisfactorily complete the document.
- A Fourth Draft of the BDHMP was completed and uploaded to the SC EMD .ftp site on April 30, 2010.
- Based upon staff notes and a new Crosswalk prepared by State officials, a Fifth and Final Draft was completed and uploaded to the SC EMD .ftp site on May 07, 2010.

II. Community Goals and Objectives

This section of the BDHMP identifies the goals and objectives established in 2004 and updated in 2009 by the Berkeley-Dorchester Hazard Mitigation Planning Committee. Each goal is a general statement of intent that may only be achieved in part or fully by the implementation of the related objectives and the mitigation action plans of each participating jurisdiction.

Goal 1: The community will strive to minimize the threat from a hazard event in order to protect the health, safety and welfare of the community's residents and visitors.

Objective 1.1: Adequate warning systems will be put in place to notify the public at risk and provide emergency instruction during a hazard event.

Objective 1.2: Local governments will effectively administrate building codes as mandated by the State of South Carolina.

Objective 1.3: Local governments will implement land use regulations to minimize vulnerability of temporary recreational structures and vehicles.

Goal 2: The community will strive to have the capability to initiate and sustain emergency response operations during and after a hazard event.

Objective 2.1: Utility and communications systems supporting emergency services will be retrofitted or relocated to withstand a hazard event and include ITS infrastructure.

Objective 2.2: Each jurisdiction will continue its participation in the command and control center established in each county.

Objective 2.3: Structures that provide storage and shelter for government equipment and vehicles will be retrofitted or relocated to withstand a hazard event.

Objective 2.4: Post-disaster communication plans will be updated to ensure communication of emergency workers after a hazard event.

Objective 2.5: Primary roads and access roads to emergency facilities will be retrofitted to ensure access after a hazard event.

Goal 3: The availability and functioning of the community's infrastructure will not be significantly disrupted by a hazard event.

Objective 3.1: Retrofit or relocate public water and sewer lines and facilities to ensure their reliability during and after a hazard event.

Objective 3.2: Encourage routine maintenance of public facilities to ensure reliability during and after a hazard event.

Objective 3.3: Local governments will collaborate on hazard mitigation programs with private-sector organizations that own or operate key community facilities.

Objective 3.4: Local governments will further develop mutual aid agreements, so they know where help is coming from and how reimbursement will work, including participation in the South Carolina Water/Wastewater Agency Response Network (SC WARN).

Goal 4: The County will strive to educate the members of the community to understand the hazards threatening local areas and the techniques to minimize vulnerability to those hazards.

Objective 4.1: Private sector decision makers shall be educated about hazard mitigation techniques and the components of the community's mitigation plan.

Objective 4.2: The public living or working in defined hazard areas will be given awareness of and understand their vulnerability and know appropriate mitigation techniques.

Objective 4.3: The public will have access to information needed to understand their vulnerability to a hazard event and appropriate hazard mitigation techniques through enhanced relationships with neighborhood and community centers.

Goal 5: The continuity of local government administration and services will not be significantly disrupted by a hazard event.

Objective 5.1: Buildings and facilities used for the routine operations of government will be retrofitted or relocated to withstand the impacts of a hazard event.

Objective 5.2: Government texts, records and documents will be backed up, relocated, and/or protected during and after a hazard event.

Objective 5.3: A contingency plan will be created and/or maintained to reestablish local government services after a hazard event in case of facility damage.

Goal 6: Local government will have the capability to develop, implement and maintain effective hazard loss reduction programs.

Objective 6.1: Data and information needed, such as watershed studies, for defining hazards, risk areas and vulnerabilities in the community will be obtained and digitized as necessary.

Objective 6.2: Local governments will strive to have the capability to effectively utilize the available data and information related to mitigation planning and program development.

Objective 6.3: There will be a program to revisit the Berkeley-Dorchester Hazard Mitigation Plan within three years and completely update the Plan in five years.

Objective 6.4: Local governments will guide new land development in a way that does not increase risk to existing developed areas.

Goal 7: The community will strive to minimize the vulnerability of homes, institutions and places of business and employment to hazard events.

Objective 7.1: The community will strive to reduce the vulnerability of schools, libraries, museums, critical facilities and other institutions to a hazard event.

Objective 7.2: The community will establish a program for the removal, relocation or retrofitting of vulnerable structures and utilities in hazard areas.

Objective 7.3: New hazardous sites will be located at least 2000 feet from schools and neighborhoods with preference given to locations ten miles from these places.

Goal 8: The policies and regulations of local government will support effective hazard mitigation programming throughout the community.

Objective 8.1: Each local jurisdiction will comply with the requirements of participation in the National Flood Insurance Program (NFIP) and the associated Community Rating System, if applicable.

Objective 8.2: Efforts will be made to place all new government facilities outside of hazard prone areas and/or these facilities will be designed to withstand a hazard event.

Objective 8.3: Government officials will strive to give hazard mitigation needs and programs appropriate emphasis in resource allocation and decision-making.

Objective 8.4: The community will strive to have land use policies, plans, and regulations that discourage or prohibit the location of structures and infrastructure components in hazard prone areas.

Goal 9: The community will continue to ensure minimal impact of a hazard event on the economic stability of the community.

Objective 9.1: Governmental officials will include the needs of the business and industrial community in emergency response and disaster recovery plans.

Objective 9.2: The community will implement programs to address public awareness and perception of the community condition and functionality after a hazard event.

Goal 10: All sectors of the community will work together to create a disaster-resistant region.

Objective 10.1: The local governments will create outreach programs to gain participation in mitigation programs by business, industry, institutions and community groups.

Objective 10.2: Government officials will encourage and assist local businesses in the creation of a business continuity and recovery plan.

Goal 11: The community will strive to reduce the impact of a hazard event on the natural and cultural resources of the community in order to protect quality of life.

Objective 11.1: Government officials will encourage the owners or caretakers of cultural resources to develop mitigation and response plans.

Objective 11.2: Local governments will strive to educate private, non-profit organizations about emergency response and hazard mitigation.

Objective 11.3: Local planning commissions will address cultural resources with regard to their jurisdiction's vulnerability in planning.

III. Mitigation Action Plans

A. Category

Each element of the mitigation action plan falls under one or more of the following mitigation technique classifications. These classifications include a wide array of activities that can be considered to achieve the goals and objectives of the BDHMP. The mitigation technique will be included in the Mitigation Action Plan Worksheet. The identified projects and actions are designed to address the hazards on new and existing buildings and infrastructure. Each jurisdiction used an internal cost benefit review during the prioritization process to identify the actions or projects with the greatest benefits. A primary criterion for prioritization of actions was based upon the precept that all local jurisdictions must continue to comply with the requirements of participation in the NFIP. The results listed in the individual action plans are those that provide the greatest level of protection to public health, safety, and welfare; and that are economically feasible through internal funding (i.e., general fund), grant funds (i.e., FEMA), or some combination of both sources.

1. Preventative Activities (PA)

Preventative activities are those activities that are intended to reduce a community's vulnerability to future hazard events. The following is a list of potential preventative activities and measures:

- a. Land-use and development regulations
- b. Building codes
- c. Floodplain regulations
- d. Water quality regulations
- e. Fire prevention codes
- f. Drainage system maintenance
- g. Coastal erosion regulations
- h. Capital improvement programming
- i. Shoreline, riparian, fault-zone setbacks

2. Property Protection (PP)

Property protection activities are intended to protect existing structures by retrofitting, relocating or modifying the structure to withstand a hazard event. The following is a list of potential property protection measures:

- a. Property acquisition
- b. Property relocation
- c. Building elevation
- d. Critical facilities protection
- e. Retrofitting vulnerable properties
- f. Participation in an insurance program
- g. Development of safe rooms

3. Natural Resource Protection (NR)

Natural resource protection activities reduce the effects of a hazard event on the natural resources within a region by preserving and/or restoring natural areas along with their mitigation functions. The following is a list of natural resource protection activities:

- a. Floodplain protection
- b. Dune protection
- c. Riparian buffers
- d. Fire resistant landscaping
- e. Wetland preservation and restoration
- f. Erosion and sediment control
- g. Beach nourishment
- h. Wastewater permitting
- i. Open space preservation
- j. Tree protection and landscaping ordinances

4. Structural Projects (SP)

Structural mitigation activities reduce the impacts of a hazard event by modifying the physical environment to withstand the particular hazard. The following is a list of structural mitigation activities:

- a. Creation of reservoirs
- b. Levees, dikes, floodwalls, seawalls
- c. Diversion canals, detention areas, retention areas
- d. Beach nourishment
- e. Storm sewers
- f. Dam construction
- g. Channel modification/dredging
- h. Infrastructure construction, modifications, repairs

5. Emergency Services (ES)

Emergency service measures minimize the impact of a hazard by preparing these services to respond efficiently and rapidly during and after a hazard event. The following is a list of potential emergency services activities:

- a. Warning systems
- b. Evacuation planning and management
- c. Sandbagging for flood protection
- d. Hurricane shutters
- e. Debris removal plan
- f. Emergency shelter preparation

6. Public Information and Awareness (PI)

Public information and awareness activities advise residents, potential buyers and visitors about hazards, potentially hazardous areas and

mitigation techniques. The following is a list of potential public information and awareness activities:

- a. Outreach projects
- b. Speaker series and demonstration events
- c. Hazard and flood map information
- d. Real estate disclosure
- e. Library materials
- f. Hazard expositions
- g. Warning system drills
- h. Vulnerability inspections for residents and business owners
- i. Radio advertisements

2. Activity – This section should include a brief description of the project or program that the participating jurisdiction proposes to undertake.

3. Objectives Addressed – Each mitigation action plan should work to achieve one or more of the objectives in the BDHMP. The number of each objective that an action plan could work to achieve should be placed in this category.

4. Priority – The participating jurisdiction should rank each mitigation action plan with a “high,” “moderate,” or “low” priority ranking. This ranking will show which action plans are the highest priority for completion and, therefore, which activities should be given a priority for funding. This ranking can be reviewed and modified after hazard event and during an update of the BDHMP. Each jurisdiction will continue to comply with the requirements of participation in the NFIP.

5. Possible Funding Sources – This category will list possible funding sources that could be utilized to undertake or complete each particular action plan. It is important for each participating jurisdiction to determine any possible funding source, if excess funds or grants were to become available that could be used to achieve each mitigation action plan. This determination does not represent a commitment of these funds for a mitigation activity, but just an example of how the activity could be funded.

6. Responsible Agency – A participating jurisdiction must determine which agency or person has the expertise and responsibility to undertake each of the mitigation action plans. This will make implementation of a mitigation action plan efficient and effective.

7. Timeframe – The participating jurisdictions must determine whether each project is a short-term (S), 1 to 3 years, long-term (L), 3 to 5 years; or an ongoing (O) project. Timing will be important in the determination of potential funding sources, staffing, and other community resources.

B. Jurisdictional Mitigation Plans

As part of the BDHMP, each participating jurisdiction provides a Hazard Mitigation Action Plan Worksheet. This worksheet contains proposed mitigation projects or programs that a participating jurisdiction would like to undertake when funding becomes available. To receive Hazard Mitigation Grant Program funding, the project must be generally or specifically included in the BDHMP as one of the jurisdiction's mitigation techniques.

On the following pages is a comprehensive list of the Mitigation Action Plans for each participating jurisdiction, by county; with an update of the status for each element of the Mitigation Action Plan.

Mitigation Action Plan Abbreviations:

Type

Preventive Activities (**PA**), Property Protection Activities (**PP**), Natural and Beneficial Functions/Resource Preservation Activities (**NB**), Emergency Services Activities (**ES**), Structural Projects Activities (**SP**), Public Information Activities (**PI**), and Geographic Information Systems Activities (**GIS**).

Priority

"1" is the highest priority element of a local Mitigation Action Plan, "4" is the lowest priority; as determined by officials representing each jurisdiction.

Status

Action Plan elements are indicated as Completed (**C**) if the activity has been successfully initiated, executed, and substantially completed; Unchanged (**U**) if the action plan element is unaltered or otherwise remains the same as previous reporting periods; Deferred (**D**) if the lack of adequate funding, staff or other resources dictates that no immediate (i.e., short-term) action may be taken.

Timeframe

Proposed Action Plan elements are scheduled as Short-term (**S**), 1 to 3-years to initiate; Long-term (**L**), 3 to 5-years to initiate; or Ongoing (**O**) in the case of Completed (**C**) activities that are maintained and/or sustained over time by the local jurisdiction.

ACTION PLAN FOR BERKELEY COUNTY, SC

Following are the proposed projects/programs/actions to be undertaken by Berkeley County, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PA	Jurisdiction will participate in the National Flood Insurance Program (NFIP)	Building & Codes	General Fund	Minimize future flood damage; reduce existing flood damage; improve water quality; educating citizens regarding steps to take to reduce vulnerabilities; improve hazard resistance of infrastructure; reduce vulnerability of our infrastructure to natural and man-made hazards	1	Completed	0
PA	County has adopted, and commenced enforcement January 1, 2004, the International series Building-related and Fire codes and the floodplain management (including the one foot freeboard and five year cumulative substantial improvement clause provisions) regulation	Building & Codes	General Fund	Minimize future flood damage; minimize future earthquake damage; minimize future hurricane damage; protect the lives of our citizens from natural and man-made hazards	1	Completed	0
PA	Continue to provide coordination of County storm water management regulations	Engineering	General Fund & Storm Water Fee	Minimize future flood damage; reduce existing flood damage; improve water quality; educating citizens regarding steps to take to reduce vulnerabilities; improve hazard resistance of infrastructure; reduce vulnerability of our infrastructure to natural and man-made hazards	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PA	Continue enforcement of zoning regulations, Subdivision and Land Development Regulations	Planning	General Fund	Minimize future flood damage; preserve environmental resources; promote long-term economic prosperity; preserve open space; encourage recreational activities; minimize future hurricane damage; minimize future earthquake damage; protecting the lives of our citizens from natural and man-made hazards	1	Completed	0
PA	Conduct or co-sponsor training workshops regarding the International Building-related, flood, and Fire Prevention Codes and Regulations if there is interest in these workshops	Building & Codes	General Fund/self supporting through workshop revenues	Educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; minimize future flood damage; minimize future earthquake damage; improve hazard resistance of infrastructure; minimize hurricane damage	1	Completed	0
PA	Continue providing information to citizens regarding none structural mitigation actions.	Emergency Preparedness	General Fund/Grant Funding	Educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; minimize future flood damage; minimize future earthquake damage	2	Completed	0
PA	Continue enforcing regulations requiring new manufactured homes brought into Berkeley County to be constructed to wind zone 2 requirements as required per State Law	Building & Codes	General Fund	Minimize future hurricane damages; protecting lives of citizens from natural and man-made hazards	1	Completed	0
PA	Continue prohibiting new manufactured homes to be installed in "V" flood zones and requiring manufacture homes installed in "A" flood zones to be on permanent foundations.	Building & Codes	General Fund	Minimize future flood damage; minimize future earthquake damage; minimize future hurricane damage; protecting lives of citizens from natural and man-made hazards	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PP	Promote the use of voluntary standards for single-family residences to exceed minimal building code requirements for wind and seismic design	Building & Codes	General Fund	Minimize future flood damage; minimize future damage; minimize future hurricane damage; preserve environmental resources; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability	2	Completed	0
PP	Promote standards for existing homes to be retrofitted to that exceed minimal codes	Building & Codes	General Fund	Reduce existing flood damage; preserve environmental resources; minimize future hurricane damages; minimize future earthquake damages; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability	2	Completed	0
PP	Continue providing information to citizens regarding hazard safe interior rooms	Emergency Preparedness	General Fund	Minimize future tornado-related loss of life; Educating citizens regarding vulnerability to hazards and steps which may reduce vulnerability	2	Completed	0
PP	Work toward eliminating flooding in existing Subdivision	Building & Codes and Engineering	General Fund	Minimize future loss;	3	Unchanged	L
PP	Continue demolishing structures posing a threat to public safety, considering location within the special flood hazard area as a prioritization factor	Building & Codes	Grant Funding	Reduce existing flood damages; promote long-term economic prosperity; encourage recreational activities; minimize future hurricane damage; minimize future flood damage; reducing vulnerability of infrastructure to hazards	3	Completed	0
PP	Seek funding for retrofitting, demolishing or relocating repetitively flooded properties if suitable candidates can be identified	Building & Codes	Grant Funding	Reduce existing flood damage; minimize future flood damage; preserve historic building inventory; reducing vulnerability of built-environment to hazards	1	Deferred	L

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PP	Distribute a brochure on protecting boats from damages during hurricanes to interested citizens through expos, offices, marinas and boat dealers	Emergency Preparedness	General Fund	Educating citizens regarding steps to take to reduce hazard vulnerability; minimize future hurricane damage; encourage recreational activities	3	Deferred	L
GIS	Develop and maintain storm drainage inventory maps and database.	GIS & Engineering	General Fund & Storm Water Fee	Reduce existing flood damage, minimize future flood drainage and improve water quality.	2	Deferred	L
	Continue working toward an established goal of fifty percent of county preserved as green (open) space.	County Supervisor & County Council	General Fund & partner with local conservation groups	Preserve environmental resources; promote long-term economic prosperity; encourage recreational activities; minimize future flood damages	2	Unchanged	L
ES	Continue hazardous material training	Emergency Preparedness	General Fund & Grant Funding	Protecting lives of our citizens from man-made hazards; minimize future hazardous materials incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to man-made hazards; establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events.	1	Completed	0
ES	Continue Terrorist Response Training	Emergency Preparedness	Grant Funding	Protecting lives of our citizens from man-made hazards; minimize future terrorist activity incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to man-made hazards; establishing cooperative relationship between public, private and non-profit sectors to enhance response for hazard events; promote long-term economic prosperity.	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
ES	Continue coordinating Emergency Operations Center activities in the event of a hazard event	Emergency Preparedness	General Fund	Protecting lives of citizens from natural and man-made hazards; establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability; preserve environmental resources; promote long-term economic prosperity	1	Completed	0
ES	Continue responding to hazard emergencies	EMS, Fire Departments, Police Department, Haz. Mat Coordinator, Emergency Preparedness	General Fund	Protecting lives of citizens from natural and man-made hazards; establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability; preserve environmental resources; preserve historic building inventory; promote long-term economic prosperity	1	Completed	0
ES	Continue to require construction practices for new County owned critical facilities that are sensitive to flood zone (e.g. avoiding "A" and "V" flood zones where feasible) and seismic considerations.	Capital Projects	General Fund Bond Funding	Protecting lives of citizens from natural and man-made hazards; reducing vulnerability of infrastructure and built environment to hazards; minimize future flood damage; minimize future flood damage; minimize future earthquake damage; minimize future hurricane damage	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
ES	Evaluate existing County owned facilities for hazard resistance and retrofit facilities if needed where feasible	Public Buildings & Engineering	General Fund/ Grant Funding/ Bond Funding	Protecting lives of citizens from natural and man-made hazards; reducing vulnerability of infrastructure and built-environment to hazards; minimize future flood damage; minimize future earthquake damage; minimize future hurricane damage	1	Deferred	S
ES	Sponsor training programs for medical providers on topics of interest such as decontamination procedures, etc. if there is interest in these programs.	Emergency Preparedness; EMS	General Fund & Grant Funding	Protecting the lives of citizens from man-made hazards; Establishing cooperative relationships between the public, private and non-profit sectors to enhance preparedness and response for hazard events; Minimize future hazardous materials incidents; minimize future terrorist activity incidents	2	Deferred	S
ES	Continue working toward the National Weather Service Storm Ready Community designation	Emergency Preparedness	General Fund	Protecting lives of citizens from natural hazards; educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; minimize future tornado-related loss of life; minimize future flood damage; reduce existing flood damage; minimize future hurricane damage; reduce existing flood damage	1	Unchanged	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
ES	Continue coordinating the Anti-Terrorism Task Force of specially trained police, fire and EMS personnel to respond to terrorist acts.	Emergency Preparedness	Grant Funding	Protecting lives of our citizens from man-made hazards; minimize future terrorist activity incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to man-made hazards; establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events; promote long-term economic prosperity	1	Completed	0
ES	Continue to promote interest in the Community Emergency Response Training (CERT) program	Emergency Preparedness	Grant Funding	Protecting lives of citizens from natural and man-made hazards, establishing cooperative relationships between the public, private and non-profit sectors to enhance preparedness and recovery for hazard events; educating citizens regarding vulnerability to hazards and steps to reduce that vulnerability to hazards and steps to reduce that vulnerability; minimize future terrorist activity incidents	1	Completed	0
PA	Continue the drainage system maintenance and canal cleaning program	Public Works	General Fund	Protect the lives of our citizens from natural hazards; reduce existing flood damage; minimize future flood damage; improve water quality; improve hazard resistance of infrastructure; promote long-term economic prosperity	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PA	Continue right of way and drainage easement permitting, considering emergency vehicle access and flood zone related issues in permitting decisions	Public Works	General Fund	Protect the lives of our citizens from natural hazards; reduce existing flood damage; minimize future flood damage; improve hazard resistance of infrastructure; promote long-term economic prosperity	1	Completed	0
SP	Implement an elevation reference mark inspection program	Engineering	General Fund & Grant Funding	Minimize future flood damage; Establishing cooperative relationships between public, private and non-profit sectors to enhance preparedness for hazards	1	Deferred	S
PA	Continue the road repair/construction program, considering needs during evacuation and soil liquefaction potential in prioritization decisions	Public Works	General Fund Grant Funding	Protect the lives of our citizens from natural hazards; reduce existing flood damage; minimize future flood damage; minimize future earthquake losses; improve hazard resistance of infrastructure; promote long-term economic prosperity	1	Completed	0
SP	Continue to distribute a generator safety brochure to interested generator retail outlets, utility companies and the general public	Emergency Preparedness	Partner donations/ General Fund	Protecting the lives of citizens from natural and man-made hazards; educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; improve hazard resistance of infrastructure; minimize future hurricane-related losses	2	Completed	0
SP	Continue to promulgate hurricane storm surge information through the Emergency Management Web Site and through community meetings.	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; reduce existing flood damage; minimize future flood damage; minimize future hurricane damage; educating citizens regarding their vulnerability to natural hazards	2	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PI	Provide hazard related information to all residents of Berkeley County through Home Telephone & Bell South telephone book	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; reduce existing flood damage; minimize future flood damage; minimize future hurricane damage; educating citizens regarding their vulnerability to natural hazards and steps to take to reduce vulnerability	1	Completed	0
PI	Continue providing hazard-related literature/information to citizens at County, Town & City offices	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; educating citizens regarding their vulnerability to natural hazards and steps to take to reduce vulnerability; minimize future flood damage; minimize future earthquake damage; minimize future tornado-related loss of life; minimize future terrorist activity incidents	2	Completed	0
PI	Sponsor "Hazard Awareness Week" and assist other communities in participating in this activity	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; educating citizens regarding their vulnerability to natural hazards and steps to take to reduce vulnerability; minimize future flood damage; minimize future earthquake damage; minimize future tornado-related loss of life; minimize future hurricane damage; minimize future terrorist activity incidents	2	Deferred	S
PI	Recognize "International Building Safety Week" to promote safety in the built environment	Building & Codes	General Fund	Protecting the lives of citizens from natural hazards; educating citizens regarding their vulnerability to natural hazards and steps to take to reduce vulnerability	3	Deferred	S

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PI	Continue providing speakers to civics groups regarding hazard related activities. Update the Speakers Bureau list as needed	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; educating citizens regarding their vulnerability to natural hazards and steps to take to reduce vulnerability	1	Completed	0
PI	Install a data information system enabling the public to determine the status of plan reviews and/or inspections, flood hazard information, storm surge information, and other public data currently kept in paper format (e.g building plans, elevation certificates, zoning information, drainage easement, etc.) via the internet	Building & Codes	General Fund	Protecting the lives of citizens from natural hazards; establishing cooperative relationships between the public, private and non-profit sectors to enhance preparedness and recovery from hazard events; educating citizens regarding their vulnerability to natural hazards and steps to take to reduce vulnerability; minimize future flood damage; minimize future hurricane damage	1	Deferred	S
PI	Conduct outreach initiatives to the small business community to encourage businesses to prepare for hazard events	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural and man-made hazards; establishing cooperative relationships between the public, private and non-profit sectors to enhance preparedness and recovery for hazard events; reducing vulnerability of built-environment to natural and man-made hazards; promote long-term economic prosperity; preserve historic building inventory	2	Deferred	S

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PI	Continue programs aimed towards providing resources to local schools to enhance their ability to educate students regarding hazard events and hazard events preparation	Emergency Preparedness	Grand Funding/ Project Impact Resources	Protecting the lives of citizens from natural hazards; educating citizens regarding their vulnerability to natural hazards and steps o take to reduce vulnerability; establishing cooperative relationships between the public, private and non-profit sectors to enhance preparedness and recovery for hazard events; reducing future flood damage, reducing vulnerability of infrastructure and built environment to natural and man-made hazards	1	Completed	0
PA	Elevate the ultraviolet disinfection system at the Lower Berkeley WWTP to avoid flooding of the system and making it inoperative	Berkeley County Water and Sanitation	Enterprise fund or grant funding	Reconstruct to a higher elevation and provide pumps to transport treated effluent into the system	1	Deferred	S
PA	Effluent pumping stations for LBWWTP	Berkeley County Water and sanitation	Enterprise fund or grant funding	Construct new wet wells and appurtenances and reinstall existing pumps	1	Deferred	S
PA	Install pipe and valves for crossover connections for Pump stations 1 AND 2	Berkeley County Water and sanitation	Enterprise fund or grant funding	Near intersection of Pomflant Access Rd and Red Bank Road install 3 valves and necessary appurtenances to be able to utilize eithre force main if necessary	2	Deferred	S
PA	Relocation of 10,700 linear feet of 12" SDR 26 under pavement along 17A	Berkeley County Water and sanitation	Enterprise fund or grant funding	Line constructed outside of pavement area along edge of R/W	2	Deferred	S
PA	6,000 Linear feet of 6" water line to St Stephen WWTP for backup disinfection system	Berkeley County Water and sanitation	Enterprise fund or grant funding	Install line along access road to WWTP	3	Deferred	S

Additional projects may be recommended and added to this list by the jurisdiction.

Action Plan for the Town of Bonneau, SC

Following are the proposed projects/programs/actions to be undertaken by the Town of Bonneau, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority(1 highest, 4 lowest)	Status	Timeframe
PA	Town has adopted and enforces the International series Building related and fire codes and floodplain management (including the one foot freeboard and five year cumulative substantial improvement clause provisions) regulations	Mayor's Office	General Fund	Improve codes, Standards and specifications applicable to repairs, alterations or new construction of structures and facilities to lesson effects of future disasters (Goal #2)	1	Completed	0
PA	Continued enforcement of zoning regulations, Subdivision and Land Development Regulations	Mayor's Office	General Fund	Eliminate the threat of hazard through measures such as relocation or prohibition of construction with an area susceptible to a risk or danger (Goal #1). Through ordinances and zoning, limit or exclude critical infrastructure in identified hazard prone areas. Promote and expand green space acquisition of increase water shed and provide buffer zone between residents and potentially hazardous industry (Goal #4)	1	Completed	0
PA	Conduct or Co-sponsor training workshops regarding the International Building-related flood and Fire and Fire Prevention Codes and Regulations if there is interest in these workshops	Mayor's Office	General Fund – workshop revenues	A continuing educational process designed to keep local government and the private sector aware of measures that can be taken to protect themselves and the property before, during and after a disaster (Goal #3)	2	Completed	0
PA	Continue providing information to citizens regarding home structural mitigation actions	Mayor's Office- Berkeley County EPD	General Fund	A continuing educational process designed to keep local government and the private sector aware of measures that can be taken to protect themselves and the property before, during and after a disaster (Goal #3)	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority(1 highest, 4 lowest)	Status	Timeframe
SP	Promote standards for existing homes and businesses to be retrofitted to exceed minimal codes	Mayor's Office	General Fund- Grants sources	Promote retrofiting of buildings main structural support components; columns post; pillars beams girders joists foundations; roof sheathing and wall to foundation connection. Less expensive retrofiting projects include; installation of shingle standards for high winds; installation of gable end bracing; and installation of diagonal bracing on meal buildings. (Goal #5)	2	Unchanged	0
PA	Continue providing information to citizens regarding hazard safe interior rooms	Mayor's Office Berkeley County EPD.	General Fund - Grant sources	Promote securing to prevent nonstructural items within buildings from falling over and causing injury, death or additional damage during earthquakes or other natural hazards. (Goal #6)	2	Completed	0
ES	Continue Hazardous Material training	Mayor's Office, Police, Fire	General Fund - Grant funding sources	A continuing educational process designed to keep local government and the private sector aware of measures that can be taken to protect themselves and the property before, during and after a disaster (Goal #3)	1	Completed	0
ES	Continue Terrorist response Training	Mayor's Office, Police, Fire	General Fund - Grant funding sources	A continuing educational process designed to keep local government and the private sector aware of measures that can be taken to protect themselves and the property before, during and after a disaster (Goal #3)	1	Completed	0
ES	Continue responding to hazard emergencies	Mayor's Office, Police, Fire	General Fund - Grant funding sources	A continuing educational process designed to keep local government and the private sector aware of measures that can be taken to protect themselves and the property before, during and after a disaster (Goal #3)	1	Completed	0
PI	Provide Pamphlets of various topics at Town Hall providing information regarding Hurricane and other natural and man-made disaster preparedness.	Mayor's Office	General Fund	A continuing educational process designed to keep local government and the private sector aware of measures that can be taken to protect themselves and the property before, during and after a disaster (Goal #3)	2	Deferred	S

Action Plan for the City of Goose Creek, SC

Below are the proposed projects/programs/actions to be undertaken by the City of Goose Creek, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan. Priority rankings ranging from High (1) to Low (4) have been assigned to each activity and a timeframe for completion, either Short-Term (1-3 yrs) or Long-Term (3-5 yrs) has been established:

Type	Activity	Responsible Agency	Possible Funding Sources	Goal and/or Objective Addressed	Priority (1 Highest, 4 Lowest)	Status	Timeframe
ES	Interconnect all City facilities via a fiber optic communication and data network	Administration Department Public Works Department	Cooperative project with cable provider, General Fund	2.1, 5.1	2	Completed	0
PA	Develop a Stormwater Management Plan	Public Works Department	General Fund Stormwater Management Fee	6.1	1	Completed	0
ES	Initiate Emergency Debris Removal Plan	Public Works Department	General Fund	Goal 5	1	Completed	0
PP	Maintain Effective Building and Fire Codes	Building Inspection Department Planning Department	General Fund	1.2	1	Completed	0
PI	Provide hazard specific checklists to residents and business owners	Public Information Office Planning Department	General Fund	4.2,4.3	3	Completed	0
PA	Maintain City of Goose Creek Emergency Preparedness Plan	All City Departments	General Fund Enterprise Fund	2.2, 2.4, 5.3	1	Completed	0
PA	Develop and Maintain Stormwater and Floodplain Mapping using GPS and GIS Technology	Public Works Department Planning Department	General Fund Stormwater Management Fees	6.1, 3.2	3	Deferred	S
PP	Construct disaster resistant records storage facility	Administration Department	General Fund Bond Funding	5.2	2	Deferred	L
PP, ES	Retrofit all municipal facilities to withstand impacts of a disaster	All Departments	General Fund Enterprise Fund Bond Funding	5.1	2	Deferred	S

	Activity	Responsible Agency	Type	Goal and/or Objective Addressed	Priority (1 Highest, 4 Lowest)	Status	Timeframe
PA	Extend Henry Brown Blvd. to create highway loop around City in order to provide additional ingress/egress to facilitate evacuation and disaster response	City Council Administration Department Planning Department	Federal Funding State Funding	2.5, 8.3	1	Unchanged	L
SP	Place all existing overhead utilities underground	Appropriate Utility Agencies Administration Department Public Works Department	Inter-agency Agreements General Fund	2.1	2	Unchanged	L
PA	Map water system valves, hydrants, and mains using GPS and GIS Technology	Public Works Department	Grant Funding Enterprise Fund	3.2	3	Underway	S
SP	Construct interconnected stormwater and flood control detention/retention pond system	City Council Administration Department Planning Department Public Works Department	Grant Funding Stormwater Management Fees Bond Funding	3.2, 6.1, 7.1, 8.3	3	Completed	O

ACTION PLAN FOR THE CITY OF HANAHAN, SC

Following are the proposed projects/programs/actions to be undertaken by the City of Hanahan, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority(1 highest, 4 lowest)	Status	Timeframe
PA	City has adopted and commenced enforcement January 1, 2004, the International series Building-related and Fire codes and the floodplain management (including the one foot freeboard and five year cumulative substantial improvement clause provisions) regulation	Building Codes &	General Fund	Minimize future flood damage; minimize future earthquake damage; minimize future hurricane damage; protect the lives of our citizens from natural and man-made hazards	1	Completed	0
PA	Continue to provide coordination of City storm water management regulations	Building Codes &	General Fund & Storm Water Fee	Minimize future flood damage; reduce existing flood damage; improve water quality; educating citizens regarding steps to take to reduce vulnerabilities; improve hazard resistance of infrastructure; reduce vulnerability of our infrastructure to natural and man-made hazards	1	Completed	0
PA	Continue enforcement of zoning regulations, Subdivision and Land Development Regulations	Planning	General Fund	Minimize future flood damage; preserve environmental resources; promote long-term economic prosperity; preserve open space; encourage recreational activities; minimize future hurricane damage; minimize future earthquake damage; protecting the lives of our citizens from natural and man-made hazards	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority(1 highest, 4 lowest)	Status	Timeframe
PA	Conduct or co-sponsor training workshops regarding the International Building-related, flood, and Fire Prevention Codes and Regulations if there is interest in these workshops	Building & Codes	General Fund/self supporting through workshop revenues	Educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; minimize future flood damage; minimize future earthquake damage; improve hazard resistance of infrastructure; minimize hurricane damage	1	Deferred	S
PA	Continue providing information to citizens regarding none structural mitigation actions.	Emergency Preparedness	General Fund/ Grant Funding	Educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; minimize future flood damage; minimize future earthquake damage	2	Completed	0
PA	Continue enforcing regulations requiring new manufactured homes brought into the City of Hanahan to be constructed to wind zone 2 requirements as required per State Law	Building & Codes	General Fund	Minimize future hurricane damages; protecting lives of citizens from natural and man-made hazards	1	Completed	0
PA	Continue prohibiting new manufactured homes to be installed in "V" flood zones and requiring manufacture homes installed in "A" flood zones to be on permanent foundations.	Building & Codes	General Fund	Minimize future flood damage; minimize future earthquake damage; minimize future hurricane damage; protecting lives of citizens from natural and man-made hazards	1	Completed	0
PP	Promote the use of voluntary standards for single-family residences to exceed minimal building code requirements for wind and seismic design	Building & Codes	General Fund	Minimize future flood damage; minimize future damage; minimize future hurricane damage; preserve environmental resources; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability	2	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority(1 highest, 4 lowest)	Status	Timeframe
PP	Promote standards for existing homes to be retrofitted to that exceed minimal codes	Building & Codes	General Fund	Reduce existing flood damage; preserve environmental resources; minimize future hurricane damages; minimize future earthquake damages; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability	2	Completed	0
PP	Continue providing information to citizens regarding hazard safe interior rooms	Emergency Preparedness	General Fund	Minimize future tornado-related loss of life; Educating citizens regarding vulnerability to hazards and steps which may reduce vulnerability	2	Completed	0
PP	Work toward eliminating flooding in existing Subdivisions	Building & Codes	General Fund	Minimize future loss;	3	Unchanged	L
PP	Continue demolishing structures posing a threat to public safety, considering location within the special flood hazard area as a prioritization factor	Building & Codes	Grant Funding	Reduce existing flood damages; promote long-term economic prosperity; encourage recreational activities; minimize future hurricane damage; minimize future flood damage; reducing vulnerability of infrastructure to hazards	3	Completed	0
PP	Seek funding for retrofitting, demolishing or relocating repetitively flooded properties if suitable candidates can be identified	Building & Codes	Grant Funding	Reduce existing flood damage; minimize future flood damage; preserve historic building inventory; reducing vulnerability of built-environment to hazards	1	Unchanged	L
PP	Distribute a brochure on protecting boats from damages during hurricanes to interested citizens through expos, offices, marinas and boat dealers	Emergency Preparedness	General Fund	Educating citizens regarding steps to take to reduce hazard vulnerability; minimize future hurricane damage; encourage recreational activities	3	Deferred	S
GIS	Develop and maintain storm drainage inventory maps and database.	Building & Codes	General Fund & Storm Water Fee	Reduce existing flood damage, minimize future flood drainage and improve water quality.	2	Deferred	S

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority(1 highest, 4 lowest)	Status	Timeframe
ES	Continue hazardous material training	Fire Department	General Fund & Grant Funding	Protecting lives of our citizens from man-made hazards; minimize future hazardous materials incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to man-made hazards; establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events.	1	Completed	0
ES	Continue Terrorist Response Training	Police Department	Grant Funding	Protecting lives of our citizens from man-made hazards; minimize future terrorist activity incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to man-made hazards; establishing cooperative relationship between public, private and non-profit sectors to enhance response for hazard events; promote long-term economic prosperity.	1	Completed	0

Additional Projects may be recommended and added to this list.

Action Plan for the Town of Jamestown, SC

The following are proposed projects/ programs/ actions to be undertaken by Jamestown, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PA	Town has adopted and commenced enforcement January 1, 2004, the International series Building – related and fire codes and the floodplain management (including the one foot freeboard and five year cumulative substantial improvement clause provisions) regulations	Building Codes &	General fund	Minimize future flood damage; Minimize future earthquake damage; protect the lives of our citizens from natural and man-made Hazards	1	Completed	0
PA	Continue to provide coordination of county storm water management regulations	Engineering	General funds/ Storm Water Fee	Minimize future flood damage; reduce existing flood damage; improve water Quality; educating citizens regarding steps to take to reduce vulnerability of our infrastructure to natural and man-made hazards	1	Completed	0
PA	Continue enforcement of zoning regulations, Subdivision and Land Development Regulations	Planning	General Fund	Minimize future flood damage; preserve environmental resources; promote long-term economic prosperity; preserve open spaces; encourage recreational activities; minimize future hurricane damage; minimize future earthquake damage; protecting the lives of our citizens from natural and man-made hazards	1	Completed	0

Action Plan for the Town of Moncks Corner, SC

The following are proposed projects/ programs/ actions to be undertaken by Moncks Corner, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PA	Continue administration of the current edition of the International Building Codes	Building Department	General Fund	1,2	1	Completed	0
PA	Continue to coordinate with the County Engineering Office to enforce Stormwater Management Regulations	Town/County Engineering	General Fund	6,7	1	Completed	0
PA	Continue enforcement of the Land Development Regulations and Flood Management guidelines of the Zoning Ordinance	Planning	General Fund	6,7,8	1	Completed	0
PA	Continue enforcement of updating buildings to meet current Codes upon change of occupancy	Building Department	General Fund	1,2	1	Completed	0
PP	Manage and when appropriate correct drainage in existing subdivisions	Public Service/ County Engineering	General Fund, Grant Funding	7	2	Completed	0
GIS	Continue Participation in the GIS Consortium and maintain adequate equipment and education for Town staff to utilize the GIS	Planning/County GIS	General Fund	6	1	Completed	0
ES	Continue Responding to hazard emergencies	Fire and Police	General Fund	6,2,3	1	Completed	0
SP	Evaluate existing Town facilities for hazard resistance and retrofit where needed	Administration	General Fund, Grant Funding	2,3,5	2	Completed	0
PA	Continue coordination with all applicable agencies in the permitting process for structures and infrastructure	Planning/Building/ Public Service	General Fund	1,6,7,8	1	Completed	0

Action Plan for the Town of St. Stephen, SC

The following are proposed projects/ programs/ actions to be undertaken by St. Stephen, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PA	Town has adopted, and commenced enforcement January 1, 2004, the International series Building – related and fire codes and the floodplain management (including the one foot freeboard and five year cumulative substantial improvement clause provisions) regulations	Building Codes &	General Fund	Minimize future flood damage; Minimize future earthquake damage; protect the lives of our citizens from natural and man-made Hazards	1	Completed	0
PA	Continue to provide coordination of county storm water management regulations	Engineering	General funds/ Strom Water Fee	Minimize future flood damage; reduce existing flood damage; improve water Quality; educating citizens regarding steps to take to reduce vulnerability of our infrastructure to natural and man-made hazards	1	Completed	0
PA	Continue enforcement of zoning regulations, Subdivision and Land Development Regulations	Planning	General Fund	Minimize future flood damage; preserve environmental resources; promote long-term economic prosperity; preserve open spaces; encourage recreational activities; minimize future hurricane damage; minimize future earthquake damage; protecting the lives of our citizens from natural and man-made hazards	1	Completed	0

Action Plan for the County of Dorchester, SC

The following are proposed projects/ programs/ actions to be undertaken by Dorchester County, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Category	Activity	Responsible Agency	Possible Funding Sources	Objectives Addressed	Priority	Status	Timeframe
PA	Continue enforcement of the International Series Building Codes including the International Fire Code and the Floodplain Management Regulations	DC Codes Enforcement & Planning	General Fund	1.2, 7.1, 7.2	Low	Completed	0
PA	Continue to provide coordination of County Storm Water Management Regulations	Public Works	Storm Water Utility Fee	3.1, 8.1	High	Completed	0
PA	Continue enforcement of zoning ordinance including the low density zoning provision.	Codes Enf. And Planning	General Fund	8.1, 8.4	High	Completed	0
PA	Participate in training or workshops for the International Series Building Codes including the International Fire Code and the Floodplain Management Regulations.	Codes Enf., Planning	General Fund	10.1	Low	Completed	0
PA	Continue enforcing regulations requiring new manufactured homes be constructed IAW Wind Zone requirements as per State Law	Codes Enforcement	General Fund	1.2, 7.2	High	Completed	0
PP	Enforce Building Codes for single family residences to at least meet minimal building code requirements for wind and seismic design.	Codes Enforcement	General Fund	1.2	High	Completed	0
PP	Promote standards for existing homes, manufactured housing developments and commercial buildings to be retrofitted to meet minimal codes, local ordinances and applicable state laws.	Codes Enf., Emerg. Mgmt	General Fund	3.2, 3.3	High	Completed	0
PP	Seek funding for, and promote, retrofitting critical facilities, utilities and communications services to enhance hazard resistance.	Emergency Mgmt, Facility Maint. County Administration	General Fund	2.1, 2.2, 3.2, 5.3	High	Deferred	S

Category	Activity	Responsible Agency	Possible Funding Sources	Objectives Addressed	Priority	Status	Timeframe
PP	Seek funding to construct a hazard resistant and adequately sized County Emergency Operations Center.	Emergency Mgmt, County Administration	Capital Improvements Fund	2.1, 2.2, 5.1, 5.3	High	Deferred	S
ES	Continue hazardous material training	Emerg. Mgmt, Fire Depts., EMS	Grants, General Fund	1.1, 2.2, 2.4, 4.3, 6.1, 9.2	High	Completed	O
ES	Continue coordinating Emergency Operations Center activities in the event of a hazard event	Emerg Mgmt, Public Safety Agencies, other Depts.	General Fund	1.1, 2.1, 2.2, 2.3, 2.4, 2.5, 3.2, 5.1, 5.3	High	Unchanged	O
ES	Continue responding to major incidents	Emerg Mgmt, Public Safety Agencies, other Depts.	General Fund	2.1, 2.3, 2.5	High	Unchanged	O
ES	Improve training to first responders	Emerg Mgmt, Public Safety Agencies, other Depts.	General Fund	8.3	High	Completed	O
ES	Participate in Joint Terrorist Task Force (JTTF) with specialty training of Law Enf. personnel	Sheriff's Office, Police Depts.	General Fund	2.1, 2.2, 2.4	High	Completed	O
ES	Create an "All Hazards" Local Emergency Planning Committee (LEPC)	Emergency Management Department	General Fund	3.3, 4.1, 4.2, 4.3, 7.1, 7.3, 9.1, 9.2, 10.1, 10.2, 11.2	High	Deferred	S
PP	Require seismic construction code compliance for new county-owned critical facilities and potential acquisitions of available real property to prevent development in known hazard areas	Capital Projects	General Fund	1.2, 2.3, 5.1, 6.1, 8.2, 8.3, 8.4	Low	Deferred	L
PP	Evaluate existing county facilities for hazard resistance and retrofit where feasible	All Departments	General/Capital Fund	3.2, 5.1	High	Deferred	L
PP	Ensure that all shelters and critical facilities have adequate emergency power sources	Emergency Management	General Fund, grants	2.1, 2.3, 3.1, 3.2, 3.3, 4.1, 5.1, 5.2, 5.3, 7.1, 7.2, 8.3, 11.1	High	Deferred	S
PP	Contact representatives of railroads to collect information about emergency planning and risks associated with rail service in Dorchester County	Emergency Management	General Fund	3.3, 4.1, 4.2, 4.3, 7.1, 9.1, 10.1, 10.2	High	Deferred	S

Category	Activity	Responsible Agency	Possible Funding Sources	Objectives Addressed	Priority	Status	Timeframe
PP	Conduct a hazardous materials survey to identify all hazardous materials that are either stored or traveling through the county and its municipalities	Emergency Management	General Fund, LEPC	3.3, 4.1, 4.2, 4.3, 6.2, 6.4, 7.1, 7.3, 8.2, 8.4, 9.1, 9.2, 10.1, 10.2, 11.2	High	Deferred	S
PP	Using the results from the hazardous materials survey, develop a plan to mitigate any unidentified risks	Emergency Management	General Fund, LEPC	3.3, 4.1, 4.2, 4.3, 6.2, 6.4, 7.1, 7.3, 8.2, 8.4, 9.1, 9.2, 10.1, 10.2, 11.2	High	Deferred	S
SP	Continue drainage maintenance and canal/ditch cleaning efforts	Public Works	Storm Water Utility Fee	3.2	High	Completed	0
SP	Continue utility right of way permitting, considering emergency vehicle access and flood zone related issues in permitting decisions	Planning, Public Works	General Fund	3.1, 7.2, 8.4	High	Completed	0
SP	Continue the road repair/construction program, considering needs during evacuation and soil liquefaction potential in prioritization decisions	Planning, Public Works	General Fund	2.5	High	Completed	0
PI	Provide Hazard Awareness literature and information to citizens at county buildings and through presentations	Emerg. Mgmt.	General Fund	4.2, 4.3, 9.2, 10.1, 11.2	High	Completed	0
PI	Provide speakers to community groups to promote hazard and preparedness awareness	Emerg Mgmt	General Fund	4.2, 4.3, 9.2, 10.1, 11.2	Moderate	Deferred	S
PI	Develop internet accessible information systems for public to access localized hazard data.	Emerg Mgmt; ITS; GIS; Public Works; Planning	General Fund	4.2, 4.3, 9.2, 10.1, 11.2	Moderate	Deferred	L
PI	Develop/obtain programs to provide resources to local schools that educate students about hazards and preparedness	Emerg. Mgmt	Grants, General Fund	4.2, 4.3, 9.2, 10.1, 11.2	Low	Deferred	S
PI	Conduct outreach initiatives to the small business community encourage businesses to prepare for hazard events	Emergency Mgmt., Economic Development	General Fund	3.3, 4.1, 4.3, 9.1, 10.1, 10.2, 11.2	Moderate	Deferred	S

Category	Activity	Responsible Agency	Possible Funding Sources	Objectives Addressed	Priority	Status	Timeframe
PI	Provide hazard awareness literature on the County's website, in phone books, and at County, town, and city offices	Emergency Mgmt.	General Fund	4.1, 4.2, 4.3, 9.2, 10.1, 11.2	Moderate	Completed	0
PI	Promote pre-disaster planning by utilizing local print and on-air media	Emergency Mgmt.	General Fund	4.1, 4.2, 4.3, 9.2, 10.1, 11.2	Moderate	Completed	0
PI	Work with 4H clubs, agricultural offices, veterinary offices, and Clemson Extension offices to plan for and educate the public on what to do with their animals in the event of a natural disaster	Emergency Mgmt.	General Fund	4.1, 4.2, 4.3, 9.2, 10.1, 11.2	Moderate	Completed	0
PI	Include utility providers in all planning and drills for mitigation planning	Emergency Mgmt., Public Works	General Fund, Grants	2.1, 2.4, 2.5, 3.1, 3.2, 3.3, 4.1, 7.1, 7.2, 9.1, 10.1, 10.2, 11.2	High	Completed	0
PI	Work with the Red Cross to promote hazard awareness training classes for the public	Emergency Mgmt.	General Fund	4.1, 4.2, 4.3, 9.2, 10.1, 11.2	Moderate	Completed	0
NB	Continue trash/rubbish pick up after each hazard event	Public Works	General Fund	5.3	High	Completed	0

Action Plan for the Town of Harleyville, SC

The following are the proposed projects/programs/actions to be undertaken by the Town of Harleyville, South Carolina in an effort to achieve goals and objectives identified through the Hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PA	Town has adopted and will continue enforcement of the International Series Building-related and fire codes and the floodplain management	Code Enforcement	General Fund	Minimize future flood damage; Minimize future earthquake damage; protect the lives of our citizens from natural and man-made hazards	1	Completed	0
PA	Continue enforcement of zoning regulations and land use regulation	Planning	General Fund	Minimize future flood damage; preserve environmental resources; promote long-term economic prosperity; preserve open spaces; encourage recreational activities; minimize future hurricane damage; minimize future earthquake damage; protecting the lives of our citizens from natural and man-made hazards	1	Completed	0
PA	Conduct or cosponsor training workshops regarding the International Building-related, flood and Fire Prevention Codes and Regulations if there is interest in these workshops	Code Enforcement	General Fund/self supporting through workshop revenues	Educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; minimize future flood damage; minimize future earthquake damage; improve hazard resistance of infrastructure; minimize hurricane damage	1	Completed	0
PA	Continue providing information to citizens regarding non-mitigation actions	Emergency Preparedness	General Funds/Grant Funding	Educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; minimize future flood damage; minimize future earthquake damage	2	Completed	0
PA	Continue enforcing regulations requiring new manufactured homes brought into the Town of Harleyville be constructed to wind zone II requirements as required by State law	Code Enforcement	General Fund	Minimize future hurricane damages; protecting lives of citizens from natural and man-made hazards	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PP	Promote the use of voluntary standards for single-family residences to exceed minimal building code requirements for wind and seismic design	Code Enforcement	General Fund	Minimize future flood damage; minimize future damage; minimize future hurricane damage; preserve environmental resources; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability	2	Completed	0
PP	Promote standards for existing homes to be retrofitted to exceed minimal codes	Code Enforcement	General Fund	Reduce existing flood damage; preserve environmental resources; minimize future hurricane damages; minimize future earthquake damages; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability	2	Completed	0
PP	Provide information to citizens regarding hazard safe interior rooms	Emergency Preparedness	General Fund	Minimize future tornado-related loss of life; Educating citizens regarding vulnerability to hazards and steps which may reduce vulnerability	2	Completed	0
PP	Demolish structures posing a threat to public safety	Code Enforcement	Grant Funding	Reduce existing flood damages; promote long-term economic prosperity; encourage recreational activities; minimize future hurricane damage; minimize future flood damage; reducing vulnerability of infrastructure to hazards	3	Completed	0
PP	Distribute a brochure on protecting boats from damages during hurricanes to interested citizens through expos, offices, marinas and boat dealers	Emergency Preparedness	General Fund	Educating citizens regarding steps to take to reduce hazard vulnerability; minimize future hurricane damage; encourage recreational activities	3	Deferred	S
GIS	Develop and maintain storm drainage inventory maps and database	Sewer Department	Sewer Fund	Reduce existing flood damage; minimize future flood drainage and improve water quality	3	Deferred	S
NB	Work toward a goal of fifty percent of green space	Mayor and City Council	General Fund & Partner with local conservation groups	Preserve environmental resources; promote long-term economic prosperity; encourage recreational activities; minimize future flood damages	2	Deferred	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
ES	Continue hazardous material training	Emergency Preparedness	General Fund & Grant funding	Protecting lives of our citizens from man-made hazards; minimize future hazardous materials incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to manmade hazards establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events	1	Completed	0
ES	Continue Terrorist Response Training	Emergency Preparedness	Grant Funding	Protecting lives of our citizens from man-made hazards; minimize future terrorist activity incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to man-made hazards; establishing cooperative relationship between public, private and non-profit sectors to enhance response for hazard events; promote long term economic prosperity	1	Completed	0
ES	Continue coordinating Emergency Operations Center activities in the event of a hazard event	Emergency Preparedness	General Fund	Protecting lives of citizens from natural and man-made hazards; establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability; preserve environmental resource; promote long-term economic prosperity	1	Completed	0
ES	Continue responding to hazard emergencies	EMS, Fire Department, Police Department, Haz. Mat Coordinator, Emergency Preparedness	General Fund	Protecting lives of citizens from natural and man-made hazards; establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events educating citizens regarding vulnerability to hazards and steps to reduce vulnerability; preserve historic building inventory, promote long-term prosperity.	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
ES	Evaluate existing Town owned facilities for hazard resistance and retrofit facilities if needed where feasible	Code Enforcement	General Funds, Grant Funds, Bond Funding	Protecting lives of citizens from natural and man-made hazards; reducing vulnerability of infrastructure and built-environment to hazards; minimize future flood damages; minimize future earthquake damage; minimize future hurricane damage	2	Deferred	S
ES	Sponsor training programs for medical provides on topics of interest such as decontamination procedures, etc., if there is interest in these programs	Emergency Preparedness; EMS	General Fund & Grand Funding	Protecting the lives of citizens from man-made hazards; establishing cooperative relationships between the public, private and non-profit sectors to enhance preparedness and response for hazard events; minimize future hazardous materials incidents; minimize future terrorist activity incidents	2	Deferred	S
ES	Work toward the National Weather Service Storm Ready Community designation	Emergency Preparedness	General Fund	Protecting lives of citizens from natural hazards; educating citizens regarding vulnerability to natural hazards an steps to reduce vulnerability; minimize future tornado-related loss of life; minimize future flood damage; reduce existing flood damage; minimize future hurricane damage; reduce existing flood damage	2	Deferred	S
ES	Coordinate an Anti-Terrorism Task Force of specially trained police, fire and EMS personnel to respond terrorist acts	Emergency Preparedness	Grant Funding	Protecting lives of our citizens from man-made hazards; minimize future terrorist activity incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to man-made hazards; establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events; promote long-term economic prosperity	1	Deferred	S

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
ES	Promote interest in the Community Emergency Response Training (CERT) program	Emergency Preparedness	Grant Funding	Protecting lives of citizens from natural and man-made hazards; establishing cooperative relationships between the public, private and non-profit sectors to enhance preparedness and recovery for hazard events; educating citizens regarding vulnerability to hazards and steps to reduce that vulnerability to hazards; minimize future terrorist activity incidents	1	Completed	0
PA	Continue right of way and drainage easement permitting; considering emergency vehicle access and flood zone related issues in permitting decisions	Public Works	General Fund	Protect the lives of our citizens from natural hazards; reduce existing flood damage; minimize future flood damage; improve hazard resistance of infrastructure; promote long-term economic prosperity	1	Completed	0
SP	Distribute generator safety brochure to interested generator retail outlets, utility companies and the general public	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural and man-made hazards; educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; improve hazard resistance of infrastructure; minimize future hurricane-related losses	3	Deferred	S
SP	Continue to promulgate hurricane storm surge information through the emergency Management Web Site and through community meetings	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; reduce existing flood damage; minimize future hurricane damage; educating citizens regarding their vulnerability to natural hazards	2	Completed	0
PI	Provide hazard related information to residents of Harleyville through Home Telephone	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; reduce existing flood damage; minimize future flood damage; minimize future hurricane damage; educating citizens regarding their vulnerability to natural hazards	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PI	Continue providing hazard-related literature/information to citizens at Town offices	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; educating citizens regarding their vulnerability to natural hazards and steps to take to reduce vulnerability; minimize future flood damage; minimize future earthquake damage; minimize future tornado-related loss of life; minimize future terrorist activity incidents	2	Completed	0
PI	Continue providing speakers to civics groups regarding hazard related activities	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; educating citizens regarding their vulnerability to natural hazards and steps to take to reduce	2	Completed	0
PI	Conduct outreach initiatives to the small business community to encourage businesses to prepare for hazard events	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural and man-made hazards; establishing cooperative relationships between the public, private and non-profit sectors to enhance preparedness and recovery for hazard events; reducing vulnerability of built environment to natural and man-made hazards; promote long-term economic prosperity; preserve historic building inventory	2	Deferred	S
PI	Continue programs aimed towards providing resources to local schools to enhance their ability to educate students regarding hazard events and hazard events preparation	Emergency Preparedness	General Fund	Protecting the lives of citizens from natural hazards; educating citizens regarding their vulnerability to natural hazards and steps to take to reduce vulnerability; establishing cooperative relationships between the public, private and non-profit sectors to enhance preparedness and recovery for hazard events	2	Deferred	S

Action Plan for the Town of Reevesville, SC

The following are the proposed projects/ programs/actions to be undertaken by the Town of Reevesville, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PA	Continue enforcing building & fire codes	Fire Department, Codes	General	Protecting lives of our citizens. Improving living conditions	1	Completed	0
PA	Coordinate with Dorchester County regarding Stormwater regulations	Street Admin.	General Grants	Reduce and/or minimize flood damage Educate citizens Improve infrastructures	1	Completed	0
PA	Adopt & enforce zoning regulations	Codes	General	Minimize natural disaster damage	1	Completed	0
PA	Participate in workshops regarding codes and regulations	Admin., Codes	General Grants	Minimize natural disaster damage	1	Completed	0
PA	Continue enforcing mobile home regulations	Code	General	Protect our citizens	1	Completed	0
PP	Provide information to citizens regarding hazard safe interior rooms	Codes Admin.	General	Educate citizens regarding vulnerability to hazards & ways to reduce same	2	Completed	0
PP	Evaluate Town-owned buildings for safety	Codes	General	Reduce damages; protect employees and citizens	1	Deferred	S
NB	Adopt & enforce a tree protection/ landscape ordinance	Codes	General	Preserve environmental resources; encourage recreational activity	2	Deferred	S
ES	Participate in hazardous material training	Police, Fire, Admin.	General	Protect lives of citizens Preserve environmental resources	1	Completed	0

Action Plan for the Town of Ridgeville, SC

The following are the proposed projects/programs/actions to be undertaken by the Town of Ridgeville, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PA	Continue enforcement of the International Series Building-related and Fire Codes	Code Enforcement	General Fund	Minimize future earthquake damage; minimize future hurricane/tornado damage; protect the lives of our citizens from natural and man-made hazards	1	Completed	0
PA	Continue enforcement of Zoning Regulations	Code Enforcement	General Fund	Preserve environmental resources; promote long-term economic prosperity; preserve open space; minimize future hurricane/tornado damage; minimize future earthquake damage; protecting the lives of our citizens from natural and man-made hazards	1	Completed	0
PA	Participate in workshops regarding the International Building-related and Fire Prevention Codes and Regulations if there is interest in these workshops	Code Enforcement	General Fund	Educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; minimize future earthquake damage; improve disaster resistance of infrastructure; minimize hurricane/tornado damage	2	Completed	0
PA	Continue enforcing regulations requiring new manufactured homes brought into the Town of Ridgeville to be constructed to wind zone 2 requirements as required by State law	Code Enforcement	General Fund	Minimize future hurricane/tornado damages; protecting lives of citizens from natural and man-made hazards	1	Completed	0
PP	Continue to recommend voluntary advocacy of standards for single-family residences to exceed minimal building code requirements for wind and seismic design	Code Enforcement	General Fund	Preserve environmental resources; minimize future hurricane/tornado damage; minimize future earthquake damage; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability	2	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PP	Promotes standards for existing homes to be retrofitted to building practices that exceed minimal codes	Code Enforcement	General Fund	Preserve environmental resources; minimize future hurricane/tornado damages; minimize future earthquake damages; educating citizens regarding vulnerability to hazards and steps to reduce vulnerability	2	Completed	0
PP	Continue providing information to citizens regarding hazard safe interior rooms	Code Enforcement	General Fund	Minimize future tornado related loss of life; Educating citizens regarding vulnerability to hazards and steps which may reduce vulnerability	3	Completed	0
PP	Evaluate existing Town-owned facilities and seek funding for retrofitting to enhanced hazards	Code Enforcement	General Fund	Reduce vulnerability of infrastructure to natural and man-made hazards; minimize future hurricane/tornado damage; minimize future earthquake damage; reduce existing flood damage; preserve historic building inventory; promote long-term economic prosperity	3	Deferred	S
NB	Continue enforcement of the tree protection/landscaping ordinances	Town Admin	General Fund	Preserve environmental resources; promote long-term economic prosperity; encourage recreational activities; minimize future flood damages	3	Completed	0
NB	Continue maintaining permanent open space as parks	Recreation Committee	General Fund	Preserve environmental resource; promote long-term economic prosperity; encourage recreational activities; minimize future flood damages	3	Completed	0
ES	Participate in hazardous material training	Fire Department	General Fund	Protecting lives of our citizens from man-made hazards; minimize future hazardous material incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to man-made hazards; establishing cooperative relationships between public, private and non-profit sectors to enhance response for hazard events	1	Completed	0

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
ES	Participate in Terrorist Response Training	Fire Department Police Department	General Fund	Protecting live of our citizens from man-made hazards; minimize future terrorist activity incidents; preserve environmental resources; improve hazard resistance of infrastructure; assessing vulnerability to man-man hazards; establishing cooperative relationship between public, private an non-profit sectors to enhance response for hazard events; promote long-term economic prosperity.	1	Completed	0
SP	Continue to provide input into the road repair/construction program	Town Admin	General Fund/1% sales tax	Protect the lives of our citizens from natural hazards; improve hazard resistance of infrastructure; promote long-term economic prosperity	2	Completed	0
SP	Continue to distribute a generator safety brochure to the citizens of the Town of Ridgeville	Town Admin	General Fund	Protecting the lives of our citizens from natural and man-made hazards; educating citizens regarding vulnerability to natural hazards and steps to reduce vulnerability; improve hazard resistance of infrastructure; minimize future hurricane/tornado-related losses	2	Completed	0
PI	Provide hazard-related literature/information to citizens at Town Hall	Town Admin	General Fund	Protecting the lives of our citizens from natural and man-made hazards; educating citizens regarding vulnerability to natural	2	Completed	0

Action Plan for the Town of St. George, SC

The following are proposed projects/programs/actions to be undertaken by the Town of St. George, South Carolina in an effort to achieve the goals and objectives identified through the hazard Mitigation Plan:

Type	Activity	Lead Agency	Funding Source	Goal(s) addressed	Priority (1 highest, 4 lowest)	Status	Timeframe
PP	Provide information to citizens regarding hazard safe interior rooms	Codes Admin.	General	Educate citizens regarding vulnerability to hazards & ways to reduce same	2	Completed	0
PP	Identify and demolish structures posing a threat to public safety	Code Admin.	General	Reduce damage protect citizens	3	Deferred	L
PP	Evaluate Town-owned buildings for safety	Codes	General	Reduce damage protect employees and citizens	1	Deferred	S
NB	Continue enforcing the tree protection/landscape ordinance	Codes	General	Preserve environmental resources encourage recreational activity	2	Completed	0
ES	Participate in hazardous material training	Police- fire-Admin.	Enterprise general	Protect lives of citizens - preserve environmental resources	1	Completed	0
PA	Continue enforcing building and fire codes	Fire Dept. Codes	General	Protecting lives of our citizens improving living conditions	1	Completed	0
PA	Coordinate with Dorchester Co. regarding stormwater regulations	Streets Admin.	General Grants	Reduce and or minimize flood damage. Educate citizens. Improve infrastructures	1	Completed	0
PA	Continue enforcing zoning regulations	Codes	General	Minimize natural disaster damage	1	Completed	0
PA	Participate in workshops regarding codes and regulations	Admin., codes	General	Minimize natural disaster damage	1	Completed	0
PA	Continue enforcing mobile home regulations	Codes	General	Protect our citizens	1	Completed	0

Action plan for the Town of Summerville, SC

The following are proposed projects/programs/actions to be undertaken by the Town of Summerville, South Carolina in an effort to achieve the goals and objectives identified through the Hazard Mitigation Plan:

Category	Activity	Responsible Agency	Possible Funding Sources	Objectives Addressed	Priority	Status	Timeframe
PA	Continue enforcement of the International Series Building Codes including the International Fire Code and the Floodplain Management Regulations (including the one foot freeboard and five year cumulative substantial improvement clause provisions.)	Building Dept., Fire Dept., Police Dept., Town Administration	General Fund	1.2, 7.1, 7.2	Low	Completed	0
PA	Continue to provide coordination of Town Storm Water Management Regulations	Public Works	General Fund	3.1, 8.1	High	Completed	0
PA	Continue enforcement of regulations and provisions of the Zoning and Land Development Ordinances and Regulations	Planning	General Fund	8.1, 8.4	High	Completed	0
PA	Conduct or Co-Sponsor training workshops regarding the International Series Building Codes including the International Fire Codes and Floodplain Management Regulations if there is a interest in these workshops	Building Dept.	General Fund	10.1	Low	Completed	0
PA	Continue enforcing regulations requiring new manufactured homes brought into Town of Summerville be constructed to wind zone 2 requirements as per State law	Building Dept., Planning, Public Works	General Funds	7.2	High	Completed	0
NB	Continue enforcement of the tree protection/landscaping ordinance	Planning	General Fund	11.1, 11.3	Low	Completed	0
PP	Promote the use of voluntary standards for single family residences to meet minimal building code requirements for wind and seismic design	Building Dept.	General Fund	1.2	High	Completed	0
PP	Promote standards for existing homes, manufactured housing developments and commercial buildings to be retrofitted to meet minimal codes, local ordinances and applicable state law	Building Dept., Fire Dept.	General Fund	3.2	High	Completed	0
PP	Continue demolishing structures posing a threat to public safety	Building Dept., Fire Dept., Public Works	General Fund	7.2	High	Completed	0

Category	Activity	Responsible Agency	Possible Funding Sources	Objectives Addressed	Priority	Status	Timeframe
PP	Seek funding for retrofitting critical facilities to enhance hazard resistance to include utility and communications to support emergency services through a command and control center in accordance with the Town Capital Improvement Plan	Building Dept Emergency Services	General Fund	2.1, 2.2, 5.3	High	Unchanged	L
NB	Continue maintaining permanent open spaces as parks	Parks and Playgrounds	General Fund	3.2, 7.1, 11.3	Low	Completed	0
ES	Continue hazardous material training	Fire Dept.	General Fund	1.1, 2.2, 2.4, 4.3, 6.1, 9.2	High	Completed	0
ES	Continue coordinating Emergency Operations Center activities in the event of a hazard event	Police Dept., Fire Dept., Public Works, Town Administrator	General Fund	1.1, 2.1, 2.2, 2.3, 2.4, 2.5, 3.2, 5.1, 5.3	High	Completed	0
ES	Continue responding to hazard emergencies	Police Dept., Fire Dept., Public Works	General Fund	2.1, 2.3, 2.5	High	Completed	0
PPA	Continue to require seismic construction code compliance for new town owned critical facilities and potential acquisitions of available real property to prevent development in known hazard areas	All Departments	General Fund	1.2, 2.3, 5.1, 6.1, 8.2, 8.3, 8.4	Low	Completed	0
PPA	Evaluate existing town owned facilities for hazard resistance and retrofit if needed where feasible	All Departments	General Fund	3.2, 5.1	High	Deferred	L
ES	Continue participation with the Joint Terrorist Task Force (JTTF) with specialty training of Police and fire personnel	Police Dept., Fire Dept.	General Fund	2.1, 2.2, 2.4	High	Completed	0
SP	Continue the drainage maintenance and can/ditch cleaning program	Public Works	Storm Water Utility Fee	3.2, 3.2	High	Completed	0
SP	Continue utility right of way permitting, considering emergency vehicle access and flood zone related issues in permitting decisions	Planning, Building Dept., Public Works	General Fund	3.2, 7.2, 8.4	High	Completed	0
SP	Continue the road repair/construction program, considering needs during evacuation and soil liquefaction potential in prioritization decisions	Public Works	General Fund	2.5	High	Completed	0
PI	Continue providing hazard related literature/information to citizens at town offices	Building Dept.	General Fund	4.2, 4.3, 9.2, 10.1, 11.2	High	Completed	0

Category	Activity	Responsible Agency	Possible Funding Sources	Objectives Addressed	Priority	Status	Timeframe
PI	Recognize "International Building Safety Week" to promote safety in the built environment	Building Dept.	General Fund	11.2, 10.1, 9.2	Low	Deferred	L
PI	Conduct outreach initiatives to the small business community to encourage businesses to prepare for hazard events	Building Dept.	General Fund	3.3, 4.1, 4.3, 9.1, 10.1, 10.2, 11.2	Low	Deferred	S
NB	Continue trash/rubbish pick up after a hazard event	Public Works	General Fund	5.3	High	Completed	0

IV. Implementation

A. Process

The BDHMP will be implemented by assignment as designated in the Mitigation Action Plans for each jurisdiction. Each Mitigation Action Plan activity is assigned specific implementation measures and a “Responsible Agency.” Each activity is also assigned a target completion date or “Timeframe.” This date does not represent a required completion date; rather, it represents the timeframe within which the jurisdiction intends to complete the activity, if and when the necessary resources become available.

For the 2010 Berkeley-Dorchester Hazard Mitigation Plan update, the Town of Summerville, the City of Goose Creek, Dorchester County, and Berkeley County submitted revisions to their Local Mitigation Action Plans. All other participating jurisdictions indicate that their Local Action Plans appearing in the 2005 BDHMP remain current and applicable. Those with constant Local Action Plans are towns ranging in size from a few thousand people to fewer than one hundred. All but one are without a town planner, and none have emergency management staff; rather, each relies upon the county in which they are located for emergency preparedness and management services. The timeframes for items in each of their Local Action Plans relies entirely upon partnerships and/or funding assistance from County, State, and or Federal resources. Each local government nevertheless continues to pursue Local Action Plan implementation; therefore, no action items have been deleted between the 2005 Plan and the 2010 Plan Update. Procedures for the monitoring and updating of the BDHMP are provided in Chapter Five: Evaluation and Updating.

B. Local Planning Vehicles

Both Berkeley and Dorchester counties include language addressing risks to natural hazards in the Natural Resources elements of their comprehensive plans. Per South Carolina law, these plans are updated no less frequently than decennially and adopted by ordinance by local government councils. The strategies identified in the Local Mitigation Action Plans are not dissimilar to comprehensive plan implementation strategies; therefore, local emergency management and preparedness staff should work with county planners to ensure their inclusion in county comprehensive plans. Hazard and risk assessment data from the 2005 Plan was reviewed and analyzed by each participating jurisdiction and incorporated into their new or updated comprehensive plans.

Since the creation of the original Berkeley-Dorchester Hazard Mitigation Plan, Berkeley County and Dorchester County have both initiated capital improvements programs to schedule capital improvements in their jurisdictions. Capital improvements are the construction, rehabilitation, or expansion of fixed infrastructure (roads, sewer lines, etc.), buildings, and in some cases, large vehicles (fire trucks) in excess of \$100,000. Capital improvements differ from operating expenses in that they are one-time expenditures. Moreover, capital improvements are typically bonded rather than paid for all at once. A

five-year schedule of capital improvements, therefore, is a responsible fiscal management tool employed by local governments. The ongoing maintenance of this schedule is a capital improvements program (CIP).

Like the comprehensive plan, South Carolina law assigns responsibility for the capital improvements program to the local government’s planning commission. As the comprehensive plan is an important program to forecast long-term capital needs, the CIP is equally important to facilitate solutions to those needs through the identification and scheduling of funding sources. County emergency management and preparedness staff must therefore continue to work with county planners and planning commissions to ensure that local mitigation action items of a capital nature not only appear in the comprehensive plan, but also advance to the CIP to be financed and constructed.

C. Funding Sources

Because many hazard mitigation activities may be too costly for communities to undertake, it is important to seek out alternative funding opportunities. This section of the Plan identifies Federal, State and non-governmental funding sources that may be utilized to perform hazard mitigation activities. To date, no local government in Berkeley or Dorchester County has successfully applied for hazard mitigation grants or similar assistance.

Funding Sources				
Program	Agency	Purpose	Match	Suggested Projects
Federal				
Pre-Disaster Mitigation Program	FEMA	Funding for cost-effective hazard mitigation activities	75% Federal share, 25% non-Federal share, which can be in-kind or cash	Hazard Mitigation Planning, Hazard retrofits, technical assistance, Community outreach
Flood Mitigation Assistance Program	FEMA	Pre-disaster funding to reduce the long-term risk of flood damage to property	75% Federal share, 25% non-Federal share,	Building relocation or retrofitting
Hazard Mitigation Grant Program	FEMA	Assists local governments to implement long-term mitigation measures following a disaster declaration	Up to 75% Federal share, non-Federal share may be in-kind services, materials or cash	Building relocation and retrofitting,
Public Assistance (Infrastructure) Program	FEMA	Post-disaster funding for infrastructure repairs	None	Road, bridge, culvert repair

Funding Sources				
Program	Agency	Purpose	Match	Suggested Projects
SBA Assistance Program	US Small Business Administration	Low-interest loans for small businesses to repair facilities after a disaster declaration	Loan	Repair on any uninsured equipment
Community Development Block Grants	US Department of Housing and Urban Development	Funding for community and economic development projects	None	Acquisition reconstruction or rehabilitation of damaged property in areas damaged in a disaster.

Local Funding Sources

Local governments in South Carolina depend heavily on local property taxes as their source of revenue. This revenue, together with allocations by formula from the State of South Carolina, constitutes a local government’s general operating budget, which funds day-to-day functions, such as emergency services, administration, and other baseline services. Most of the municipalities in Berkeley and Dorchester counties would need to identify a local match for any of the above federal grants opportunities within their general operating budgets. Due to the present state of the economy and related, deep budget cuts from the State, local matching funds cannot be immediately identified, nor can a date for which they are likely to become available be forecast.

Some, typically larger local governments within these two counties have in the past or are currently administering one or more tax-increment financing (TIF) districts. This is a special tax district in which property tax revenues are redirected to specific local capital projects aimed to revitalize the district, a smaller geography within the broader limits of incorporation. A TIF district exists for a limited period of time, typically ten to fifteen years, before monies redirected for revitalization must once again fund operating budgets for all taxing authorities relying upon the property taxes in question. (A list of local governments with active tax-increment financing districts appears on page VIII-1.)

A local government that can demonstrate within a redevelopment plan that a hazard mitigation activity will serve as a capital improvement to help revitalize a portion of its jurisdiction may choose to establish a TIF district, identify that hazard mitigation activity in its capital improvements program, and assign TIF revenue to the improvement. Such a redevelopment plan must be prepared by a planning commission and adopted by the local government council. Council would subsequently adopt the tax-increment financing district by ordinance. A hypothetical application of hazard mitigation funding coupled with tax-increment financing would be a neighborhood or commercial district in need of significant drainage improvements due to repeated flooding or tidal inundation.

Non-Governmental Funding Sources

There are numerous trusts, foundations, and corporations that award money community and economic development, which would allow money to be awarded for mitigation activities. Appendix H is a list of alternate non-governmental funding sources that was provided to the BCDCOG staff by the South Carolina Emergency Management Division.

V. Monitoring, Evaluation and Updating

The Plan Maintenance section of the Berkeley-Dorchester Hazard Mitigation Plan (HMP) describes the formal process that will ensure the Plan remains an effective and relevant document. This section establishes the method and schedule for monitoring, evaluating, and updating the HMP during three-year and five-year plan-update cycles. It also establishes how the BCDCOG will maintain ongoing community involvement in the planning process.

General Plan Maintenance Approach

- Incorporate hazard mitigation actions into existing planning mechanisms.
- Determine how mitigation projects and actions will be monitored.
- Establish indicators of effectiveness or success.
- Develop an evaluation and revision schedule to ensure the Plan is up-to-date at the end of the three-year and five-year cycles.
- Establish a process for public input and community involvement during the planning cycle.

A. Monitoring and Reporting

Berkeley and Dorchester counties will each perform periodic monitoring and updating of the Berkeley-Dorchester Hazard Mitigation Plan, as adopted and subsequently amended. The Plan should be reviewed within three years of its approval, or after each disaster declaration. The Plan must be updated within five years of its approval. Each review and update shall work to improve the effectiveness of the Plan by incorporating more data and research as it becomes available. The Berkeley County Emergency Preparedness Department will monitor and review the BDHMP for activities within Berkeley County boundaries, while the Dorchester County Planning and Codes Department will assume the same role within Dorchester County.

Three-Year Plan Review

During the three-year review, the status of each Mitigation Action Plan activity will be reviewed and incorporated into a status report to each county council. This report shall include an updated copy of each Local Mitigation Action Plan Worksheet, an evaluation of the effectiveness of each action plan activity, and a recommendation for any needed changes. The criteria for plan evaluation will include a rating and ranking of performance on each action or project. Results will be compiled into the report, which may recommend BDHMP modifications.

A Hazard Mitigation Planning Committee will be convened in each of the two counties utilizing members from the bi-county committee assembled for the 2010 Update. Each committee will include representatives from municipalities, which rely on their county governments for emergency preparedness and management services. The Planning

Committee will determine whether or not the recommendations found in the aforementioned report warrant modification of the Plan.

Five-Year Update

Once in effect for five years, the BDHMP will be thoroughly reviewed and revised. This update shall include the latest available data and maps to be published in the Plan. Each Hazard Mitigation Planning Committee member will reexamine the goals and objectives of the Plan and may add or subtract from these, as needed. Each jurisdiction will be asked to reevaluate its local mitigation action plan and add or subtract action strategies, as needed.

The Planning Committee will update the HMP every five years to reflect the results of the annual reports and this ongoing plan evaluation process. Throughout the planning cycle, the BCDCOG will compile new information and incorporate it into the Plan.

The Planning Committee will also assess and incorporate recommended comments expressed by FEMA in the initial review into the plan revision. At the end of the planning cycle, the Planning Committee will submit the updated Plan to the State Emergency Management Division (SCEMD) and FEMA for review. After FEMA has approved the Berkeley-Dorchester HMP, the BCDCOG will again formally adopt the Plan by Board Action. The following table is an outline of how the Plan will be updated after FEMA-approval:

BDHMP Update Schedule		
Timeframe	Participants	Expected Outcome
First Quarter, 2011	Planning Committee, BCDCOG	Organize and reconvene Planning Committee to review and discuss mitigation action progress and possible plan improvements.
First Quarter, 2012	BCDCOG	Apply for Plan Update funding.
First Quarter, 2013	Planning Committee, BCDCOG, General Public	Reconvene Planning Committee to discuss possible plan improvements. Update: Goals, Risk/Vulnerability Assessments. Promote and conduct Public Hearing on HMP.
Second Quarter, 2013	BCDCOG	Submit draft plan update to SCEMD for review and comments.
First Quarter, 2014	Planning Committee, BCDCOG, General Public	Reconvene Planning Committee to begin Plan Update: Mitigation Actions, Plan Implementation, and Plan Maintenance. Promote and conduct Public Hearing.
Fourth Quarter, 2014	Planning Committee, BCDCOG	Submit draft plan update to SCEMD for review and comments.
First Quarter, 2015	BCDCOG, SCEMD	Submit plan to FEMA for final approval.
First Quarter, 2015	BCDCOG, local jurisdictions, Berkeley County Council, Dorchester County Council	Re-adopt the FEMA-approved Berkeley-Dorchester HMP

B. Incorporation of Local Planning Mechanisms

As part of the local capability assessment conducted during the planning process, the Planning Committee and BCDCOG staff identified current plans, programs, policies/ordinances, and studies/reports that will augment or help support mitigation planning efforts. The Planning Committee, which will meet on an annual basis, will be the mechanism for ensuring the local jurisdictions integrate hazard mitigation into future planning activities. Following the HMP approval and adoption, the Planning Committee will work to incorporate, where applicable, the HMP into the planning mechanisms identified in the following table:

Jurisdiction	Comprehensive Plan	Capital Improvements Program	Regional Development Plan	Transportation Improvements	Water and Sewer Construction	Building Code Enforcement	Zoning Ordinance	Floodplain Ordinance	Subdivision Regulations
Berkeley County	●	●	●	●	●	●	●	●	●
Bonneau	●		●	●		●	●		●
Charleston	●	●	●	●	●	●	●	●	●
Goose Creek	●	●	●	●	●	●	●	●	●
Hanahan	●		●	●		●	●	●	●
Jamestown	●		●	●		●	●	●	●
Moncks Corner	●	●	●	●	●	●	●	●	●
St. Stephen	●		●	●		●	●	●	●
Summerville	●	●	●	●	●	●	●	●	●
Dorchester County	●	●	●	●	●	●	●	●	●
Harleyville	●		●	●	●	●	●	●	●
North Charleston	●	●	●	●	●	●	●	●	●
Reevesville	●		●	●		●	●	●	●
Ridgeville	●		●	●		●	●	●	●
St. George	●		●	●	●	●	●		●
Summerville	●	●	●	●	●	●	●	●	●

Throughout the plan maintenance cycle, the Planning Committee will work to integrate hazard mitigation goals and actions into the general operations of county and municipal agencies. The Planning Committee will work with agencies to identify opportunities as outlined on the following page:

- Update work plans, policies, or procedures to include hazard mitigation concepts.

- Establish mitigation funding within capital and operational budgets.
- Issue plans, policies, executive orders, regulations, or other directives to carry out mitigation actions.
- Include hazard mitigation action plan elements in proposed comprehensive plans and area redevelopment plans being considered for adoption by local jurisdictions.

Continuing Public Participation

The BCDCOG is dedicated to continued public involvement in the hazard mitigation planning and review process. During all phases of plan maintenance, the public will have the opportunity to provide feedback. The BDHMP Plan will be maintained and available for review, posted on the BCDCOG website (www.BCDCOG.com) through 2014. Individuals will have an opportunity to submit comments for the Plan update at any time via mail or e-mail.

The BCDCOG will compile all comments and present them at the annual Planning Committee meetings where members will consider them for incorporation into the revision. To help publicize the revised plan, six months prior to the submission of the 2014 Plan update, BCDCOG will post a notice on its website requesting feedback on an updated draft BDHMP.

The Planning Committee will hold community involvement meetings with representatives from academic institutions, the private sector, community groups, and neighboring jurisdictions. Finally, BCDCOG will send a notice to member units of government, informing them of the Plan update. This will provide the public an opportunity to express their concerns, opinions, or ideas about any updates/changes that are proposed to the Plan.

C. Plan Amendments

An amendment to the BDHMP shall be initiated by the Hazard Mitigation Planning Committee, either on their own initiative or upon the recommendation of Berkeley County Council, Dorchester County Council, State or BCDCOG staff in support thereof.

After an amendment is initiated, County staff will contact all interested or affected parties and make them aware of the nature of the amendment. These parties will be given thirty days to comment on the amendment. At the end of this comment period, County staff shall forward all comments to the Hazard Mitigation Planning Committee within that county for its review in consideration of the final amendment.

Should the Planning Committee approve the amendment, staff need merely notify the appropriate County Council of the amendment. Likewise, County staff will notify the local government representative of each participating municipality.

VI. Hazard Identification and Analysis

A. Introduction

BCDCOG staff performed a hazard identification to determine the hazards that may potentially affect Berkeley and Dorchester Counties. To perform this process, existing sources of hazard frequency were researched including FEMA floodplain publications, SC Forestry Commission fire events data, National Oceanic Atmospheric Administration (NOAA)-Coastal Services Center for storm historical records and National Climatic Data Center (NCDC) for flood, drought, tornadoes and winter storms events data. Hail information was gathered from the NOAA Historical Severe Weather Database and earthquake information from the University of South Carolina (USC) Seismic Network. Most data used to perform the risk assessment was processed by the USC Hazards Research Lab (HRL), excluding the fire events data which was provided by Place Matters.

The hazard identification process was used to identify those hazards that pose the greatest risk to Berkeley and Dorchester Counties and to determine the potential vulnerability to those hazards. In this section, information relevant to both counties is presented and an overview of the analyses is provided, including some graphical representations.

B. Potential Hazards

An important indication of the hazards threatening the community is the actual occurrences of disaster events, and the level of impact they have on the community. For Berkeley and Dorchester Counties the natural hazards that pose a major threat to these areas are: storms, tornadoes, hail, earthquakes and liquefaction, flood zones, flood events and fire events. There are other hazards that may affect these areas as well but not to the same extent.

The NCDC have monitored the occurrences of some of these hazards since 1950 to the present (2009). Their database includes information of location, date and time of occurrence, death and injuries reported, and total damage. A summary of this information for Berkeley and Dorchester Counties is presented in Table VI.1. The time period used by the NCDC is not the same the same as data represented spatially in the analyses.

Table VI.1: Summary of events that have occurred in Berkeley and Dorchester Counties and their estimated damage values.

Hazards	Time Period	# Events	#Deaths	# Injuries	Total Damage	% Chance per Year
Berkeley County						
Floods	1950-2009	41	1	0	\$25,107,000	69.5
Hurricane/TS	1950-2009	9	0	0	\$33,600,000	15.2
Tornadoes	1950-2009	29	1	26	\$8,287,000	49.2
Winter Storms	1950-2009	4	0	0	\$15,342,112	6.8
Thunderstorms	1950-2009	196	2	8	\$766,000	32.2
Hail	1950-2009	189	0	0	\$63,000	100.0
Wildfires	----	6,014	0	0	\$334,042	100.0
Droughts	1950-2009	21	0	0	\$14,201,278	36.0
Earthquakes	----	540	0	0	\$ 6,000,000	100.0
Dam Failure	----	----	----	----	----	----
Dorchester County						
Floods	1950-2009	22	0	0	\$25,101,000	37.2
Hurricane/TS	1950-2009	8	0	0	\$33,601,000	14.0
Tornadoes	1950-2009	16	0	4	\$3,056,000	27.1
Winter Storms	1950-2009	4	0	0	\$14,616,599	6.8
Thunderstorms	1950-2009	184	0	7	\$400,000	100.0
Hail	1950-2009	98	0	0	\$0	100.0
Wildfires	----	2,463	0	0	\$334,042	100.0
Droughts	1950-2009	21	0	0	\$14,058,478	36.0
Earthquakes	1699-2009	192	0	0	\$ 6,000,000	62.0
Dam Failure	----	----	----	----	----	----

Source: NOAA-NCDC; Hazard Vulnerability Research Institute; USGS

Table VI.2: Table summarizes the total number and assessed value of residential and commercial structures located within Berkeley and Dorchester counties, South Carolina. Note: Berkeley County reported values referred to 2000 to 2009 data.

Jurisdictions	# Res. Bldgs	Total Res. Value	# Comm Bldgs	Total Comm Value
Berkeley County				
Bonneau	110	\$7,886,600	36	\$10,975,700
Charleston	1,621	\$307,345,724	33	\$57,104,943
Goose Creek	3,225	\$369,005,193	51	\$37,181,060
Hanahan	1,899	\$287,029,183	51	\$48,254,156
Jamestown	33	\$78,300	20	\$1,039,500
Moncks Corner	1,984	\$60,999,974	67	\$40,872,677
St. Stephen	525	\$5,093,800	142	\$4,756,800
Summerville	784	\$163,736,706	35	\$29,774,746
County	6,915	\$1,139,046,373	525	\$440,074,929
Dorchester County				
Harleyville	265	\$7,593,092	19	\$3,604,601
North Charleston	6,148	\$2,152,098,662	47	\$19,541,344
Reevesville	148	\$3,250,961	6	\$126,000
Ridgeville	271	\$5,136,658	9	\$572,595
St. George	924	\$22,246,871	116	\$11,077,515
Summerville	11,485	\$2,144,955,394	433	\$214,555,562
County	58,243	\$9,341,171,609	1,277	\$582,209,300

1. Flooding

Berkeley and Dorchester Counties are located in the southern portion of South Carolina and are bordered by Charleston County to the south; Colleton County to the west; Georgetown County to the east and Orangeburg County to the north (Figure VI.1). They are both part of the Low Country region, which is characterized by low topographic relief or relatively flat terrain areas. Therefore, the counties flood vulnerability is heightened by the presence of low-lying and estuarine areas.

Berkeley County is within the Santee and Ashley/Cooper River Basins. The Ashley/Cooper River Basin covers the southern portion of Dorchester County. The Santee River basin itself contains 11 watersheds and 1,279 square miles. There are a total of 934 stream miles in the Santee River Basin, 94,664 acres and 5,275 acres of estuarine waters. The Santee River is formed from the confluence of the Congaree and Wateree Rivers and flows through the Lake Marion. The river is diverted in lower Lake Marion, and either flows out of the Santee dam to eventually drain into the Atlantic Ocean, or is channeled along a 7.5 mile diversion canal to fill Lake Moultrie and the (lower) Santee River. (Source: DHEC-OCRM)



Figure VI.1: Location of Berkeley and Dorchester counties

The Ashley/Cooper River Basin encompasses 8 watersheds and 843 square miles, with a total of 471 stream miles, 60,188 acres of lake waters, and 13,059 acres of estuarine areas. Dorchester County also encompasses the Edisto River Basin, which originates in the Sandhills region of the State. This basin contains 30 watersheds and two million acres, 2,775 stream miles and 32 square miles of estuarine areas. Due to the hydro-morphology setting of Berkeley and Dorchester Counties flooding events turn into a major threat to the area. (Source: DHEC-OCRM)

Flooding is a naturally occurring event that affects rivers and streams that overflow onto adjacent banks and floodplains when excess rainfall or storm surge is observed. The impact of flood events is correlated to the land use/land cover of the watershed or basin area. For example, heavily developed urbanized watersheds, with large areas covered by buildings, parking lots and roads have higher runoff volumes (water volumes) which usually occur very quickly due to drainage modifications.

Berkeley and Dorchester Counties are susceptible to riverine, urban and flash floods. Flooding along rivers is a natural event that may occur seasonally when winter or spring rains coupled with melting snow, fill river basins with too much water too quickly. Torrential rains from decaying hurricanes or tropical systems can also produce river flooding. Conversely, urban flooding occurs when land is converted from fields or woodlands to impervious areas (parking lots, roads, etc.) losing its ability to absorb rainfall. Urbanization increases runoff 2 to 6 times over what would occur on natural terrain. During periods of urban flooding, streets can become swift moving rivers, while basements can become death traps as they fill with water.

Additionally, flash floods occur within a few minutes or hours of excessive/localized rainfall, a dam or levee failure, or a sudden release of water held by an ice jam. These floods can roll boulders, tear out trees, destroy buildings and bridges, and scour out new channels. Rapidly rising water can reach heights of 30 feet or more. Furthermore, flash flood-producing rains can also trigger catastrophic mud slides. Most flash flooding is caused by slow-moving thunderstorms, thunderstorms repeatedly moving over the same area, or heavy rains from hurricanes and tropical storms. (Source: NWS)

For this reason, most of the floodplains in the United States have been mapped by the Federal Emergency Management Agency (FEMA). These maps designate the 100-year flood zone, the Base Flood Elevation and Special Flood Hazard Areas. A 100-year flood zone is an area that has one percent chance of flooding in any given year. Additionally, the base flood elevation relates to the 100-year flood zone and is the elevation of the water surface resulting from a 100-year flood. Berkeley County floodplains are shown in Figure VI.2.

Floodplain maps for Dorchester County have not yet been converted to a digital format, but will be available in the future. Coastal flooding caused property damage of \$25,000,000 in October 1994. In 2008 and 2009, approximately \$62,000 in property damage was caused by repeated flash flooding (5 events).

Damage caused by flood events ranked second for Berkeley and Dorchester Counties (Table VI.1), with an estimated total property and crop damage of approximately \$25,000,000 for each county. According to NCDC data (1950-2009) a total of 43 flood events and one death were reported for Berkeley County and 26 flood events, with no deaths, were reported for Dorchester County.

Since the creation of the original Berkeley-Dorchester Hazard Mitigation Plan, adopted in 2005, the towns of Jamestown, St. Stephen, and Reevesville have become participants in the National Flood Insurance Program, joining Goose Creek, Hanahan, Harleyville, Moncks Corner, Ridgeville, Summerville, and both counties as participants. All of these jurisdictions in Dorchester County are susceptible to flooding. However, despite possible flood risk in their communities, the Town of St. George and the Town of Bonneau do not participate in the NFIP and remain sanctioned. For these two jurisdictions to receive approval for its flood mitigation strategy one or more of the following may be required:

1. An adopted revised flood mitigation strategy that addresses how the jurisdiction will reduce future flood losses in the areas for new development and infrastructure, and major improvements to existing structures;
2. An adopted flood damage prevention ordinance that complies with minimum NFIP standards, as contained in 44 CFR 60; and/or
3. Documentation of acceptance of the jurisdiction into the NFIP.

In response, the towns of Bonneau and St. George will individually assess their status as NFIP-sanctioned communities and consider compliance with the above requirements. If any jurisdiction chooses to meet the requirements documentation of compliance will be provided either as an amendment to this plan or inclusion in future plan updates.

2. Hurricanes and Tropical Storms

Hurricanes and tropical storms, as well as tropical depressions, are all tropical cyclones which are defined by the National Weather Service's National Hurricane Center (NHC) as *a warm-core non-frontal synoptic-scale cyclone, originating over tropical or subtropical water, with organized deep convection and a closed surface wind circulation about a well-defined center*. Once formed the system is fed by extracting heat energy from the ocean at high



Figure VI.2: Berkeley County floodplain areas

temperatures and releasing heat at the low temperatures of the upper troposphere. Damage caused by these systems is mainly associated with rainfall, storm surge and high winds. Storms can last several days, depending on the atmospheric factors, causing sustained flooding and erosion conditions for all jurisdictions within the two counties.

Hurricanes/tropical storms are classified using the Saffir-Simpson Hurricane Scale and is used by the NHC to predict potential property damage and flooding levels from imminent storms. The scale rates the intensity of hurricanes based on wind speed and barometric pressure measurements. Although, the scale assigns a wind speed and surge level to each category of storm, in recent years, there has been a recognition of the fact that wind speed, storm surge and inland rainfall are not necessarily of the same intensity for a given storm. However, the Saffir-Simpson Scale is still the most widely used classification tool for hurricanes. A description of the Saffir-Simpson Scale is presented in Table VI.2.

Hurricane track data gathered from the NOAA-Coastal Services Center as part of the South Carolina State Hazard Assessment (performed by the South Carolina Emergency Management Division in conjunction with the USC Hazards Research Lab) indicates that from 1850 to 2007, 40 storms passed directly through Berkeley County and 29 through Dorchester County. These included tropical storms, tropical depressions, subtropical storms, subtropical depressions, extratropical storms and hurricanes. Figure VI.3 illustrates the storm paths for Berkeley and Dorchester Counties.

Storms that passed in relatively close proximity to Berkeley and Dorchester Counties may also have an impact upon those areas. Therefore, the vulnerability analysis considered all storms that pass through or within 100 miles of the counties. These data were used to calculate the probability or frequency of occurrence for each county. A summary of estimated damages for Berkeley and Dorchester Counties is presented in Table VI.1.



Figure VI.3: Storm tracks passing through Berkeley and Dorchester counties

Table VI.2: Saffir-Simpson Scale and typical damages (Source: NOAA-NHC)

Category	Sustained WS (MPH)	Surge (ft)	Pressure (MB)	Typical Damage
Tropical Depression	<39	----	----	
Tropical Storm	39-73	----	----	
Hurricane 1	74-95	3-5	>980	Minimal- Damage primarily to shrubbery and trees, to unanchored homes, and to poorly constructed signs. Low-lying coastal roads inundated, minor pier damage, some small craft in exposed anchorage torn from moorings.
Hurricane 2	96-110	6-8	979-965	Moderate- Major damage to exposed mobile homes and poorly constructed signs. Some damage to roofing materials of buildings, windows and doors. Coast roads and low-lying escape routes inland cut by rising water 2 to 4 hours before arrival of hurricane center. Considerable damage to piers. Marinas flooded. Evacuation of some shoreline residences and low-lying areas required.
Hurricane 3	111-130	9-12	964-945	Extensive Damage- Large trees are toppled, some structural damage to roofs. Mobile homes destroyed. Structural damage is done to small homes and utility buildings. Low-lying escape routes inland cut by rising water 3 to 5 hours before hurricane center arrives. Evacuation of low-lying residences possibly required.
Hurricane 4	131-155	13-18	944-920	Extreme Damage- Extensive damage to roofing materials, windows and doors; failure of roofs and walls on many small residences. Complete destruction of mobile homes. Flat terrain 10 feet or less above sea level flooded inland as far as 6 miles. Major damage to lower floors of structures near shore due to flooding Low-lying escape routes inland cut by rising water 3 to 5 hours before hurricane center arrives.
Hurricane 5	>155	>18	<920	Catastrophic Damage- Very severe and extensive damage to windows and doors. Complete failure of roofs on many residences and industrial buildings. Some complete building failures. Small buildings overturned or blown away. Low-lying escape routes inland cut by rising water 3 to 5 hours before hurricane center arrives. Massive evacuation of residential areas on low ground within 5 to 10 miles of shore possibly required.

3. Tornadoes

According to the National Weather Service, *a tornado is a violently rotating column of air extending from a thunderstorm to the ground.* This atmospheric event is caused by the development of thunderstorms in a warm and moist environment. Occasionally tornadoes may accompany tropical storms and hurricanes that move over land. Tornadoes are considered the most destructive of all atmospheric-generated phenomena, with an average of 1200 tornadoes reported a year nationwide. In South Carolina the majority of tornado touchdowns occurred between the months of March and May, during evening hours. On March 28, 1984 the Carolinas received a total of 22 tornadoes, causing 57 deaths, 1,284 injuries, \$200 million in damage and 37% of fatalities in mobile homes.

“Dr. T. Theodore Fujita developed a damage scale for winds, including tornadoes, which was supposed to relate the degree of damage to the intensity of the wind. (The Fujita) scale was the result. The Enhanced F-scale is a much more precise and robust way to assess tornado damage than the original. It classifies F0-F5 damage as calibrated by engineers and meteorologists across 28 different types of damage indicators (mainly various kinds of buildings, but also a few other structures as well as trees)” (National Weather Service Storm Prediction Center, www.spc.noaa.gov, 2009.) Table VI.3, below, details the Enhanced Fujita Scale.

Table VI.3: Enhanced Fujita Tornado Scale (Source: SPC-NOAA)

F Number	Fastest (mph)	¼-mile	3-Second (mph)	Gust	EF Number	3-Second (mph)	Gust
F0	40-72		45-78		EF0	65-85	
F1	73-112		79-117		EF1	86-110	
F2	113-157		118-161		EF2	111-135	
F3	158-206		162-209		EF3	136-165	
F4	207-260		210-261		EF4	166-200	
F5	261-318		262-317		EF5	Over 200	

Table VI.1 tornadoes have caused major property damage in Berkeley as well as Dorchester County. Tornado touchdown events reported for both counties are shown in Figure VI.4. The occurrence of tornadoes is been limited to certain jurisdictions, but notice that due to the unpredictable nature of tornado touchdowns all jurisdictions may be at risk.

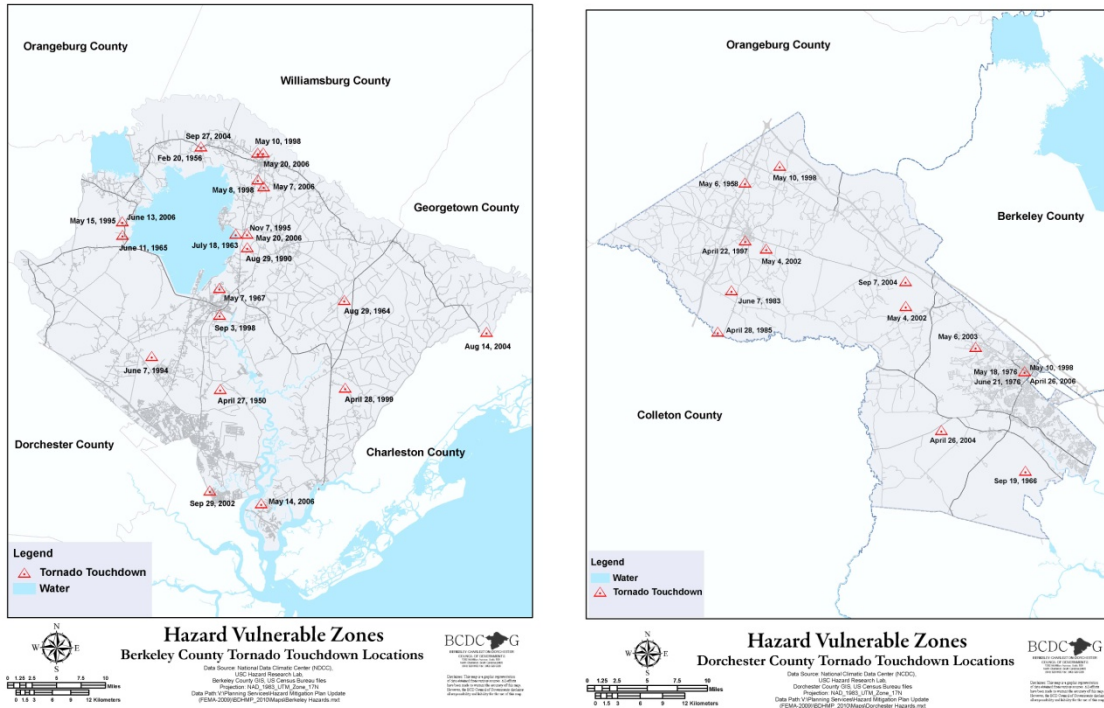


Figure VI.4: Tornado touchdown locations for Berkeley and Dorchester counties

4. Winter Storms

Winter storms can be very disruptive, particularly in areas where they are not frequent occurrences. While winter storms have had an effect on South Carolina, they occur relatively infrequently compared to areas in the northern US. However, while winter storms are rare, they can adversely impact all jurisdictions within the two counties.

These storms can combine different types of precipitation including snowfall and ice storms, as well as high winds, and cold temperatures. They vary in size and intensity and may be accompanied by strong winds that may create blizzard conditions and dangerous wind chills. A blizzard may be considered the most dangerous winter storm because it combines low temperature, heavy snowfall and winds above 35 mph. Heavy snowstorms are those that drop four or more inches of snow within a twelve-hour period. Ice storms may also be dangerous due to the moisture that falls and freezes upon impact causing dangerous conditions for transportation.

Two of the most notable winter storms in South Carolina history occurred 20 years apart; one on February 8-11, 1973 and a second one on March 12-14, 1993. In February 1973, more than 18 inches of snow fell across six counties along the Lowcountry, and 24 inches in

the Upstate, making the 1973 storm the most significant snowstorm to occur in South Carolina. Columbia and Charleston set daily records during the blizzard with 15.7 and 7.1 inches, respectively. The storm of 1993 struck South Carolina from the coast to the mountain with coastal erosion, storm surge, severe thunderstorms, and heavy snowfall. Wind gusts with speeds of 90 mph were observed at Myrtle Beach. Coastal counties received little snowfall but did experience the strong winds that accompanied the storm. Thousand of power outages left people in the dark and cold across the Upstate and in coastal sections where high winds downed trees and power lines.

Some occurrences have been reported for Berkeley and Dorchester Counties since 2000 to the present (2009). Snowfall events of one to around two inches, sleet, freezing rain and high winds were reported for both of these counties causing some power outages. No other major events have been reported for these counties.

5. Thunderstorms

Thunderstorms affect relatively small areas when compared with hurricanes, tornadoes and winter storms, but still they can be dangerous. The typical thunderstorm is 15 miles in diameter and can last 30 minutes on average. Thunderstorms formed from a combination of moisture, rapidly rising warm air and a force capable of lifting air such as warm or cold fronts, sea or mountain breezes. They are consider severe if it produces hail at least one inch in diameter, winds of 58 mph or stronger, and/or a tornado.

Due to frequent occurrences of thunderstorms 196 events have been reported for Berkeley County (1950-2009). These events caused over \$764,000 and \$2,000 in property and crop damage, respectively (Table VI.1). Dorchester County, have reported 184 thunderstorm events, with an estimated property damage of \$400,000 (Table VI.1)

6. Hail

Hails form by the circulation of strong updrafts of warm air and downdrafts of cold air in a thunderstorm. In this process water droplets can be carried by the updrafts well above the freezing level with temperatures below 32°F and freeze. With each trip above and below the freezing level the frozen droplets will add another layer of ice. Those frozen water droplets, with many layers of ice, fall to the ground as hail. Hail events along the U.S. cause \$1 billion in crop and property damages.

Hail events are prevalent in Berkeley and Dorchester Counties. In Berkeley County a total number of 189 events have been registered since 1950, causing \$13,000 in property damage and \$50,000 in crop damage (Table VI.1). Hail storm events in Dorchester County have also been prevalent (98 events) but not associated damage have been reported for these events (Table VI.1). Figure VI.5 presents hail locations for Berkeley and Dorchester Counties.

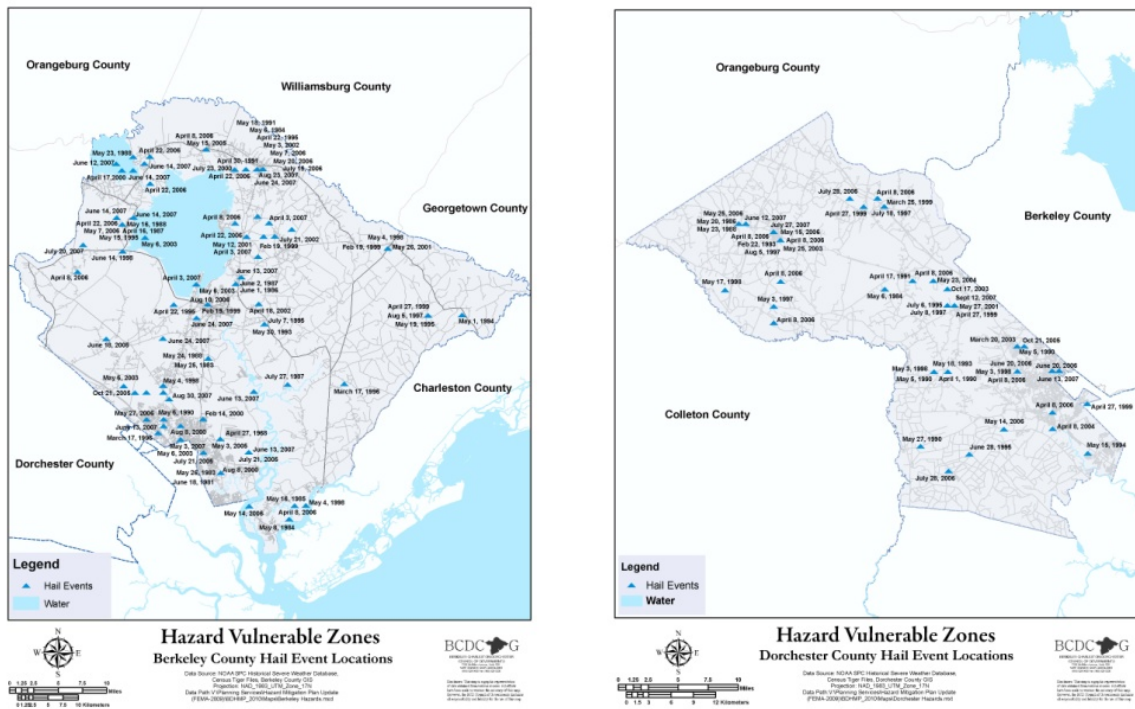


Figure VI.5: Hail event locations for Berkeley and Dorchester

7. Wildfire

According to the U.S. Forest Service’s Wildland Fire Assessment System, Berkeley and Dorchester Counties are located in a moderate risk fire danger area. A moderate classification stands for those fires that start from accidental causes, but with the exception of lightning fires in some areas. These fires are not likely to become serious and control should be relatively easy. Generally, there are three major factors to consider in assessing the threat of wildfires to an area: topography, vegetation and weather.

An area’s terrain and land slopes affect its susceptibility to wildfire spread. Wildfire travels much faster upslope than it does down slope. Berkeley and Dorchester Counties are located on the coastal plain, which is characterized by flat terrains, which limits the propagation of fire.

Vegetation and land use is another characteristic that affects the spread of wildfire. In particular, forest/dense wooded areas and grasslands provide readily accessible fuel for wildfires. Besides just the existence of this type of vegetation, its moisture content, is also a significant factor. This is dependent on weather; droughts or dry weather cause vegetation to become dryer and thus serve as a better fuel. There are numerous forested areas and grasslands in Berkeley County considering that the Francis Marion National Forest (251,139 acres) is contain within parts of Berkeley County, which are susceptible to wildfires.

Weather is the third factor; high temperatures combined with low humidity offer the most conducive environment for wildfires. Berkeley and Dorchester Counties weather is consider Subtropical Humid, with high temperatures during the summer. Although, high temperatures are reported for the summer months, this is combined with the high levels of humidity which are not propitious to the ignition and spread of wildfires. However, during drought periods the threat of wildfire increases.

According to SC State Climatology Office, Berkeley and Dorchester Counties have experienced different level of drought conditions since 1998. A moderate drought condition was reported for years 1998 and 2000, while a severe condition was experienced during 1999, 2007 and 2008 years. Extreme drought conditions were experienced during 2002 year which caused 4,000 wildfires across the state. These fires damaged or destroyed 77 homes, 120 outbuildings, 75 vehicles and almost 40,000 acres of woods and grasslands (SC Forestry Commission). In Berkeley County 437 fires were reported, which affected approximately 4,958 acres. Additionally, Dorchester County reported 188 fires that affected approximately 1,357 acres.

8. Drought

Drought is caused by lack of precipitation, but may be exacerbated by other factors such as high temperatures, high winds, low relative humidity and water consumption rates. Droughts can result in a shortage of water for consumption and can affect hydroelectric power, recreation and navigation. Additionally, severe droughts can lead to significant losses of crops, wildlife and livestock, as well as wildfires, throughout the two counties.

The Palmer Index is used to measure the dryness of an area. It utilizes a formula consisting of rainfall amounts and temperature levels to create a scale from negative four to positive four, to indicate whether an area is suffering from excessive rainfall or drought. Negative numbers indicate drought occurrences and positive numbers depict excessive rainfall. The Palmer Index is most effective in determining long term droughts that persist over several months and is not effective in measuring short term droughts over a period of weeks.

There are four drought management areas corresponding to the major river basins in South Carolina: Piedmont, Central, Catwba-Pee Dee, and Coastal (SC Department Natural Sources). Berkeley and Dorchester Counties correspond to the Coastal Drought Management Area. Several drought events have been reported since 1950 to the present (2009) for Berkeley and Dorchester Counties. As mentioned previously, the most severe cases of drought were experienced on 2002 were the whole state including the coastal counties were classified in extreme drought conditions. The State of South Carolina has had a drought management plan in effect since 1985 that continues to be updated, and also has a State Drought Program Coordinator. Updates are provided continuously by the SC State Climatology Office.

9. Earthquake

Earthquakes are the results of forces within the Earth's interior that continuously affect the surface of the Earth. The energy from these forces related mainly to the movement of plate

tectonics is stored in a variety of ways within the rocks. When energy is released through the faults along the crust of the Earth, an earthquake results. The point on the Earth's surface directly above the focus area is called the epicenter of the earthquake (US Geological Survey-USGS). The severity of an earthquake can be defined by the intensity and magnitude of the event. The seismic hazard is related to the magnitude but also to the phenomena generated by the earthquakes, such as surface rupture, ground motion, ground motion amplification, liquefaction and landslides.

Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. Numerous intensity scales have been developed to evaluate the effects of earthquakes but the one currently used in the United States is the Modified Mercalli (MM) Intensity Scale (Table VI.4). Conversely, the magnitude is related to the amount of seismic energy released at the hypocenter of the earthquake recorded by a seismograph. While several scales have been defined, the most commonly used is the magnitude local which is used by the Richter scale. Table VI.5 presents a classification of earthquakes based to their Richter scale magnitude.

The USGS rates areas of the United States for their susceptibility to earthquakes based on a ten percent probability of a given peak force (%g for a 1.0 SA)¹, being exceeded in a 50 year period. Berkeley and Dorchester Counties' peak acceleration ranges from 60 to 80% g which is considered very significant.

Earthquake epicenter location data (gathered from the USC Seismic Network), was collected for the period from 1698 to 2007. These data indicate that 48 events have had their epicenter in Berkeley County. Of these 48 events, only five had magnitudes greater than three, which are considered as minor or light earthquakes (Table VI.5), with the most recent one occurring in 2003. In Dorchester County 150 events were registered but only nine had magnitudes greater than three. Figure VI.6 presents the epicenter locations registered for Berkeley and Dorchester Counties from 1698 to 2007.

a) *Liquefaction*

Liquefaction is the process where soils losses strength and act as liquid instead of solid, amplifying the waves associated to the earthquake. Soft sandy soils can be liquefied by strong ground motion. The effect on structures and buildings can be devastating, and is a major contributor to urban seismic risk. Liquefied soil exerts higher pressure on retaining walls, which can cause them to tilt or slide. This movement can cause settlement of the retained soil and destruction of structures on the ground surface.

¹ Ground motion hazard values are expressed as percent of the acceleration of gravity (% g). The acceleration of gravity is 980 cm/sec/sec. Spectral acceleration (SA) relates ground motion activity to the motion experienced by a structure or building. The larger an earthquake's magnitude, the stronger the ground motion it generates.

Table VI.4: Modified Mercalli intensity scale

Level	Description
I	Not felt except by a very few under especially favorable conditions.
II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
III	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration similar to the passing of a truck. Duration estimated.
IV	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone; many awakened. some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rail bent.
XI	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.
XII	Damage total. Lines of sight and level are distorted. Objects thrown into the air.

Source: USGS

Table VI.5: Richter Magnitude scale (Source:USGS)

Magnitudes	Description	Earthquake Effects	Frequency of Occurrence
Less than 2.0	Micro	Micro-earthquakes, not felt.	About 8,000 per day
2.0-2.9	Minor	Generally not felt, but recorded.	About 1,000 per day
3.0-3.9	Minor	Often felt, but rarely causes damage.	49,000 per year (est.)
4.0-4.9	Light	Noticeable shaking of indoor items, rattling noises. Significant damage unlikely.	6,200 per year (est.)
5.0-5.9	Moderate	Can cause major damage to poorly constructed buildings over small regions. At most slight damage to well-designed buildings.	800 per year
6.0-6.9	Strong	Can be destructive in areas up to about 160 kilometers (100 mi) across in populated areas.	120 per year
7.0-7.9	Major	Can cause serious damage over larger areas.	18 per year
8.0-8.9	Great	Can cause serious damage in areas several hundred miles across.	1 per year
9.0-9.9	Great	Devastating in areas several thousand miles across.	1 per 20 years
10.0+	Epic	Never recorded; see below for equivalent seismic energy yield.	Extremely rare (Unknown)

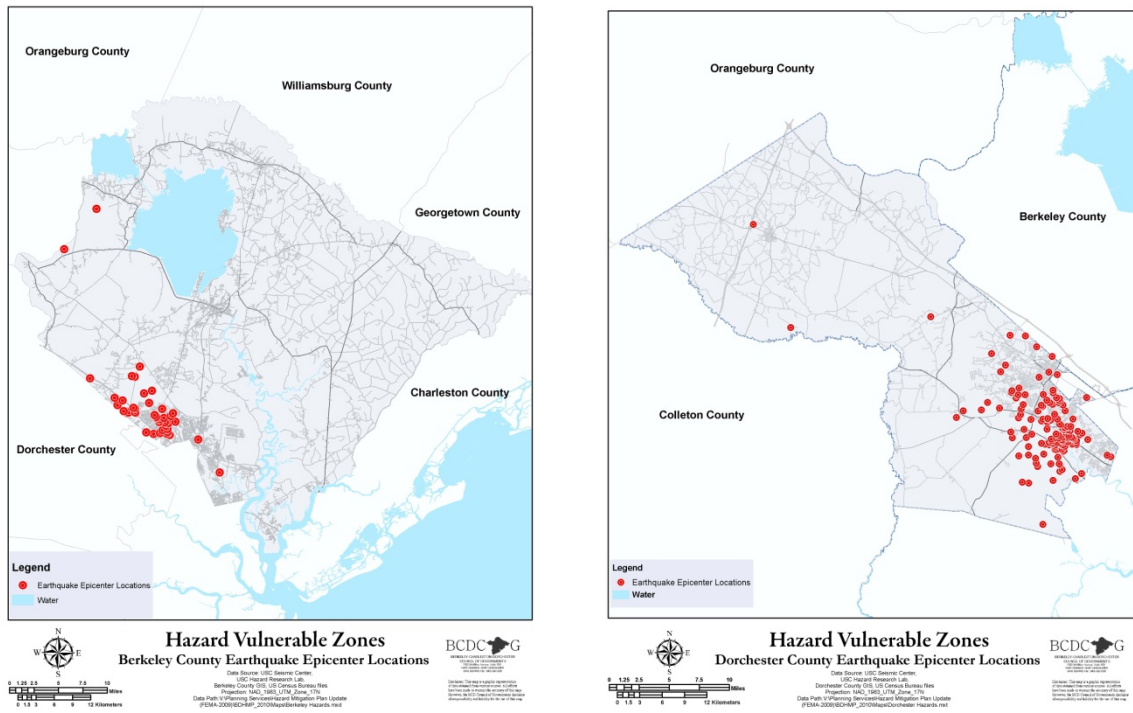


Figure VI.6: Berkeley and Dorchester earthquake epicenter locations

Berkeley and Dorchester Counties have a high risk of liquefaction given that most of the soils present in these areas are sandy soils. The mix of sandy soils and high water tables (typical of the Lowcountry area) increases the probability of soil liquefaction during an earthquake event. Liquefaction areas for Berkeley and Dorchester Counties are presented in Figure VI.7. Notice that a significant percentage of Berkeley and Dorchester Counties are susceptible to the effects of liquefaction.

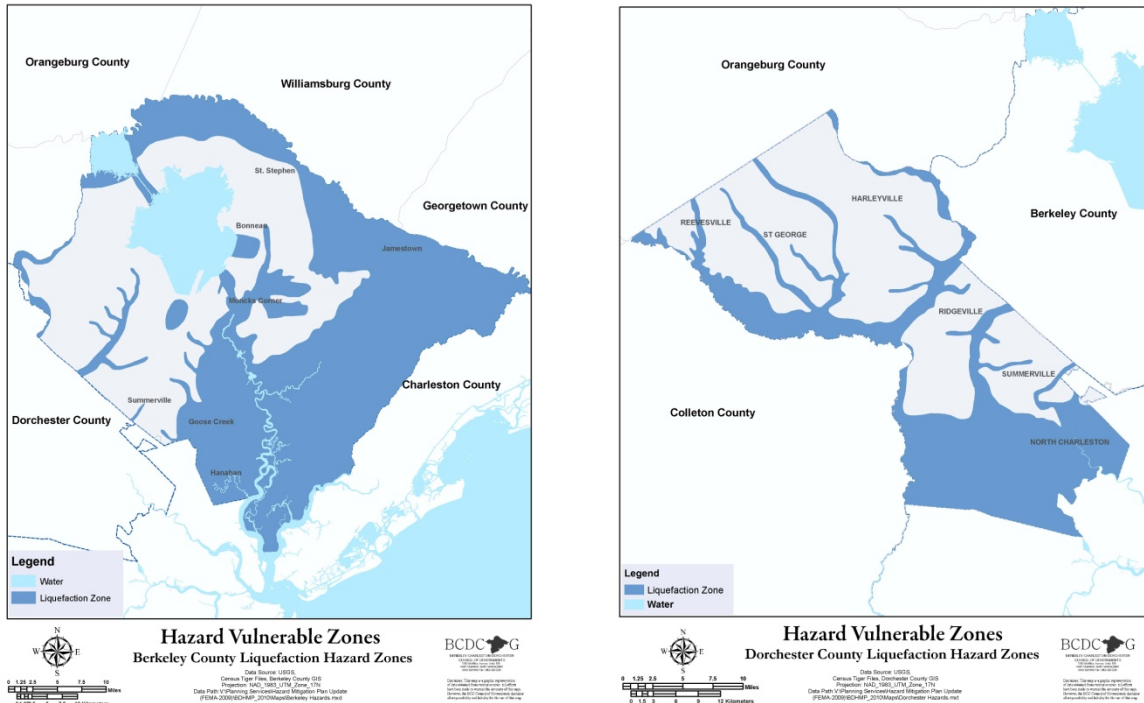


Figure VI.7: Berkeley and Dorchester liquefaction hazard zones

b) Landslides

Landslides are often prompted by the occurrence of other hazards. The magnitude of an earthquake can cause landslides. Also, long duration precipitation events and floods create saturated conditions, unstable soils which as a consequence produced a landslide. Landslide events are more common and significant in mountainous areas due to the elevation but also to their soil composition (clayey soils are more susceptible to landslides).

The USGS has a National Landslide Hazards Program and has mapped the landslide risk for the conterminous U.S. All of eastern South Carolina is mapped in the low risk area where there is a low landslide incidence that involves less than 1.5 percent of the land area (Figure VI.8). Given the relatively flat terrain of Berkeley and Dorchester Counties, and its low landslide incidence as mapped by the USGS, landslides are not considered a significant threat to these counties.

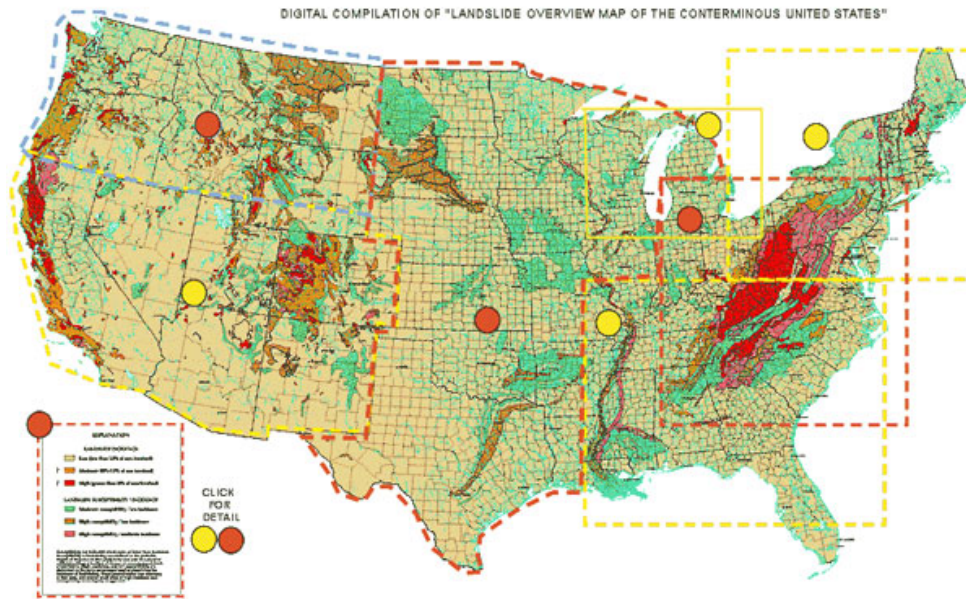


Figure VI.8: Landslide risk map for the conterminous U.S.

c) *Tsunamis*

Tsunamis are large sea waves generated by earthquakes, volcanic eruptions or large landslides. When a tsunami is generated and makes its way to the shoreline, it can cause extensive damage to nearby structures and infrastructure, as well as significant inland flooding. Much of the damage inflicted by tsunamis is caused by strong currents and floating debris. Tsunamis generally occur in the Pacific Ocean but some occurrences have been reported in Caribbean areas in the Atlantic Ocean. Thus, tsunamis are not considered a major threat along the eastern seaboard of the continental U.S.

10. Dam Failure

A dam failure is when downstream flooding occurs because of a collapse or failure of an impoundment. Dam failures may be the result of prolonged rainfall and flooding or, because of erosion during very dry conditions. The primary danger associated with a dam failure is the swift, unpredictable flooding of those people or structures immediately downstream from a large hydro dam or several dams in succession.

Berkeley County contains the two (2) largest man-made dams in South Carolina (Figure VI.9). These dams are routinely inspected for signs of potential emergency and maintained in a safe condition. According to the 1999 Berkeley County Hazard Analysis for Emergency management, “portions of the earthen dam have been recently strengthened to better withstand an earthquake.” This report contends that the Santee North Dam has remote tail-water and seismic sensors to alert system controllers of problems. The report also states that the only instance of problem with the system was the failure of a water tunnel control

gate in July 1983. This failure may have caused concern in the community but did not pose a serious threat. Conversely, there are nine (9) minor dams in Dorchester County and no dam failure incidents have been reported for this county (Figure VI.9).

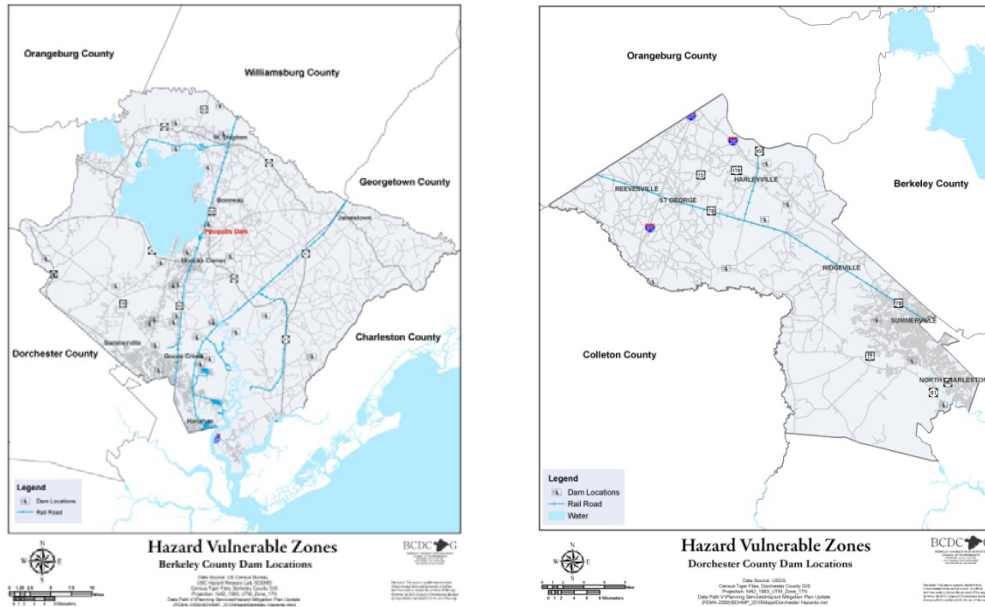


Figure VI.9: Berkeley and Dorchester counties dam locations maps

11. Hazardous Materials

Hazardous material releases or spills mainly occur along transportation routes or at hazardous storage locations. Some of the major roads intersecting Berkeley County are Interstate 26 and 526, U.S. Highways 176 and 52, and S.C. Highways 27, 41, 45, 6 and 402. While Dorchester County intersecting routes are Interstate 26 and 95, U.S. Highway 15, 78, 17A, and 52, and S.C. Highways 61, 642, 453, among others. The Interstates 26, 95 and 526 are the most frequently used routes to transport materials to and from points within the Counties' industrial and urban areas. A snapshot of these routes is presented in Figure VI.10.

Two major railway lines run south of Berkeley County, one parallel to U.S. Highway 52 towards Williamsburg County and the second one perpendicular to S.C. Highway 402 towards Georgetown County. The railway in Dorchester County runs parallel to U.S. Highway 78 towards Orangeburg County. These railway pathways connect with the east coast corridor railway traffic which provides access to different areas along the coast and the State of South Carolina.

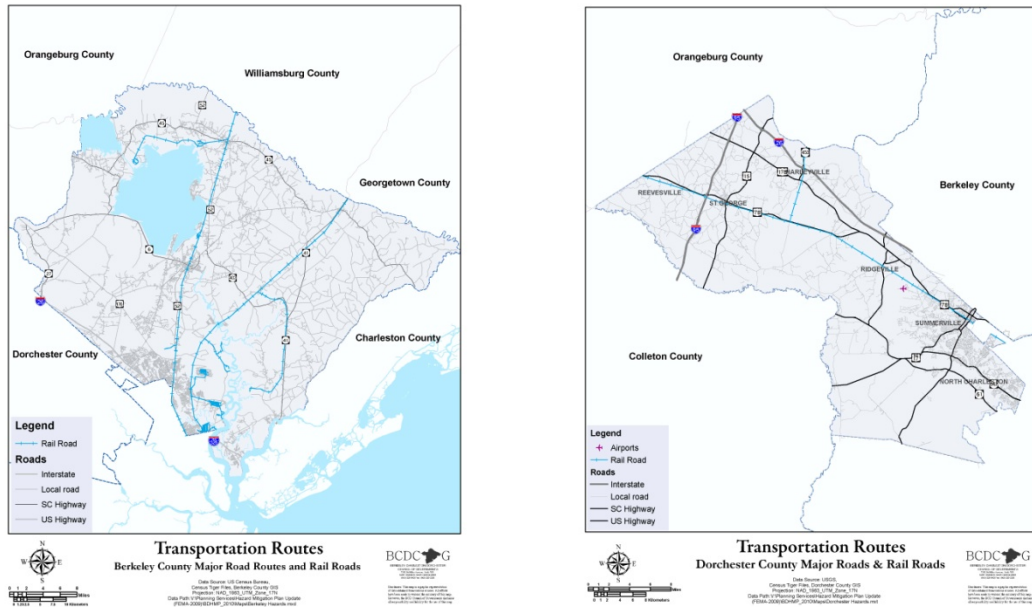


Figure VI.10: Berkeley and Dorchester counties transportation routes

There are several facilities that generate or store hazardous materials that are required to be register with the U.S. Environmental Protection Agency (EPA). Some of the common types of facilities that store or generate hazardous materials include the following:

- Municipal Solid Waste Landfills (MSW)
- Hazardous Waste Generators (HAZGEN)
- Radiological Waste Generators (RAD)
- Superfund Sites
- Toxic Release Inventory Sites
- Treatment, Storage and Disposal Sites (TSD)

Facilities	Berkeley	Dorchester
MSW	1	2
HAZGEN	47	40
RAD	2	2
TRI	22	15
TSD	3	1
CERCLA	1	4

Table VI.6: Number of hazardous facilities in Berkeley and Dorchester Counties.

This information was obtained through the Hazards & Vulnerability Research Institute (HVRI). No superfund sites were identified for Berkeley County and only one was identified for Dorchester County. A summary of the amount of facilities identified for each county is presented in Table VI.6.

The most prevalent facilities for both, Berkeley and Dorchester Counties are HAZGEN and TRI facilities. In Berkeley County the majority of HAZGEN (47) and TRI (22) facilities are concentrated in areas such as Summerville, Goose Creek, Hanahan and Moncks Corner. There are only two RAD facilities within the county; one located in Summerville and the second one in the Charleston Naval Weapons Station. Most of the TSD sites are also within the limits of the Charleston Naval Weapons Station.

In Dorchester County the majority of HAZGEN (40) and TRI (15) facilities are distributed among North Charleston, Summerville, Harleyville and Ridgeville. Other facilities such as TSD, RAD and CERCLA are concentrated in Harleyville, Summerville and North of Ridgeville. MSW are located north of Goose Creek in Berkeley County and north of Ridgeville in Dorchester County.

VII. Vulnerability Assessment

A. Introduction

The BCDCOG staff conducted numerous vulnerability assessments for Berkeley and Dorchester Counties during the planning process. These assessments were created through research done on each jurisdiction and the use of Geographic Information System (GIS) technology. These assessments build on the identification of hazards in the community and the risk that the hazards pose to the community. The vulnerability assessment process examines more specifically how the facilities, systems and jurisdictions of Berkeley and Dorchester Counties would be damaged or disrupted by the hazard events identified in the Hazard Identification and Analysis.

The vulnerability assessment requires the integration of different components such as, hazard identification and occurrence, identification of vulnerable populations and the integration of vulnerable population and potential hazards in a spatial context. The integration of these components provides a better understanding of which areas are more susceptible to be affected by the occurrence of single or multiple hazards. This information is important to implement practices aimed at decreasing future impacts and increasing resilience, which leads to fewer persons in potential danger.

To estimate the vulnerability of both the incorporate and unincorporated areas of Berkeley and Dorchester Counties different factors were evaluated. A social vulnerability analysis was created using information such as population, race, mean house values and renters and mobile homes units. Demographic information was obtained from the 2000 U.S. Census Bureau. Those variables were combined to get a final vulnerable social score that determine those socially vulnerable areas. Socially vulnerable maps are detailed in Appendix D.

To estimate the vulnerability to natural hazards different variables were evaluated some of which includes, hurricane (storms), tornado, hail, earthquake, liquefaction, flood events, winter storms and fire events. Probability of occurrence or frequency was calculated using historical records gathered through the USC Hazard and Vulnerability Research Institute. This information was further process and combined together to obtain a final probability value that integrated all natural hazards mentioned previously. This information provided us with those areas more likely to be affected by one or multiple hazards in the area. Natural hazard vulnerability maps are presented in Appendix E. Natural hazard and socially final vulnerability values were combined to obtain a Final Place Vulnerability Zone Map for both counties. This map represents an overall picture of hazard risk in relation to geographic location.

1. Geographic Profiles

Berkeley County

Berkeley County is located in the southeastern part of South Carolina. The County has a land area of 1,100 square miles. The County includes many natural resources that give it a rural characteristic. In 1999, over 80% of the County's land areas were considered agricultural or forest. Although agriculture is practiced in Berkeley County, most of this 80% is tied into lakes, forests and swamps. Lake Moultrie and Lake Marion make up a large portion of the County and have a tremendous effect on its economy and quality of life.

The County's climate along with the clean air, high water quality, fertile soils and minerals make it an attractive place to visit and live. There are six incorporated jurisdictions in Berkeley County: the City of Goose Creek, the City of Hanahan, the Town of Bonneau, the Town of Jamestown, the Town of Moncks Corner and the Town of St. Stephens. Berkeley County includes a portion of the Town of Summerville. The County also includes the heavily developed area of Daniel Island, which has been annexed into the City of Charleston.

Dorchester County

Dorchester County is located in the southeastern part of South Carolina. The County is comprised of 575 square miles of mostly rural land. The rural land includes both agricultural and forest, with approximately 70% of Dorchester County being covered by forestland. This rural land is interrupted by six incorporated areas that are densely developed as compared to the rest of the County: the Town of Harleyville, the Town of Reevesville, the Town of Ridgeville, the Town of St. Stephens, and the Town of Summerville. The County also includes part of North Charleston. Farms and forest account for a large portion of the unincorporated areas of the County.

The climate of Dorchester County is moderate and pleasant. This along with the rural nature of the County combines for a good quality of life.

2. Demographic Profile

Berkeley County

At the time of the 2000 US Census, there were 142,651 people living in Berkeley County. This represents an 11 percent increase from 1990. The greatest population increase occurred in Goose Creek and can be attributed to new development and natural increase.

The following table gives the population of each incorporated jurisdiction in Berkeley County and their change in population from 1990:

Table VII.1: Berkeley County Population. Source: U.S. Census Bureau, 2000

Place	1990 Population	2000 Population	Percent Change
Town of Bonneau	374	354	-5.0
City of Goose Creek	24,692	29,208	18
City of Hanahan	13,176	12,937	-2.0
Town of Jamestown	84	97	16
Town of Moncks Corner	5,607	5,952	6.0
Town of St. Stephens	1,697	1,776	5.0
Unincorporated County	83,028	92,327	11

Dorchester County

At the time of the 2000 US Census there were 96,413 people living in the Dorchester County. This represents a 16 percent increase from 1990. This increase occurred mainly in the Town of Summerville and the City of North Charleston. Population increase in those two jurisdictions can be attributed to natural increases, new developments and annexations. In 2003, Dorchester County was the 4th fastest growing county in SC, now surpassing 100,000.

The following table gives the population of each incorporated jurisdiction in Dorchester County and their change in population from 1990:

Table VII.2: Dorchester County Population. Source: U.S. Census Bureau, 2000

Place	1990 Population	2000 Population	Percent Change
Town of Harleyville	633	594	-6.0
City of North Charleston (pt.)	1,107	3,397	207
Town of Reevesville	244	207	-15
Town of Ridgeville	1,625	1,690	4.0
Town of St. George	2,077	2,092	0.7
Town of Summerville	21,585	26,787	24
Unincorporated County	83,028	92,327	11

The following table provides the basic demographic data for both Berkeley and Dorchester Counties:

Table VII.3: Demographic Data for Berkeley and Dorchester Counties (2000)

Categories	Berkeley County	Dorchester County
Population		
Total	142,651	96,413
Sex and Age		
Total:	142,651	96,413
Male:	72,530	47,000
Female	70,121	
Under 5 years	10,086	6,478
5 -9 years	4,228	3,123
9 years	2,349	2,069
10 years	2,586	1718
11 years	2,366	1,744
12 years	2,349	1624
13 years	2,539	1834
14 years	2,411	1637
15 years	2,477	1441
16 years	2,281	1683
17 years	2,041	1514
18 years	2,861	1194
19 years	3,186	1006
20 years	2,506	1140
21 years	1,847	887
22 to 24 years	6,418	3,073
25 to 29 years	10,144	6,133
30 to 34 years	10,400	7,185
35 to 39 years	12,424	8,966
40 to 44 years	11,623	8,215
45 to 49 years	9,574	7,435
50 to 54 years	8,843	6,413
55 to 59 years	6,599	4,811
60 and 61 years	2,211	1549
62 to 64 years	2,915	1,869
65 and 66 years	1757	1299
67 to 69 years	2,079	1707
70 to 74 years	3,174	2,133
75 to 79 years	2099	1,714
80 to 84 years	1326	1060
85 years and over	847	845
Race		
Total:	142,651	96,413

Categories	Berkeley County	Dorchester County
White alone	96,717	68,579
Black or African American alone	37,403	24,016
American Indian and Alaska Native alone	1,031	578
Asian alone	2,933	1,254
Native Hawaiian and Other Pacific Islander alone	121	0
Some other race alone	1,688	709
Two or more races	2,758	1,277
Hispanic or Latino by Race		
Total:	142,651	96,413
Not Hispanic or Latino:	138,817	94,709
White alone	95,324	67,658
Black or African American alone	37,227	24,004
American Indian and Alaska Native alone	930	578
Asian alone	2,880	1,254
Native Hawaiian and Other Pacific Islander alone	113	0
Some other race alone	120	52
Two or more races	2,223	1,163
Hispanic or Latino:	3,834	1,704
White alone	1,393	921
Black or African American alone	176	12
American Indian and Alaska Native alone	101	0
Asian alone	53	0
Native Hawaiian and Other Pacific Islander alone	8	0
Some other race alone	1,568	657
Two or more races	535	114
Household Type		
Total	142,651	96,413
In households:	137,197	94,317
Householder:	37,892	26,482
Spouse	28,973	20,276
Child:	45,559	31,459
With own children under 18 years	14,180	10,350
Other relatives	1,966	1,211
Nonrelatives	2,624	1,731
In group quarters:		
Institutionalized population	2,421	1,725

3. Economic Profile

Berkeley County

According to the 2000 US Census approximately 66 percent of the resident population of Berkeley County participated in the labor force in 1999, while 3 percent were unemployed and 43 percent were not in the labor force. Approximately 26 percent of those within the labor force categorized their occupation as being sales and office occupations. The educational, health, social services industry employs the highest percentage of workers, with 17 percent or 10,451. The manufacturing and retail trade industry were second and third, respectively, employing 15 percent and 12 percent of workers.

The per capita income for Berkeley County in 2000 was \$16,879. The median household income was \$39,908. There were approximately 3,664, or 10 %, individuals that were considered below poverty level.

Dorchester County

According to the 2000 US Census approximately 66 percent of the population of Dorchester County was in the labor force in 1999, while 3 percent were unemployed and 34 percent were not in the labor force. Approximately 32 percent of those within the labor force categorized their occupation as being management, professional or related occupations. The educational, health, social services industry employs the highest percentage of workers, with 20 percent or 8,802. The manufacturing and retail trade industry were second and third, respectively, employing 15 percent and 13 percent of workers.

The per capita income for Dorchester County in 2000 was \$18,840. The median household income was \$43,316. There were approximately 1,883, or 7 %, individuals that were considered below poverty level.

4. Natural, Historic and Cultural Resources

Berkeley County

The rural character of Berkeley County is a result of the large number of natural resources in the County. The County's natural resources include: the Francis Marion National Forest, the Santee Cooper Lakes, the Cooper River, the Wando River, Four Holes Swamp, Dean Swamp and Wassamassaw Swamp. These resources contribute to the recreational industries by attracting hunters and fishermen from all over the United States. The County also contains several other sites named as nature feature sites by the SC Department of Natural Resources Heritage Trust Program: the Bird Island Rookery, Stoney Landing, and Westvaco Eagle Nest.

Berkeley County also contains several mineral resources. The large Santee Limestone deposit located in the County is the only "viable mining deposit in the State of South

Carolina. (Berkeley County Comprehensive Plan, 1999) The soils in Berkeley County also contain an abundance of sand, gravel, clay and phosphate.

Water resources are also abundant in Berkeley County. The County is part of three different watersheds: the Ashley-Cooper Watershed, the Edisto Watershed and the Santee Watershed. Berkeley County also contains two lakes: Lake Marion and Lake Moultrie.

Berkeley County also contains a number of valuable cultural and historic resources and activities. There are five properties within the County that are designated National Historic Landmarks. Another 23 properties are listed on the National Register for Historic Places. There are also 30 other properties that are eligible to be included on the National Register of Historical Places. Along with these historic sites, there are 39 properties that are considered archaeological sites, including Cypress Gardens, Hagan Plantation and Mepkin Abbey, that are being investigated for inclusion on the National Register.

Dorchester County

There are several natural features of Dorchester County that can be considered natural resource. The largest natural resource in the County is the Francis Beidler Forest, which is 5,800-acre portion of the Four Holes Swamp that is owned by the Audubon Society. Although there are no sites in Dorchester County in the Heritage Trust Program, there are sites that fit the description of unique and distinguished areas. These include: the Chandler Bridge Formation, the Givhans Limestone Bluffs, the Halfway Gut Branch Bays, the McAlhany's Southern Mixed Hardwood Forest and the Reevesville Bay.

Dorchester County contains two main mineral resources. There are two areas of the County that are rich in Phosphate deposits. There is also one area of the County that contains deposits of Limestone.

Dorchester County is part of the Saluda-Edisto Watershed. There are several water resources in the County, including rivers and swamps. The Four Holes Swamp, the Cypress Swamp, the Edisto River and the Ashley River are the major water resources in Dorchester County.

Dorchester County also contains a number of cultural and historic sites. There are two properties, Middleton Place and Francis Beidler Forest, in the County that are designated as National Historic Landmarks. There are 22 properties within Dorchester County that are included on the National Register of Historic Places. Another 15 properties within the County are considered to be eligible for inclusion on the National Register. There are also 12 properties that are being investigated for inclusion on the National Registry.

5. Hazard Prone Locations

Berkeley County

Berkeley County contains limestone deposits. Although these deposits are positive mineral resources, they do make the County’s soils more susceptible to sinkholes and flooding. This susceptibility depends on the limestone type and depth from the surface.

As observed in the Final Natural Hazard Zones (composite map), Berkeley County is vulnerable to a wide array of hazards including but not limited to hurricanes, tornadoes, hail, earthquake, liquefaction, fire, floods and winter storms. Final Natural Hazard Zones map is presented in Figure VII.1.A.

The degree of vulnerability varies from location to location throughout the county, ranging from the lowest probability of occurrence of 0% to the highest vulnerability (100%). According to this analysis (Figure VII.1.A) the most vulnerable areas based on natural hazards are: Goose Creek, Moncks Corner and Bonneau. When the natural hazard vulnerability assessment was combined with the social characteristic (vulnerable zones) the areas at higher risk became to be: Summerville, Hanahan and Goose Creek (Figure VII.1.B).

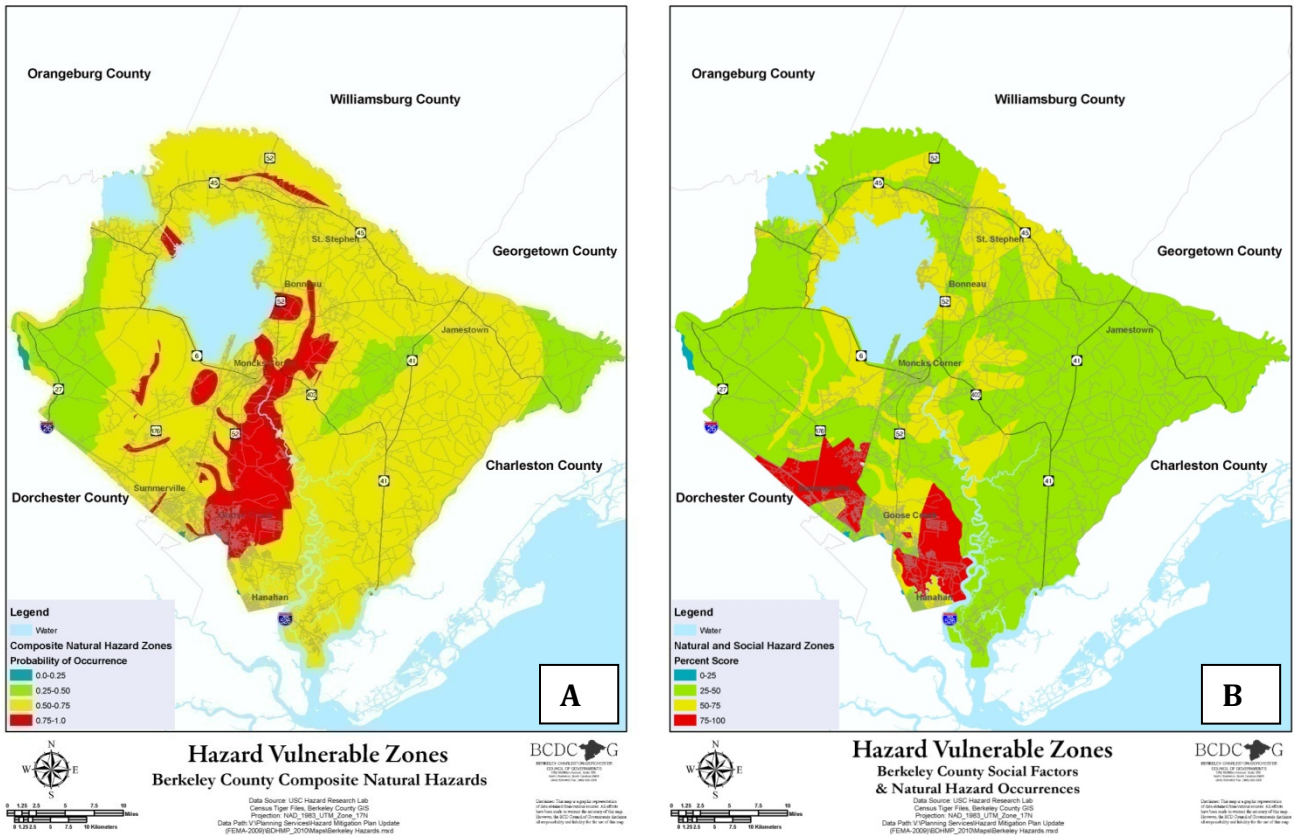


Figure VII.1: A: Composite natural hazard zones B: Composite natural hazards and social factors zones

a) Floods

The flood hazard map shows that Berkeley County vulnerable to flooding along the low-lying areas adjacent to rivers, streams and lakes. The northern edge of the County is particularly vulnerable to flooding due to the presence of the Santee River. Southern portions are highly vulnerable due to their proximity to coastal areas directly influenced by tides. Refer to Figure VI.2.

b) Hurricanes

According to the hurricane hazard zone map, Berkeley County is particularly vulnerable to storms (i.e. hurricanes and tropical storms). The most vulnerable areas in the County are the southern coastal areas, in particular Charleston (Daniel Island), Hanahan, Summerville, Goose Creek, and the northeastern portions in particular Jamestown.

c) Tornadoes

Based on the tornado hazard zone analysis, the central northern portions of the County are more vulnerable to tornadoes, particularly Bonneau, Moncks Corner, St. Stephen and Goose Creek areas.

d) Winter Storms

Winter storms, although rare occurrences in the southern Coastal Plain are spatially diverse. The occasional snow and/or ice storm adversely affects all local jurisdictions throughout the two counties, especially with regard to vehicular transportation. The absence of public snow and ice surface treatment and/or removal equipment causes major travel delays and slows traffic movement on interstate highways, major and minor arterials. While disruptive, no property damage has been reported after the four (4) most recent storm events (2000-2010) or since 1950.

e) Thunderstorms

Thunderstorms and high winds are the most frequent of local weather events: 212 events reported in Berkeley County (1950-2009). According to NCDC records, Summerville, Moncks Corner, and Goose Creek are somewhat more susceptible to damage caused by high winds and lightning strikes.

f) Hail

According to hail hazard zones information, the central northern and southern portions of Berkeley County are more vulnerable to hail, in particular Bonneau, Moncks Corner, Goose Creek, St. Stephen and Summerville areas.

g) Wildfires

According to fire hazard zones analysis, the central northwestern portions of the County are more susceptible to fire, in particular Bonneau and Moncks Corner areas.

h) Droughts

Historically, all jurisdictions within Berkeley County may expect a maximum drought of Palmer Index -2 in any given year. Agricultural operations in the rural portions of the County are more susceptible to crop damage, caused by drought, when compared to urbanized areas.

i) Earthquakes

Based on the earthquake hazard zones analysis, the southwestern portion of Berkeley County is more vulnerable to earthquake events. Areas like Summerville, Goose Creek and Hanahan are at higher risk.

(i) Liquefaction

According to liquefaction information, the central, southern and northeastern portions of the County are highly susceptible to the adverse effects of liquefaction, in particular Jamestown, Goose Creek, Hanahan and Moncks Corner areas (Figure VI.7).

j) Dam Failure

In 1983, hundreds of people in Berkeley County were evacuated after a leak in the Pinopolis Dam was discovered. No other dam failure events have been reported for Berkeley County. Based upon the dam locations of Berkeley County the most vulnerable jurisdictions are: Moncks Corner, Goose Creek, Summerville and Hanahan. Of these the Town of Moncks Corner is at greater risk due to its close proximity to the Pinopolis Dam.



A summary of the level of vulnerability based on the historical occurrences of natural hazards by jurisdiction is presented in Table VII.4 for Berkeley County.

Dorchester County

Dorchester County also contains limestone deposits. Although these deposits are positive mineral resources, they do make the County’s soils more susceptible to sinkholes and flooding. This susceptibility depends on the limestone type and depth from the surface.

As observed in the Final Natural Hazard Zones (composite map), Dorchester County is vulnerable to a wide array of hazards including but not limited to hurricanes, tornadoes, hail, earthquake, liquefaction, fire, floods and winter storms. Final Natural Hazard Zones map is presented in Figure VII.2 A.

The degree of vulnerability varies from location to location throughout the county, ranging from the lowest probability of occurrence of 0% to the highest vulnerability (100%). According to this analysis (Figure VII.2 A) the most vulnerable areas based on natural hazards are: Summerville and North Charleston, and Ridgeville and St. George with a

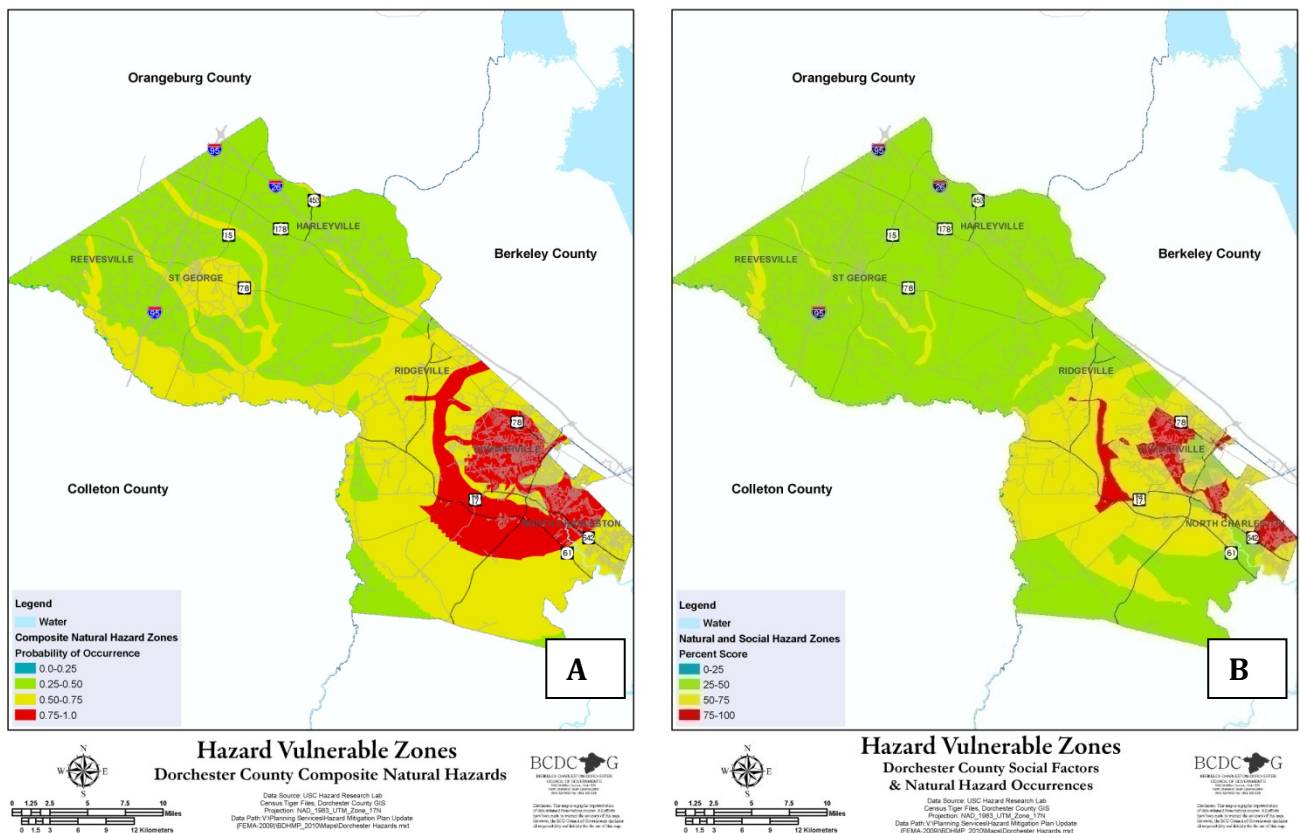


Figure VII.2: A: Composite natural hazard zones B: Composite natural hazards and social factors zones
 moderate vulnerability value. When the natural hazard vulnerability assessment was

combined with the social characteristic (vulnerable zones) Summerville and North Charleston remain as the areas at greater risk (Figure VII.2 B)

a) Floods

Detailed, geographic flood hazard information was not available for Dorchester County due to the lack of digitized floodplain information.

b) Hurricanes

According to the hurricane hazard zone map, Dorchester County is particularly vulnerable to storms (i.e. hurricanes and tropical storms). The most vulnerable areas in the County are the central portions in particular, Summerville, North Charleston, Ridgeville and Reevesville.

c) Tornadoes

Based on the tornado hazard zone analysis, the central southern portions of the County are more vulnerable to tornadoes, particularly Summerville and North Charleston areas, with moderate vulnerability for the St. George area.

d) Winter Storms

Winter storms, although rare occurrences in the southern Coastal Plain, are spatially diverse. The occasional snow and/or ice storm adversely affects all local jurisdictions throughout the two counties, especially with regard to vehicular transportation. The absence of public snow and ice surface treatment and/or removal equipment causes major travel delays and slows traffic movement on interstate highways, major and minor arterials. While disruptive, no property damage has been reported after the four (4) most recent storm events (2000-2010) or since 1950.

e) Thunderstorms

Thunderstorms and high winds are the most frequent of local weather events: 201 events reported in Dorchester County (1950-2009). According to NCDC records, Summerville, Harleyville, St. George, and Ridgeville are somewhat more susceptible to damage caused by high winds and lightning strikes.

f) Hail

According to hail hazard zones information, the central southeastern portions of Dorchester County are more vulnerable to hail, in particular Summerville, with all other jurisdictions at moderate risk.

g) Wildfires

According to fire hazard zones analysis, the central portions of the County are more susceptible to fire, in particular Ridgeville and Summerville areas.

h) Droughts

Historically, all jurisdictions within Dorchester County may expect a maximum drought of Palmer Index -2 in any given year. Agricultural operations in the rural portions of the County are more susceptible to crop damage, caused by drought, when compared to urbanized areas.

i) Earthquakes

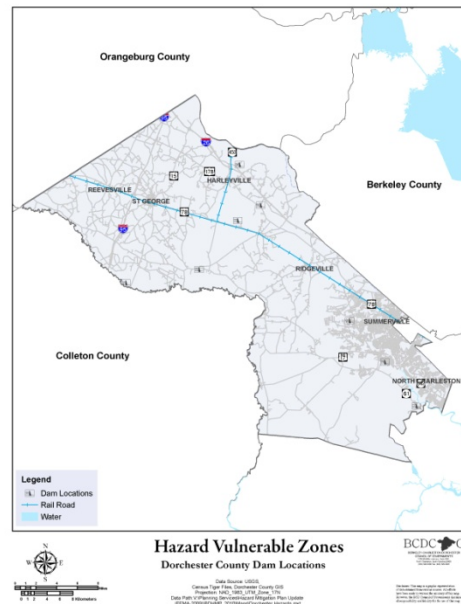
Based on the earthquake hazard zones analysis, the southern portion of Dorchester County is more vulnerable to earthquake events. Areas like Summerville and North Charleston are at higher risk.

(i) Liquefaction

According to liquefaction information, only the southern portion of the County is more susceptible to the effects of liquefaction, in particular the North Charleston area (Figure VI.7).

j) Dam Failure

There have been no dam failure incidents in Dorchester County. Most dams in Dorchester County are small and are used primarily for recreation. Nevertheless, population located immediately downstream from several dams in sequence may be at greater risk. Therefore, the Harleyville, Ridgeville, Summerville and North Charleston jurisdictions may be the most vulnerable areas due to close, downstream proximity to dam locations.



Number and Value of Buildings

The potential impact of each hazard within a community may be estimated based upon the total number and assessed value of residential and commercial buildings in each jurisdiction. The following table summarizes data provided by each county assessor.

Jurisdiction	# Residential Buildings	Total Residential Value	# Commercial Buildings	Total Commercial Value
Berkeley County				
Bonneau	110	\$7,886,600	36	\$10,975,700
Charleston	1,621	\$307,345,724	33	\$57,104,943
Goose Creek	3,225	\$369,005,193	51	\$37,181,060
Hanahan	1,899	\$287,029,183	51	\$48,254,156
Jamestown	33	\$78,300	20	\$1,039,500
Moncks Corner	1,984	\$60,999,974	67	\$40,872,677
St. Stephen	525	\$5,093,800	142	\$4,756,800
Summerville	784	\$163,736,706	35	\$29,774,746
Berkeley County	6,915	\$1,139,046,373	525	\$440,074,929
Dorchester County				
Harleyville	265	\$7,593,092	19	\$3,604,601
North Charleston	6,148	\$2,152,098,662	47	\$19,541,344
Reevesville	148	\$3,250,961	6	\$126,000
Ridgeville	271	\$5,136,658	9	\$572,595
St. George	924	\$22,246,871	116	\$11,077,515
Summerville	11,485	\$2,144,955,394	433	\$214,555,562
Dorchester County	58,243	\$9,341,171,609	1,277	\$582,209,300

Summary of Vulnerability

A summary of the level of vulnerability for each jurisdiction, based upon historical occurrences of natural hazards by jurisdiction is presented in Table VII.4 for Berkeley County, and Table VII.5 for Dorchester County. Based upon these historic events (1950-2009), vulnerability categories are listed as High (H), Moderate (M), Somewhat (S), and Low (L). High meaning 75 to 100% potential loss of the affected structures, Moderate 50 to 75%, Somewhat 25 to 50%, and Low 0 to 25%, potential loss of affected structures.

Table VII.4: Summary of vulnerability by jurisdiction to natural hazards for Berkeley County

Jurisdiction	Natural Hazards									
Type	Floods	Hurricanes/ TS	Tornadoes	Winter Storms	Thunder storms	Hail	Wildfires	Droughts	Earthquakes Liquefaction	Dam Failure
Bonneau	M	S	H	L	L	H	H	L	L	L
Charleston	H	H	L	L	L	S	L	L	L	L
Goose Creek	M	M	L	L	L	H	S	L	M	L
Hanahan	M	H	L	L	L	M	L	L	S	L
Jamestown	M	H	L	L	L	L	L	L	L	L
Moncks Corner	M	S	M	L	L	H	M	L	L	L
St. Stephen	M	S	M	L	L	M	M	L	L	L
Summerville	H	H	L	L	L	M	M	L	H	L

*Vulnerability Categories: **H**=High; **M**=Moderate; **S**=Somewhat; **L**=Low

Table VII.5: Summary of vulnerability by jurisdiction to natural hazards for Dorchester County

Jurisdiction		Natural Hazards								
Type	Floods	Hurricane/T S	Tornadoes	Winter Storms	Thunders torms	Hail	Wildfires	Droughts	Earthquakes Liquefaction	Dam Failure
Harleyville	M	S	S	L	L	M	S	L	L	L
N Charleston	M	H	M	L	L	M	S	L	H	L
Reevesville	M	H	S	L	L	M	S	L	L	L
Ridgeville	M	H	M	L	L	M	H	L	L	L
St. George	M	S	M	L	L	M	M	L	L	L
Summerville	H	H	H	L	L	H	H	L	M	L

*Vulnerability Categories: **H**=High; **M**=Moderate; **S**=Somewhat; **L**=Low

6. HAZUS Simulations

Several HAZUS simulations were run to estimate damage by building type for Berkeley and Dorchester Counties. Simulations were run for storms and earthquake scenarios. Structure information was available in a census tract basis that provides information about the building type and occupancy class. This information was incorporated into this plan to provide a general idea of the economic loss that may be experience if one of these scenarios occurs. HAZUS dollar exposure information estimated replacement costs based on structure classification.

Storm Assessment

Three storm simulations were performed to assess the relative vulnerability of structures in Berkeley and Dorchester Counties. For this analysis a Category one, three, and five scenarios were used to obtain the estimate economic loss for each classification of building.

Assuming a Category one scenario that passed directly through or within close proximity to Berkeley and Dorchester Counties, with all parts of both counties experiencing the same wind speeds a damage assessment was obtained. Results are presented in Table VII.6. HAZUS dollar exposure provides replacement costs based upon structure classification.

Table VII.6: Damage assessments for a Category 1 storm event. Note: Dollar value in thousands.

Jurisdictions	Wood	Steel	Mobile Home	Mason	Concrete	Total	Percent
Berkeley County							
Bonneau	0.3	0.0	0.3	0.0	0.0	0.6	0.2
Charleston	4.2	0.2	0.6	0.3	0.0	5.3	1.4
Goose Creek	47.1	0.2	4.2	2.9	0.0	54.4	14.1
Hanahan	160.1	4.9	6.2	23.9	0.0	195.1	50.8
Jamestown	0.1	0.0	0.1	0.0	0.0	0.2	0.1
Moncks Corner	27.8	0.6	3.9	2.9	0.0	35.2	9.2
St. Stephen	0.9	0.0	0.9	0.1	0.0	1.9	0.5
Summerville	80.0	0.5	7.7	3.4	0.0	91.6	23.8
County	0.1	6.4	23.8	33.6	0.1	384.3	100
Dorchester County							
Harleyville	0.9	0.0	0.5	0.0	0.0	1.4	1.0
North Charleston	57.3	0.4	1.6	4.9	0.0	64.2	47.6
Reevesville	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ridgeville	0.2	0.0	0.0	0.0	0.0	0.2	0.1
St. George	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Summerville	56.2	2.5	3.3	6.3	0.8	69.1	51.2
County	114.5	2.9	5.4	11.2	0.8	134.9	100.0

The total amount of damage for a Category one storm is estimated at \$384,300 for the incorporated areas of Berkeley County. Total amount of damage is estimated at \$134,900 for the incorporated areas of Dorchester County. The results of the Category 1 suggest that the Hanahan, Summerville, Goose Creek, and Moncks Corner jurisdictions would be the most affected areas within Berkeley County with a with damage equaling 50.8%, 23.8%, 14.1% and 9.2%, respectively (Table VII.6). Results for Dorchester County showed that the Town of Summerville and the City of North Charleston would experience 51.2% and 47.6%, respectively, of the total damage estimated for the incorporated areas of the County, while other jurisdictions would experience minimal to no damage (Table VII.6).

Assuming a Category three scenario that passed directly through or within a close proximity of Berkeley and Dorchester Counties, with all parts of both counties experiencing the same wind speeds, a damage assessment was obtained. Results are presented in Table VII.7.

Table VII.7: Damage assessments for a Category 3 storm event. Note: Dollar value in thousands.

Jurisdictions	Wood	Steel	Mobile Home	Mason	Concrete	Total	Percent
Berkeley County							
Bonneau	2,729.5	207.7	1,247.9	341.8	43.5	4,570.4	1.0
Charleston	12,483.3	6,388.8	1,722.6	4,364.7	1,020.3	25,979.7	5.9
Goose Creek	56,409.0	7,936.3	4,862.0	8,818.4	1,356.0	79,381.7	18.0
Hanahan	115,220.0	16,447.7	5,426.8	28,198.7	5,839.4	171,132.6	38.8
Jamestown	741.9	85.2	273.5	97.7	14.2	1,212.5	0.3
Moncks Corner	32,389.9	8,528.5	5,541.8	7,521.6	1,500.8	55,482.5	12.6
St. Stephen	6,917.3	1,613.7	3,640.8	1,662.9	345.1	14,179.8	3.2
Summerville	60,050.8	9,066.4	9,167.3	9,492.1	1,438.6	89,215.2	20.2
County	11,557.8	50,274.2	31,882.7	60,497.9	11,557.8	441,154.3	100.0
Dorchester County							
Harleyville	337.6	41.0	57.6	98.0	8.3	542.5	0.4
North Charleston	46,271.9	4,723.8	7,471.7	2,063.2	895.9	61,426.5	42.4
Reevesville	47.5	2.3	6.8	15.6	0.5	72.6	0.1
Ridgeville	229.7	57.1	59.3	99.9	12.9	458.8	0.3
St. George	875.4	162.0	230.0	165.9	43.9	1477.2	1.0
Summerville	56,764.7	79,17.5	10,750.6	4,055.8	1,496.1	80,984.7	55.9
County	104,526.8	12,903.7	18,576.0	6,498.3	2,457.6	144,962.3	100.0

The total amount of damage for a Category three storm is estimated at \$441,154,300 for the incorporated areas of Berkeley County. Total amount of damage is estimated at \$144,962,300 for the incorporated areas of Dorchester County. The results of the Category three suggest that the Hanahan, Summerville, Goose Creek, and Moncks Corner jurisdiction would be the most affected areas within Berkeley County with a with damage equaling 38.8%, 20.2%, 18.0% and 12.6%, respectively (Table VII.7). Results for Dorchester County showed that the Summerville and North Charleston

jurisdictions would experience 55.9% and 42.4%, respectively, of the total damage estimated for the incorporated areas of the County, while other jurisdictions would experience minimal to no damage (Table VII.7).

Assuming a Category 5 storm passed directly through or within close proximity of the Counties, with all parts of the Counties experiencing the same wind speeds, an analysis of the damage was assessed. Results are presented in Table VII.8.

Table VII.8: Damage assessments for a Category 5 storm event. Note: Dollar value in thousands.

Jurisdictions	Wood	Steel	Mobile Home	Mason	Concrete	Total	Percent
Berkeley County							
Bonneau	2.6	0.06	1.1	0.2	0.02	3.9	3.0
Charleston	17.8	3.30	2.4	2.9	0.70	27.1	21.0
Goose Creek	11.4	0.96	2.7	0.9	0.25	16.2	12.6
Hanahan	33.8	0.16	2.0	3.8	0.02	39.8	30.9
Jamestown	1.3	0.03	0.5	0.1	0.01	1.9	1.5
Moncks Corner	15.3	0.25	2.8	1.6	0.05	20.0	15.5
St. Stephen	4.2	0.07	1.9	0.4	0.00	6.5	5.1
Summerville	7.0	0.10	5.8	0.5	0.00	13.4	10.4
County	93.5	4.9	19.1	10.3	1.0	128.9	100
Dorchester County							
Harleyville	0.0	0.00	0.0	0.0	0.00	0.0	0.0
North Charleston	60.6	0.50	2.0	5.7	0.20	69.0	71.1
Reevesville	0.0	0.00	0.0	0.0	0.00	0.0	0.0
Ridgeville	0.0	0.00	0.0	0.0	0.00	0.0	0.0
St. George	0.0	0.00	0.0	0.0	0.00	0.0	0.0
Summerville	23.1	0.45	2.5	2.0	0.02	28.1	28.9
County	83.7	1.0	4.5	7.7	0.2	97.1	100

The total amount of damage for a Category 5 storm is estimated at \$128,900 for the incorporated areas of Berkeley County. Total amount of damage is estimated at \$97,100 for Dorchester County. The results of the Category 5 storm suggest that jurisdictions like Hanahan, Charleston, Moncks Corner, and Goose Creek would be the most affected areas within Berkeley County with a with damage equaling 30.9%, 21.0%, 15.5% and 12.6%, respectively (Table VII.8). Results for Dorchester County showed that North Charleston and Summerville jurisdictions would experience 71.1% and 28.9%, respectively, of structure damage, while other jurisdictions would experience minimal to no damage (Table VII.8). Estimated values are less than those obtained for a Category three scenarios due to the fact that the Hurricane Hugo (Category 5 scenario) was based on historic wind speed and barometric pressure storm data as oppose to a standardized set of wind speeds and pressures that was used in the category one and three scenarios. Therefore, smaller values were obtained for this scenario.

Earthquake

The most powerful earthquake in the vicinity was the Charleston earthquake of 1886 which had a magnitude (M_L) of 6.9. A scenario was performed based on that event using the same epicenter location and magnitude. A depth of 10 kilometers was used for the epicenter. Results are presented in Table VII.9.

Table VII.9: Damage assessment for an earthquake event of magnitude 6.9. **Note:** Dollar value in thousands

Jurisdictions	Wood	Steel	Mobile Home	Mason	Concrete	Total	Percent
Berkeley County							
Bonneau	98.9	17.5	64.9	48.5	6.3	236.0	0.1
Charleston	7,485.8	6,861.1	860.7	7,085.1	1,611.4	23,904.1	12.4
Goose Creek	4,553.3	2,521.5	1,305.1	30,21.1	11,374.7	22,775.7	11.8
Hanahan	41,213.9	13,566.0	3,323.0	23,318.4	33,504.0	114,925.2	59.6
Jamestown	48.0	13.2	23.4	22.6	3.7	110.9	0.1
Moncks Corner	1,886.0	793.2	495.6	1,389.3	749.6	5,313.6	2.8
St. Stephen	170.1	91.8	138.9	171.1	34.3	606.2	0.3
Summerville	7,866.0	4,158.0	3,754.0	6,026.0	3,058.0	24,862.0	12.9
County	63,321.9	28,022.3	9,965.5	41,082.1	50,341.9	192,733.8	100.0
Dorchester County							
Harleyville	451.1	213.1	204.4	266.3	57.4	1,192.3	0.2
North Charleston	248,268.0	74,823.2	16,318.6	79,306.9	20,083.1	438,799.8	55.5
Reevesville	117.0	27.6	61.4	53.3	7.9	267.2	0.0
Ridgeville	493.7	404.4	318.2	472.9	140.7	1,829.9	0.2
St. George	1,305.1	1,203.6	444.6	1,307.2	526.6	4,787.1	0.6
Summerville	138,821.4	61,765.2	19,151.0	104,181.7	19,283.7	343,203.1	43.4
County	389,456.3	138,437.1	36,498.3	185,588.3	40,099.4	790,079.4	100.0

The results of the assessment for a 6.9 magnitude earthquake suggest that Hanahan (59.6%), Summerville (12.9%), Charleston (Daniel Island; 12.4%) and Goose Creel (11.8%) would experience more damage than any other jurisdiction in Berkeley County. The total amount of damage is estimated at \$192,733,800 million for the incorporated areas of the County. The estimated damage for Dorchester County is at \$790,079,400. The results of the assessment suggest that the jurisdictions that would experience more damage are: North Charleston (42.4%) and Summerville (97.7%), while other jurisdictions would experience minimal damage.

7. Hazardous Materials

The identification of hazardous materials sites facilities was used to provide general information of their location. Additionally, this information aims to show areas that may be at risk due to their proximity to some of these facilities. Some radial distances were used to identify those areas at major risk. The American Society for Testing and Materials (ASTM) develops standards used in searching for regulated

facilities that manufacture, use, store, or are disposal sites for hazardous materials and waste. According to these standards, the following radial distances were considered in evaluating each of the site’s potential to effect surrounding properties:

Table VII.10: Radial distances used to highlight vulnerable areas to hazardous materials and waste contamination

Facilities	Radial Distances
MSW	1.5 miles
HAZGEN	1.25 miles
RAD	2.0 miles
TRI	1.25 miles
TSD	1.5 miles
CERCLA	2.0 miles

a) Hazardous Generators (HAZGEN)

A greater concentration of HAZGEN facilities were observed in Summerville, Goose Creek, Moncks Corner, and Hanahan areas for Berkeley County. In Dorchester County the majority of facilities were located within Summerville and North Charleston areas. Refer to Appendix F for detailed maps.

b) Toxic Release Inventory (TRI)

A greater concentration of TRI facilities were observed in Summerville, Goose Creek, Moncks Corner, and at the Naval Weapons Station areas for Berkeley County. In Dorchester County the majority of facilities were located areas like Summerville, Ridgeville and Harleyville. Refer to Appendix F for detailed maps.

c) CERCLA and Radiological Waste Generators (RAD)

No CERCLA sites were identified for Berkeley County, and only two RAD facilities were identified: one in Summerville near I-26 and the second one at the Naval Weapons Station area. In Dorchester County two CERCLA sites were identified: one in Summerville and the second one north of Ridgeville. Also, two RAD facilities were identified: one in Harleyville, the other in the Oakbrook area of Summerville. Refer to Appendix F for detailed maps.

8. Treatment, Storage, Disposal (TRD) and Municipal Solid Waste (MSW)

A greater concentration of TRD facilities were observed in areas like Hanahan and at the Naval Weapons Station in Berkeley County. Only one MSW has been identified for this county located north of Goose Creek.

A greater concentration of TRD facilities was observed in areas north of Harleyville in Dorchester County. Two MSW facilities were identified for this county located north of Ridgeville. Refer to Appendix F for detailed maps.

9. Severe Repetitive Loss Properties

Another indication of the hazards threatening Berkeley and Dorchester Counties is the frequency with which properties are repeatedly damaged by disaster events. The properties, which may be buildings, roads, utilities, or similar construction, are termed “repetitive loss properties.” Properties can fall into this classification based on repeated damages from a variety of hazards. Ten (10) repetitive loss properties have been identified in Berkeley and Dorchester counties, none of which have been mitigated; four (4) repetitive loss properties have been insured.

Municipality	Address	Occupancy	Mitigated?	Insured?
Berkeley County				
Hanahan	1125 Brookside Drive	Single-family	No	Yes
Hanahan	1226 Brookside Drive	Single-family	No	Yes
Hanahan	1273 Redeemer Road	Single-family	No	No
Hanahan	1254 Redeemer Road	Single-family	No	No
Hanahan	1275 Redeemer Road	Single-family	No	No
Hanahan	5903 Steward Street	Single-family	No	Yes
Dorchester County				
Summerville	Block A, Lot 1	2- to 4-family	No	No
Summerville	110 Holly Street	Single-family	No	Yes
Ladson	146 Harrison Drive	Single-family	No	No
Ladson	148 Harrison Drive	Single-family	No	No

10. Critical Facilities

Critical facilities are those facilities that are essential to the health and welfare of a community during and after a hazard event. This information is extremely important to consider not just the effects of a hazard event on a structure but also the effects that the interruption of services that the structure provides. Some critical facilities have been identified for Berkeley and Dorchester Counties. These facilities were overlay with the composite analysis of natural hazards and social factors used to determine most vulnerable areas.

There is no definitive definition of what is to be considered a critical facility. The definition will differ for each community. For the purposes of the BDHMP, a critical facility is a structure from which essential services and functions are provided. These services include

any activity that ensures that public safety activities and disaster response and recovery continue during and after a hazard event. Some of the facilities included in the map representation are:

1. Hospitals
2. Other Health Facilities
3. Emergency Facilities
4. Fire Stations
5. Shelters
6. Schools
7. Airport Facilities
8. Industrial Sites
9. Communication Facilities
10. Electric Power Facilities
11. Bridges
12. Roads
13. Rail Roads
14. Natural Gas Pipelines

A spatial representation of these facilities and their location in relation to risk areas is presented in Appendix F for Berkeley and Dorchester Counties.

11. Development Trends

Berkeley County

Since the turn of the century, Berkeley County has gained 112, 000 people. This gain continued between 1990 and 2000, with the County experiencing an 11 percent population growth. The following is a list of the planning areas of Berkeley County, its population and population increase between 1990 and 2000:

Planning Area	2000 Population	Number Difference 1990-2000	Percent Difference 1990-2000
Northwest Berkeley County	15,735	3,066	24.2%
Sangaree East	24,596	3,638	17.4%
Moncks Corner	14,890	1,955	15.1%
Goose Creek/Hanahan/Ladson	87,430	5,216	6.3%

As indicated by the table, the northwest area of Berkeley County experienced the highest percentage of growth, with the population growing over 24 percent. The Goose Creek/ Hanahan/ Ladson area experienced the largest increase in actual population, with an influx

of 5,216 new residents. The US Census estimated population projection for July 1, 2002 for Berkeley County was 145,274.

These new residents require new homes and the population growth in the area has made Berkeley County an enticing area for builders and developers. Between 1990 and 2000, there were 5,017 building permits issued for new single-family residents in Berkeley County. The majority of these permits, 3,138 were issued for the Goose Creek/ Hanahan/ Ladson planning area.

This increase in population and the concentration of new development increases the vulnerability of Berkeley County to a hazard event. It increases the number of people and structures that are susceptible to the effects of a hazard event. This type of vulnerability is called social vulnerability because it relates to the social characteristics of an area, not the hazard events that hit the area.

Dorchester County

Dorchester County has added 80,119 new residents this century. Over 16 percent of this growth occurred between 1990 and 2000. The following table is a list of the planning areas in Dorchester County, its population and population increase in the past ten years:

Planning Area	2000 Population	Number Difference 1990- 2000	Percent Difference 1990- 2000
St. George Area	13,096	597	5%
Dorchester County West	8,152	1,594	24%
Central Summerville	33,129	4,014	14%
Dorchester Road Corridor	42,036	7,148	20%

As shown in the table, the area in the west of the County experienced the highest percentage population growth, with the population growing 24 percent. The Dorchester Road Corridor experienced the highest actual population growth between 1990 and 2000, with 7, 148 new residents in the area. The US Census estimated population projection for July 1, 2002 was 100,833.

The population growth of Dorchester County has also made it a favorable place for new construction and development. There were 5,430 building permits issued for single-family houses between 1990 and 2000. The majority, 3,138, of these permits was issued in the Dorchester Road Corridor planning area.

An increase in population and new homes increases the vulnerability of an area to a hazard event. An increase in the number of people and the number of structures increases the potential for loss.

VIII. Appendix A: Mitigation Capabilities Assessment

A. Jurisdiction Policies for Control of Vulnerabilities

An important aspect of the vulnerability assessment process is to determine if the local government jurisdictions have policies, plans, codes or requirements in place that are intended to avoid or minimize the continuing development of properties that could be in harm's way from a future disaster. If local government's policies, plans and requirements address the hazards posing the greatest risk to the community, then the vulnerability to future disasters can be reduced. The following table provides a list of identified policies and codes in Berkeley and Dorchester Counties that relate to the hazard mitigation. These ordinances were utilized to provide background data about each jurisdiction. As each of these documents is updated any project or activity not already addressed will be incorporated as appropriate.

Jurisdiction	Comprehensive Plan	Zoning Ordinance and Land	Stormwater Drainage	Tax
		Development Regulations	Regulations	Increment Financing Ordinances
Berkeley County	Y	Y	Y	N
Bonneau	Y	Y	Y	N
Goose Creek	Y	Y	Y	Y
Hanahan	Y	Y	Y	Y
Jamestown	N	N	N	N
Moncks Corner	Y	Y	Y	N
St. Stephen	Y	Y	Y	N
Dorchester County	Y	Y	Y	N
Harleyville	Y	Y	Y	N
Reevesville	Y	N	N	N
Ridgeville	Y	Y	Y	N
St. George	Y	Y	Y	N
Summerville	Y	Y	Y	N

** It should be noted that Berkeley County has, in addition to the items listed in the table, Floodplain Management Regulations, Zoning Regulations, Subdivision Regulations, Land Development Regulations, Fire Prevention Codes, a Community Emergency Response Training Program, and are a member of the National Weather Service Storm Ready Communities.*

IX. Appendix B: Berkeley-Dorchester Hazard Mitigation Steering Committee

BERKELEY-CHARLESTON-DORCHESTER
COUNCIL OF GOVERNMENTS
2009 BOARD OF DIRECTORS

Section 2. Representation of Members - Each County and Municipality executing this agreement shall be entitled to representation on the Council according to the following schedule:

REPRESENTATIVE:

ELECTED/APPOINTED:

Berkeley County Council

1 Elected & 3 Appointed

Hon. Dan Davis

Hon. Phillip Farley

Hon. Steve Davis

Hon. Caldwell Pinckney, Jr.

Berkeley County Delegation

1 Elected & 1 Appointed

Hon. Joseph H. Jefferson

Hon. Elaine Morgan

Charleston County Council

3 Elected & 4 Appointed

Hon. A. Victor Rawl

Hon. Elliott Summey

Hon. Teddie Pryor

Hon. Robert J. Reid

Hon. Earl Mitchell

Hon. Sam Brownlee

Hon. Jack Hoey

Charleston County Delegation

3 Elected & 2 Appointed

Vacant

Hon. Robert Brown

Hon. Seth Whipper

(Larry Singletary - Regular Proxy)

Hon. Phillip Siegrist, Jr.

Hon. Tim Mallard

**BCD Council of Governments
Representation of Members
Page Two**

REPRESENTATIVE:

ELECTED/APPOINTED:

Dorchester County Council
Hon. Larry Hargett*
Hon. Jamie Feltner
Hon. Ralph James
Hon. Mathew L. Profit

1 Elected & 3 Appointed

Dorchester County Delegation
Michael Rose
Lester Dempsey

1 Elected & 1 Appointed

City of Charleston
Mayor Joseph P. Riley, Jr.
Hon. Louis Waring
Hon. Deborah Morinelli

3 Elected

City of North Charleston
Mayor R. Keith Summey*
Hon. Samuel L. Hart

2 Elected

City of Hanahan
Mayor Minnie N. Blackwell

1 Elected

Town of Mt. Pleasant
Kruger Smith
(Brad Morrison - Regular Proxy)

1 Elected

Town of Summerville
Hon. Aaron Brown

1 Elected

City of Goose Creek
Mayor Michael Heitzler *

1 Elected

City of Isle of Palms
Mayor Dick Cronin

1 Elected

Town of Moncks Corner
Hon. William W. Peagler

1 Elected

**BCD Council of Governments
Representation of Members
Page Three**

REPRESENTATIVE:	ELECTED/APPOINTED:
Town of St. George Mayor Anne Johnston	1 Elected
Town of St. Stephen Hon. Anne Keller	1 Elected
Town of Sullivan's Island Mayor Carl Smith (Andy Benke - regular proxy)	1 Elected
City of Folly Beach Mayor Carl Beckmann	1 Elected
Towns of Ravenel, Hollywood & Meggett Mayor Opal N. Baldwin	1 Elected
Town of Lincolnville Mayor Tyrone E. Aiken	1 Elected
Towns of Awendaw & McClellanville Mayor William Alston	1 Elected
Towns of Bonneau & Jamestown Hon. Allen June	1 Elected
Town of James Island Mayor Mary Clark (Mary Jo Thomas - Regular Proxy)	1 Elected
Towns of Kiawah & Seabrook William Wert	1 Elected
Towns of Reevesville, Harleyville & Ridgeville Mayor James Williams	1 Elected
James Island Public Service District Eugene Platt	1 Elected

**BCD Council of Governments
Representation of Members
Page Four**

REPRESENTATIVE:

ELECTED/APPOINTED

North Charleston Sewer District
Hon. Mary R. Miller *

1 Appointed

St. Andrews Public Service District
Vacant

1 Elected

1st District Highway Commissioner
Mr. Danny Isaac

1 Appointed

Board Member Emeritus
Hon. Gordan B. Stine, DDS

1 Appointed

* **Denotes OFFICERS**

X. Appendix C: Mitigation Goals Survey

Thank you for taking the time to complete this survey! It should take just a couple minutes. Please return your completed survey to BCDCOG by fax (843.529.400) or mail to BCDCOG

Attn: Alec Brebner
1362 McMillan Ave., Suite 100
N. Charleston, SC 29405

First, please tell us a bit about the local government or organization that you represent:

1. Please identify the following activities that your jurisdiction/organization currently performs related to hazard preparation/prevention by circling the corresponding letter:

- a. Fire protection regulations
- b. Earthquake building code requirements
- c. Wind building code requirements
- d. Floodplain management regulations
- e. Stormwater management regulations
- f. Riverine/stream erosion regulations
- g. Wetlands protection regulations
- h. Water quality regulations
- i. Stream dumping regulations
- j. Conservation of open space
- k. Potable water conservation regulations
- l. Water conservation/management
- m. Public education/awareness
- n. Other (*Please specify.*) _____

2. Please identify the following actions that your jurisdiction/organization currently performs or has recently performed protect property from hazards by circling the corresponding letter:

- a. Purchasing flood insurance for properties your jurisdiction/organization owns.
- b. Purchasing wind insurance for properties your jurisdiction/organization owns (including additional coverage for hurricanes).
- c. Purchasing earthquake insurance for properties your jurisdiction/organization owns.
- d. Designing new structures for your jurisdiction/organization that *exceed* minimal hazard resistance requirements.
- e. Retrofitting existing structures owned by your jurisdiction/organization to *meet or exceed* minimal hazard resistance requirements.
- f. Providing information regarding flood insurance to citizens.
- g. Providing information regarding earthquake insurance to citizens.
- h. Elevating/retrofitting repetitively damaged properties.
- i. Acquiring and relocating repetitively damaged properties.
- j. Demolition of repetitively damaged properties.
- k. Other (*Please specify.*) _____

The following 11 goals appear in the 2005 Berkeley-Dorchester Hazard Mitigation Plan. We ask you, as an elected or appointed official, to set hazard mitigation priorities for the Berkeley-Dorchester Region.

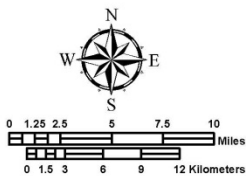
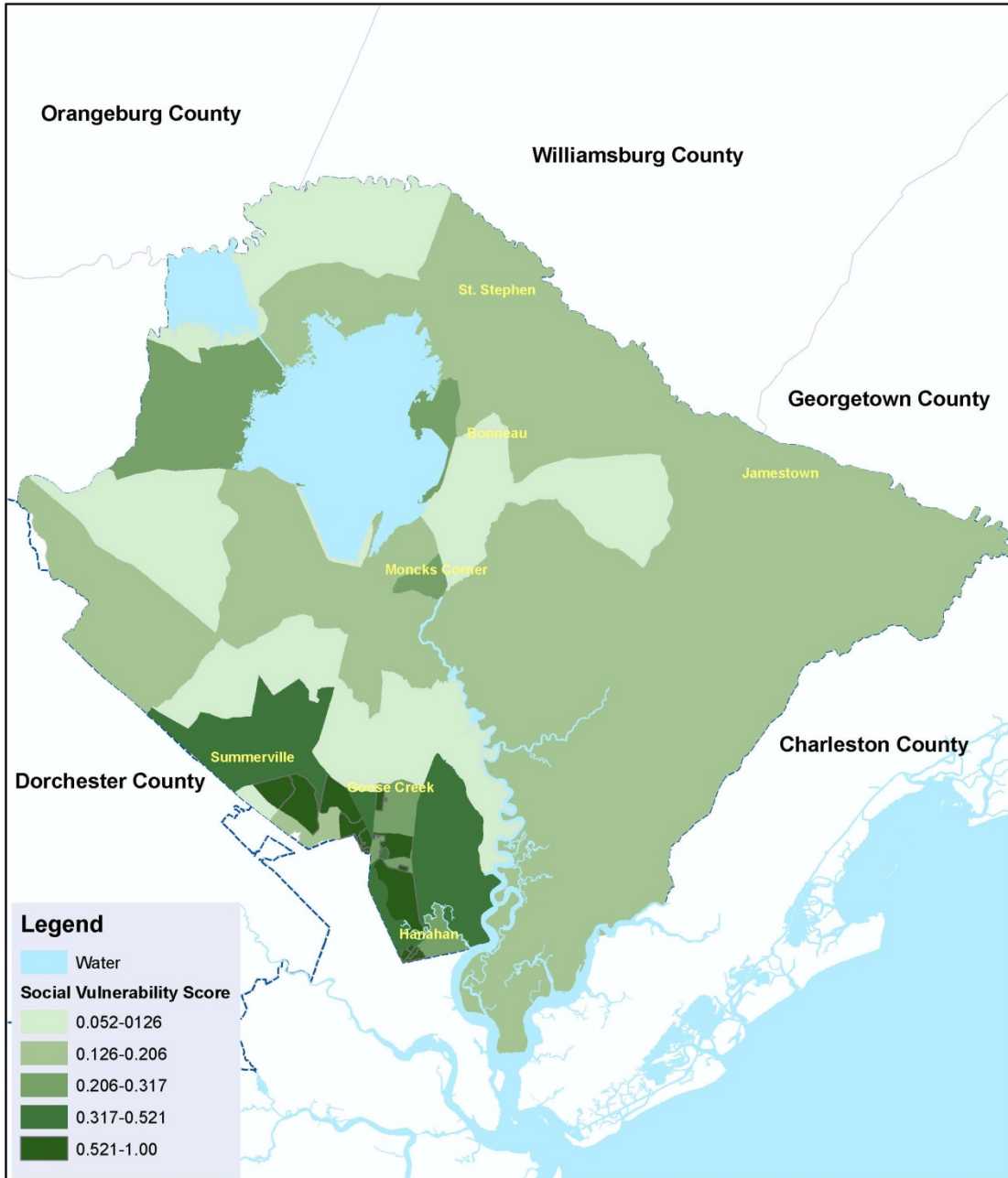
Please rate the following 11 goals in order of importance to your jurisdiction/organization (1 = most important and 11 = least important):

- _____ The Berkeley-Dorchester Region will strive to minimize the threat from a hazard event in order to protect the health, safety and welfare of the community's residents and visitors.
- _____ The region's public entities will strive to have the capability to initiate and sustain emergency response operations during and after a hazard event.
- _____ The availability and functioning of the community's infrastructure will not be significantly disrupted by a hazard event.
- _____ The region will strive to educate citizens to understand the hazards threatening local areas and the techniques to minimize vulnerability to those hazards.
- _____ The continuity of administration and services of local governments and public works will not be significantly disrupted by a hazard event.
- _____ Local governments will have the capability to develop, implement and maintain effective hazard loss reduction programs.
- _____ Local governments will strive to minimize the vulnerability of homes, institutions and places of business and employment to hazard events.
- _____ The policies and regulations of local government and public entities will support effective hazard mitigation programming throughout the community.
- _____ The region will strive to reduce the impact of a hazard event on the economic stability of the community.
- _____ All sectors of the community will work together to create a disaster resistant region.

If you have additional comments, please write them below. You may also share them with Alec Brebner or Ileana La Torre at BCDCOG by telephoning (843)529-0400.

Thanks again for taking the time to complete and return this survey! Your input is extremely valuable to the plan! Please send your completed survey to BCDCOG by September 16, 2009. It will be compiled into results for review by the hazard mitigation planning committee at its next meeting.

XI. Appendix D: Demographic Vulnerable Zones Maps

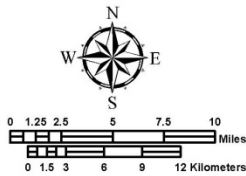
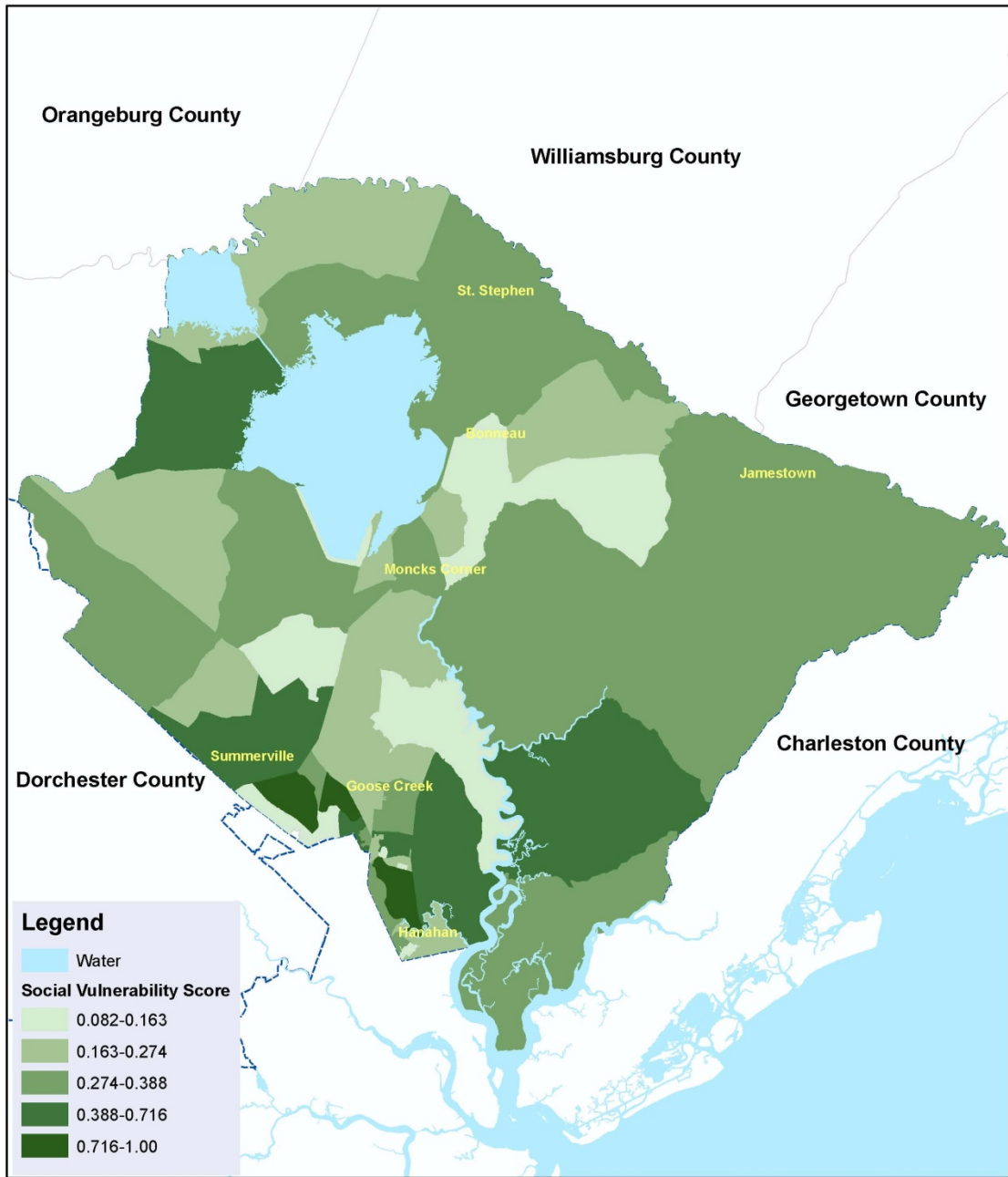


Socially Vulnerable Zones
Berkeley County Total Population,
Population Density, Housing Units

Data Source: US Census Bureau,
Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Map\Berkeley Hazards.mxd



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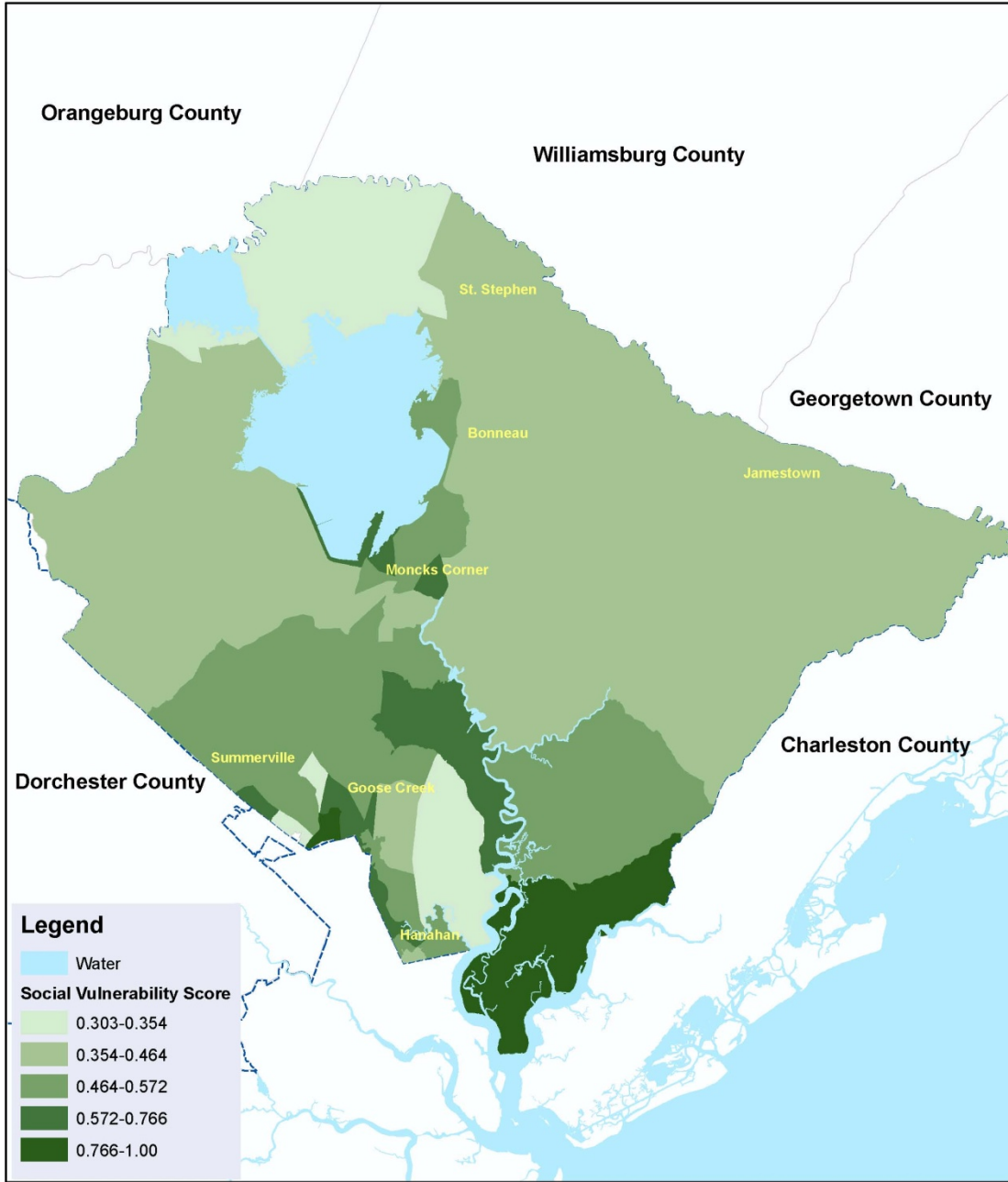
Socially Vulnerable Zones

Berkeley County Female Population, Non-white Population, Age <18 and >65

Data Source: US Census Bureau,
Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Map\Berkeley Hazards.mxd



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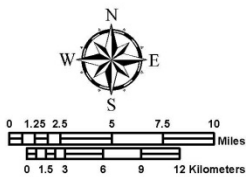


Legend

Water

Social Vulnerability Score

- 0.303-0.354
- 0.354-0.464
- 0.464-0.572
- 0.572-0.766
- 0.766-1.00



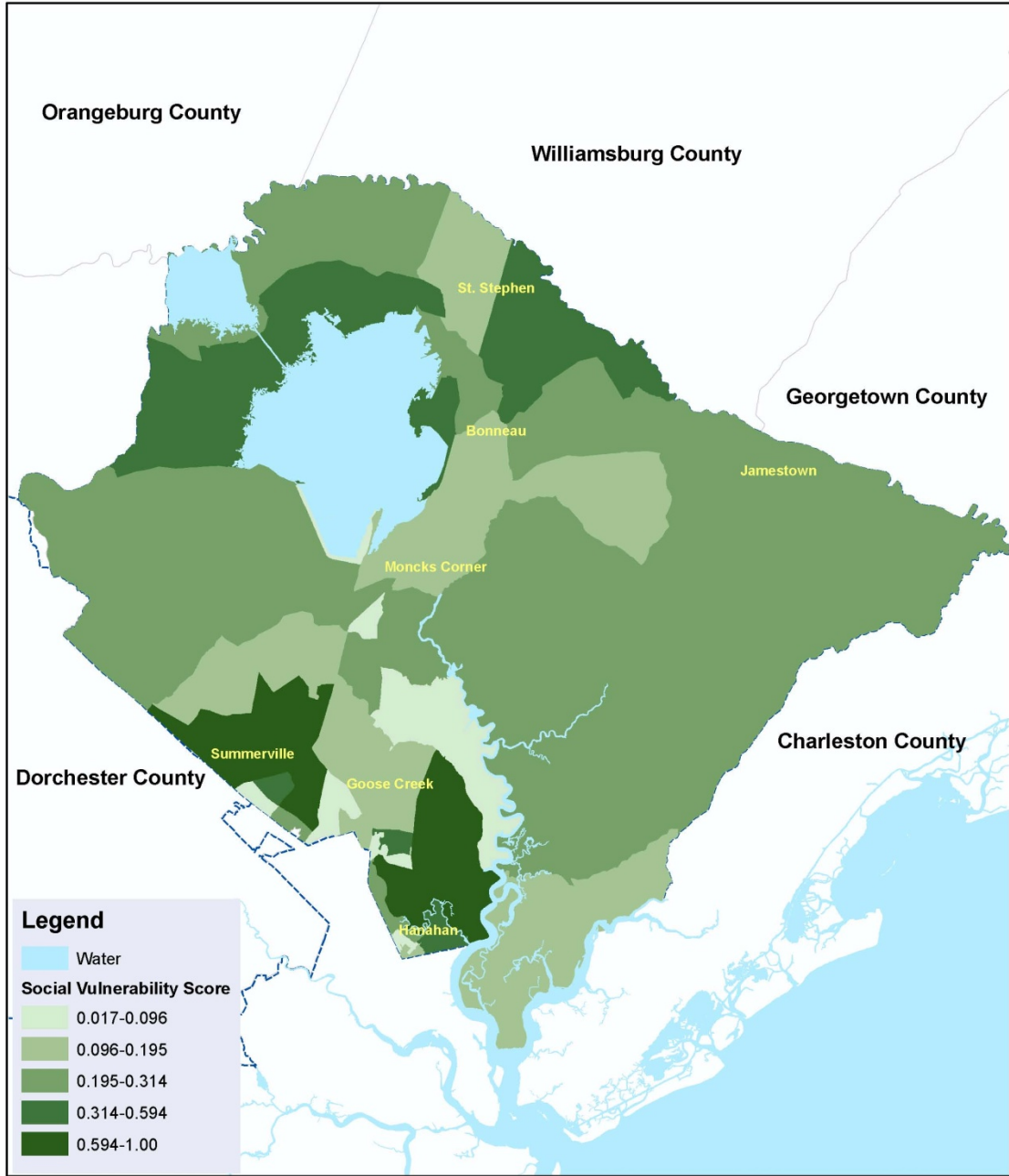
Socially Vulnerable Zones

Berkeley County Mean House Values

Data Source: US Census Bureau,
 Census Tiger Files, Berkeley County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: V:\Planning Services\hazard Mitigation Plan Update
 (FEMA-2009)\BDH\MP_2010\Mapst\Berkeley Hazards.mxd

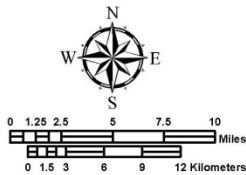


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Legend

- Water
- Social Vulnerability Score**
- 0.017-0.096
- 0.096-0.195
- 0.195-0.314
- 0.314-0.594
- 0.594-1.00



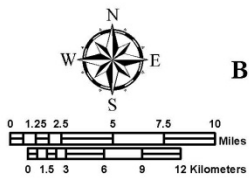
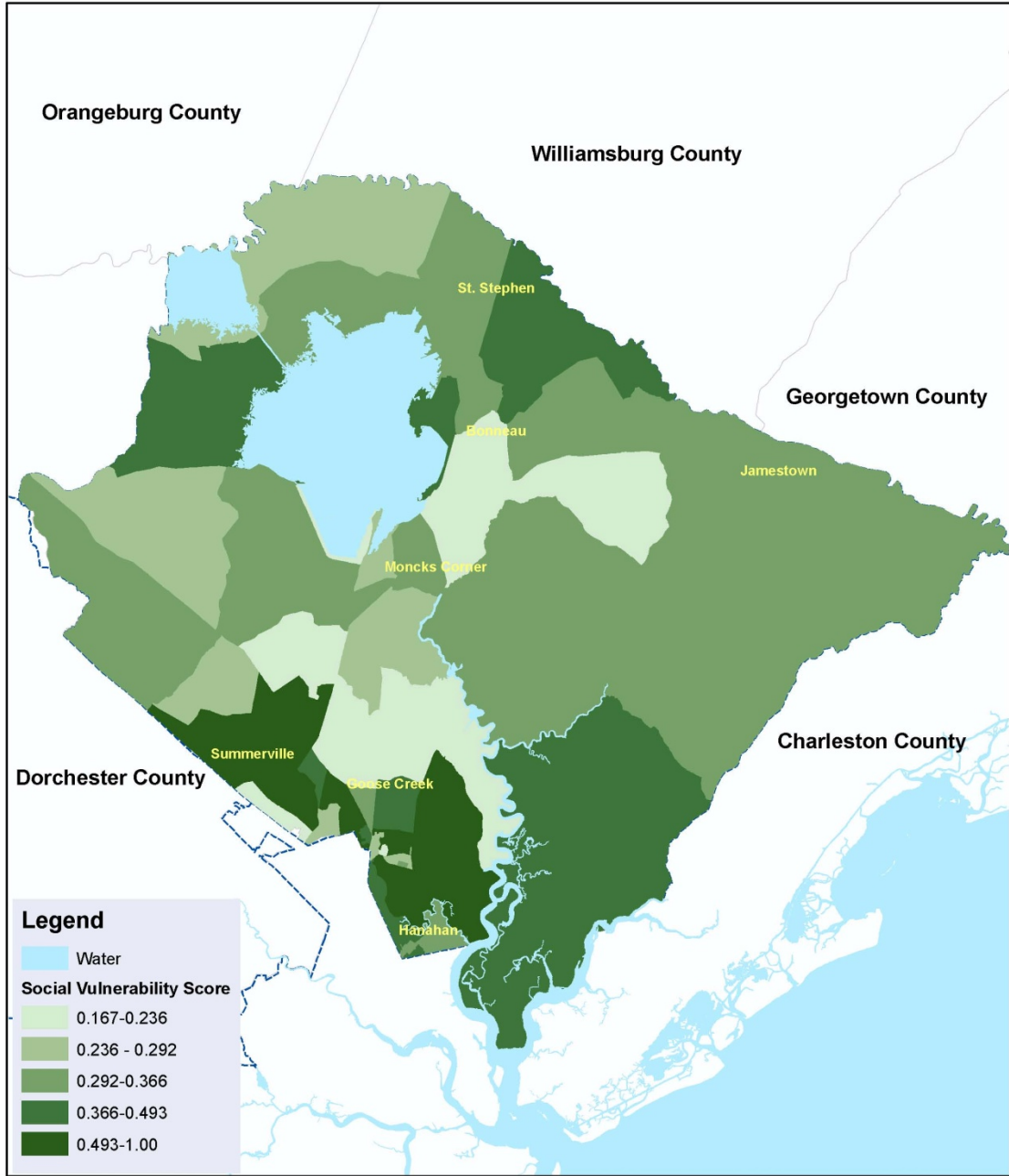
Socially Vulnerable Zones

Berkeley County Renter Units and Mobile Homes

Data Source: US Census Bureau,
 Census Tiger Files, Berkeley County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: \Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Map\Berkeley Hazards.mxd



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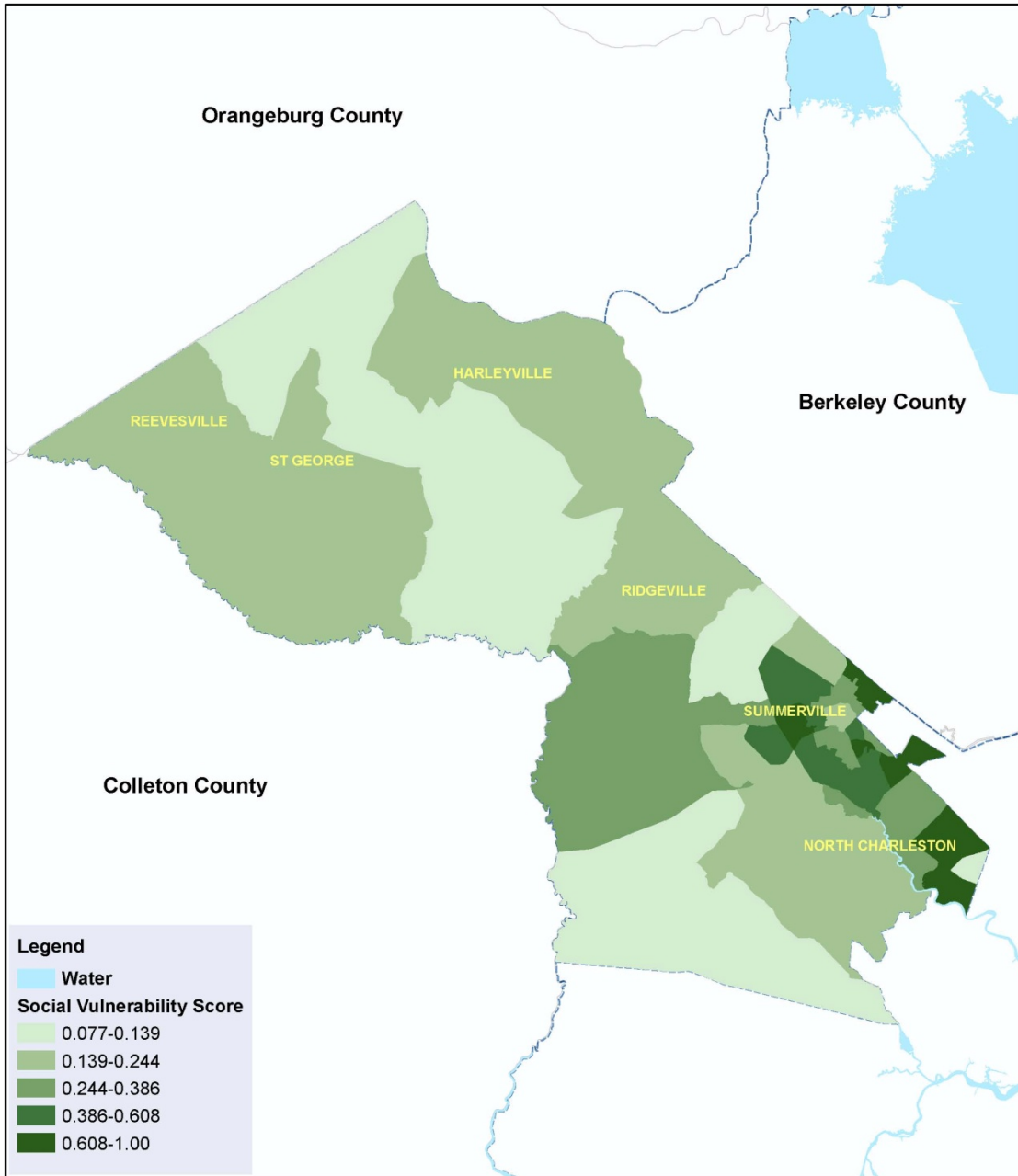
Socially Vulnerable Zones

Berkeley County Composite of All Demographic Variables

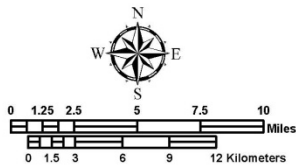
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 Census Tiger Files, Berkeley County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: \Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Map\Berkeley Hazards.mxd

BCDC
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 COUNCIL OF GOVERNMENTS
 320 Williamsburg Road, 5th
 North Charleston, South Carolina 29405
 803.782.6600
 www.bcdc.org

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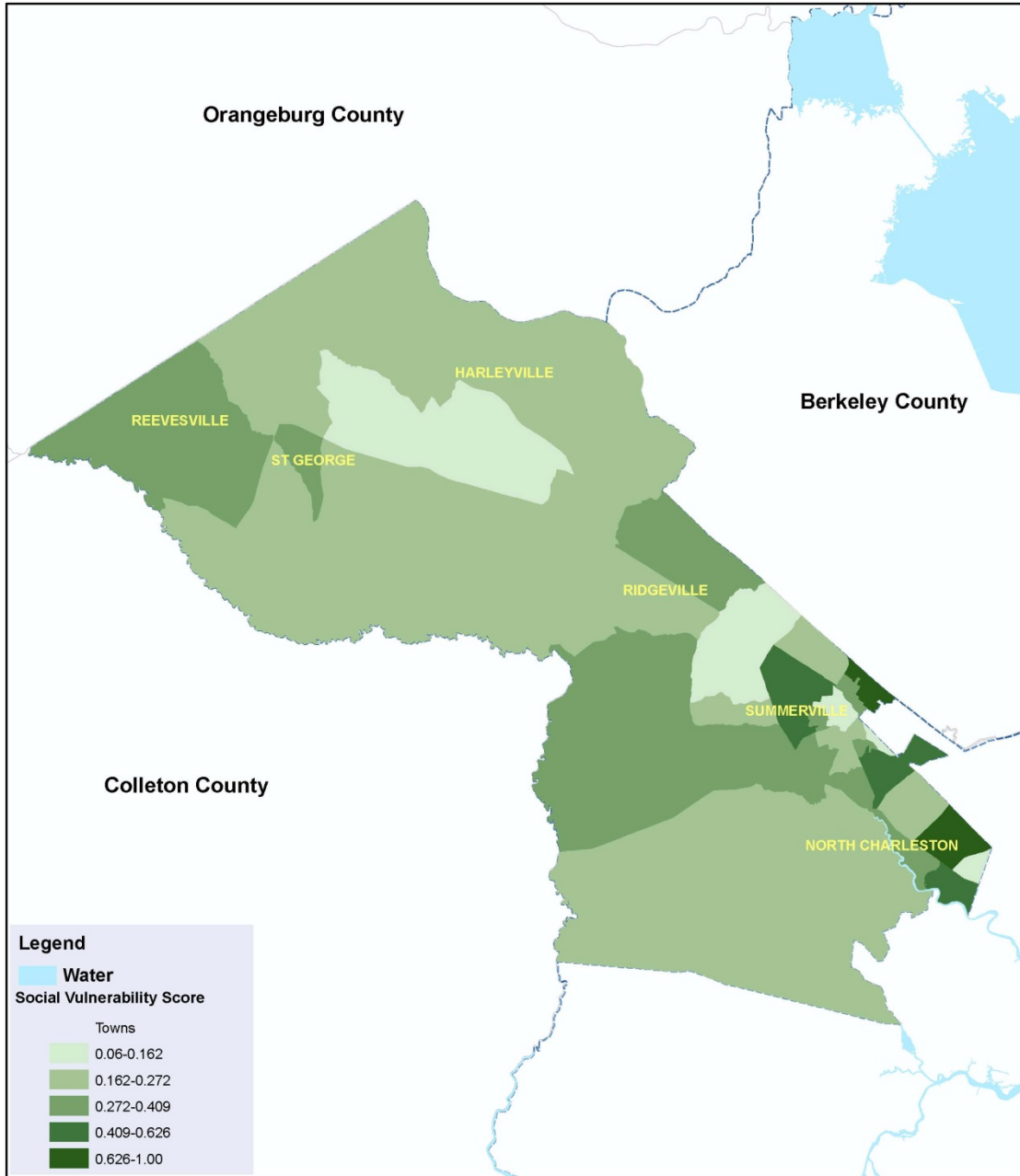
Socially Vulnerable Zones Dorchester County Total Population, Population Density, Housing Units



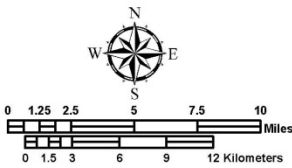
Data Source: US Census Bureau,
Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd



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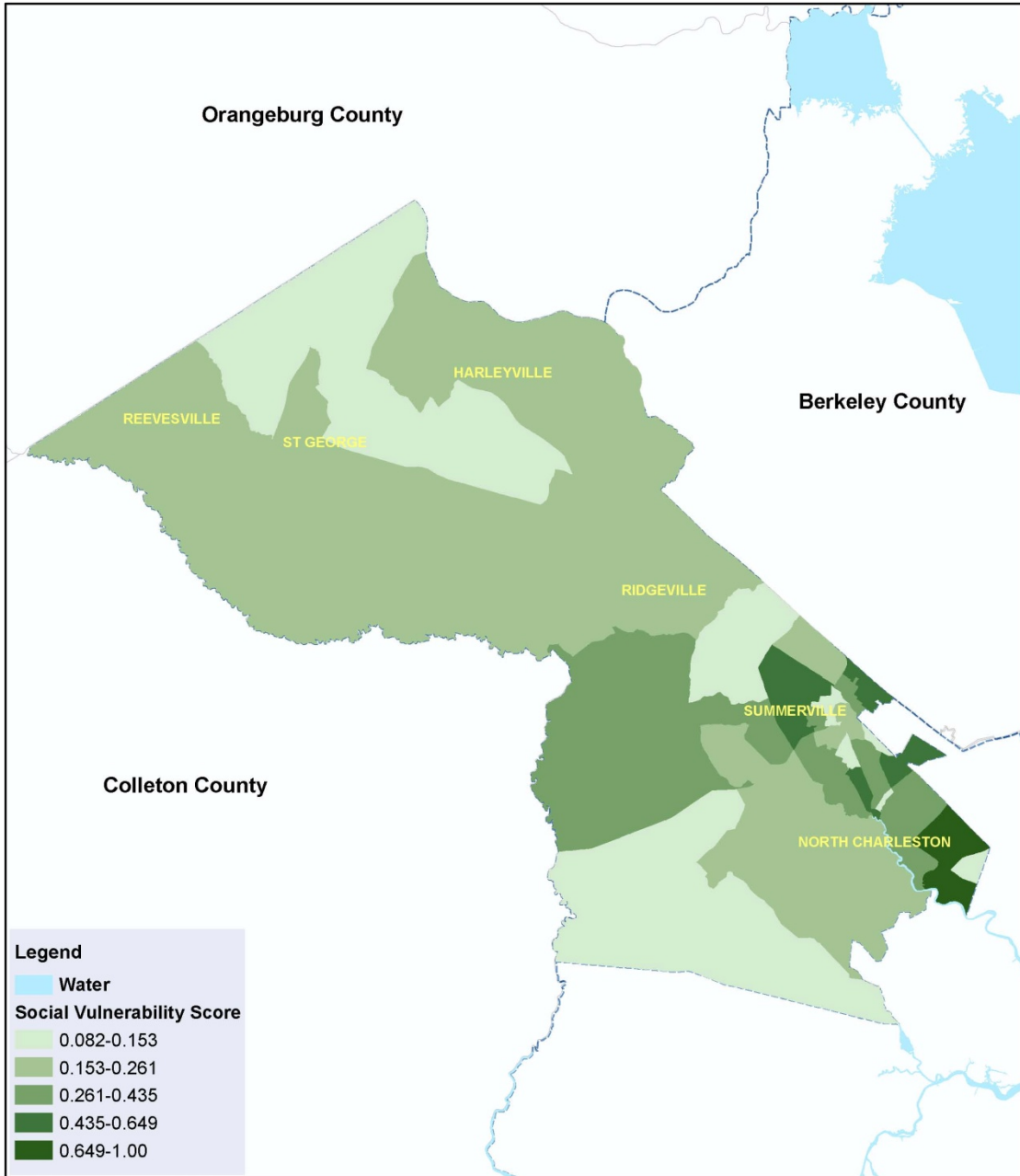
Socially Vulnerable Zones Dorchester County Female Population, Non-white Population, Age <18 and >65



Data Source: US Census Bureau,
Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd



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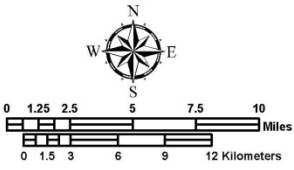


Legend

Water

Social Vulnerability Score

- 0.082-0.153
- 0.153-0.261
- 0.261-0.435
- 0.435-0.649
- 0.649-1.00



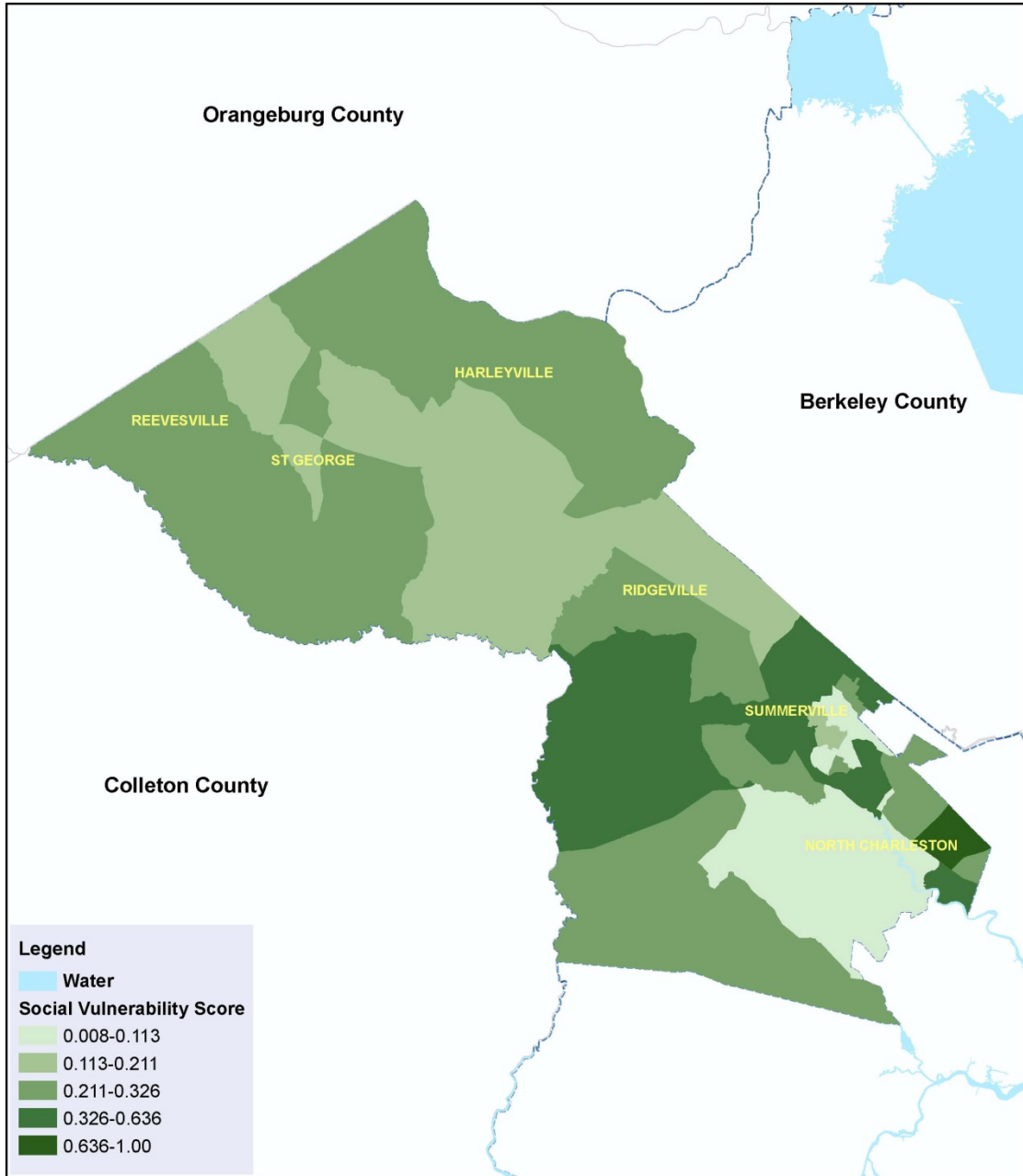
Socially Vulnerable Zones Dorchester County Mean House Values

Data Source: US Census Bureau,
Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
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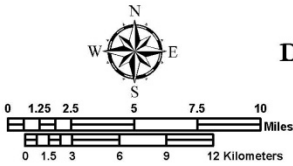
BERKELEY-CHARLESTON DORCHESTER
COUNTY OF GOVERNMENTS
1500 Middlebrook Road, 2nd Floor
Summerville, South Carolina 29586
(843) 884-6000 Fax: (843) 884-6002

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Legend

- Water
- Social Vulnerability Score**
- 0.008-0.113
- 0.113-0.211
- 0.211-0.326
- 0.326-0.636
- 0.636-1.00



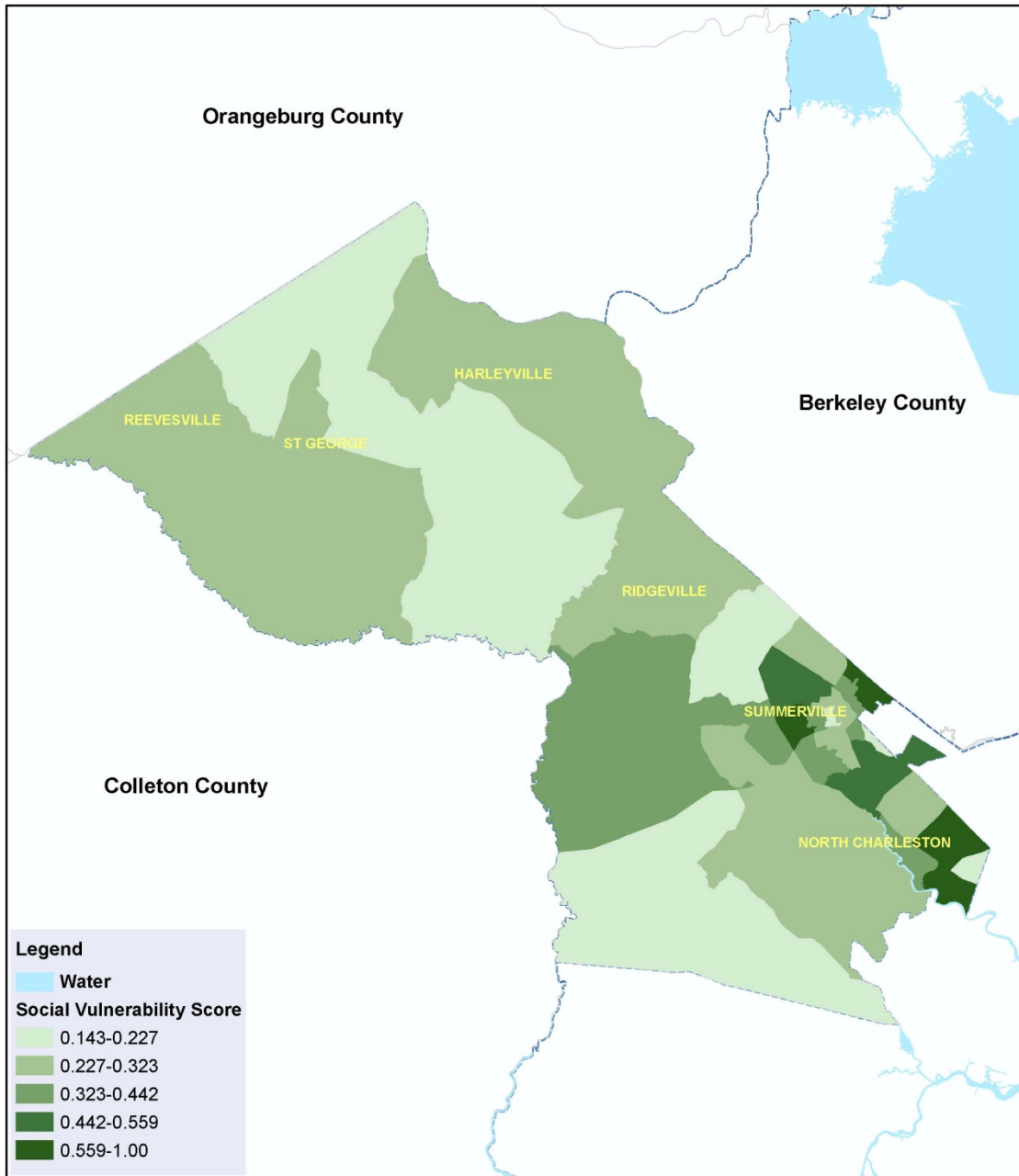
Socially Vulnerable Zones

Dorchester County Renter Units and Mobile Homes

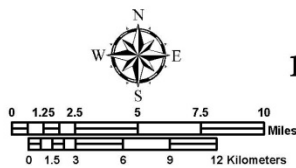
Data Source: US Census Bureau,
Census Tiger Files, Dorchester County GIS
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Socially Vulnerable Zones Dorchester County All Demographic Values



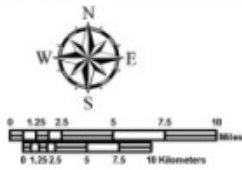
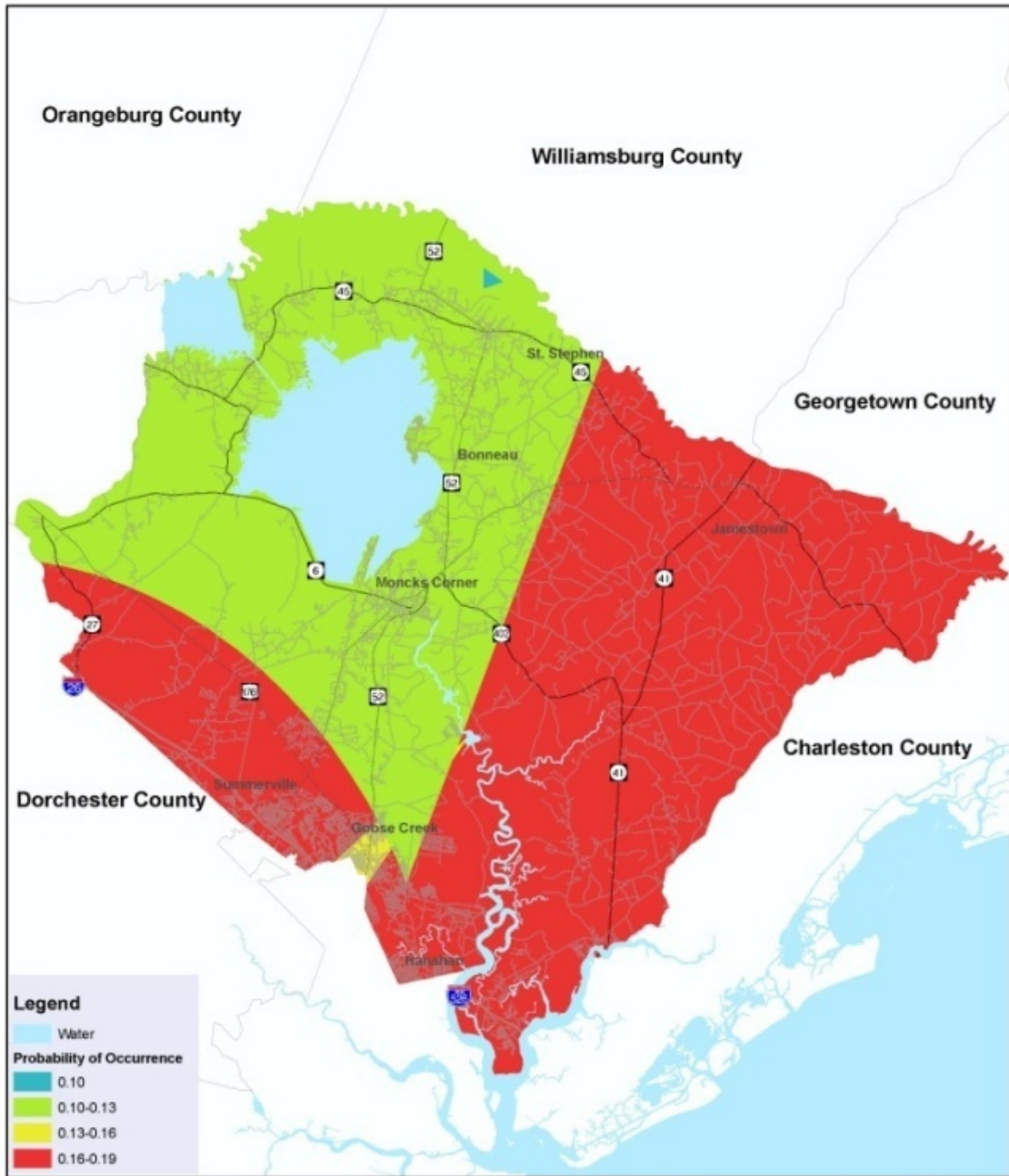
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(803) 585-3333

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XII. Appendix E: Vulnerability Assessment Maps

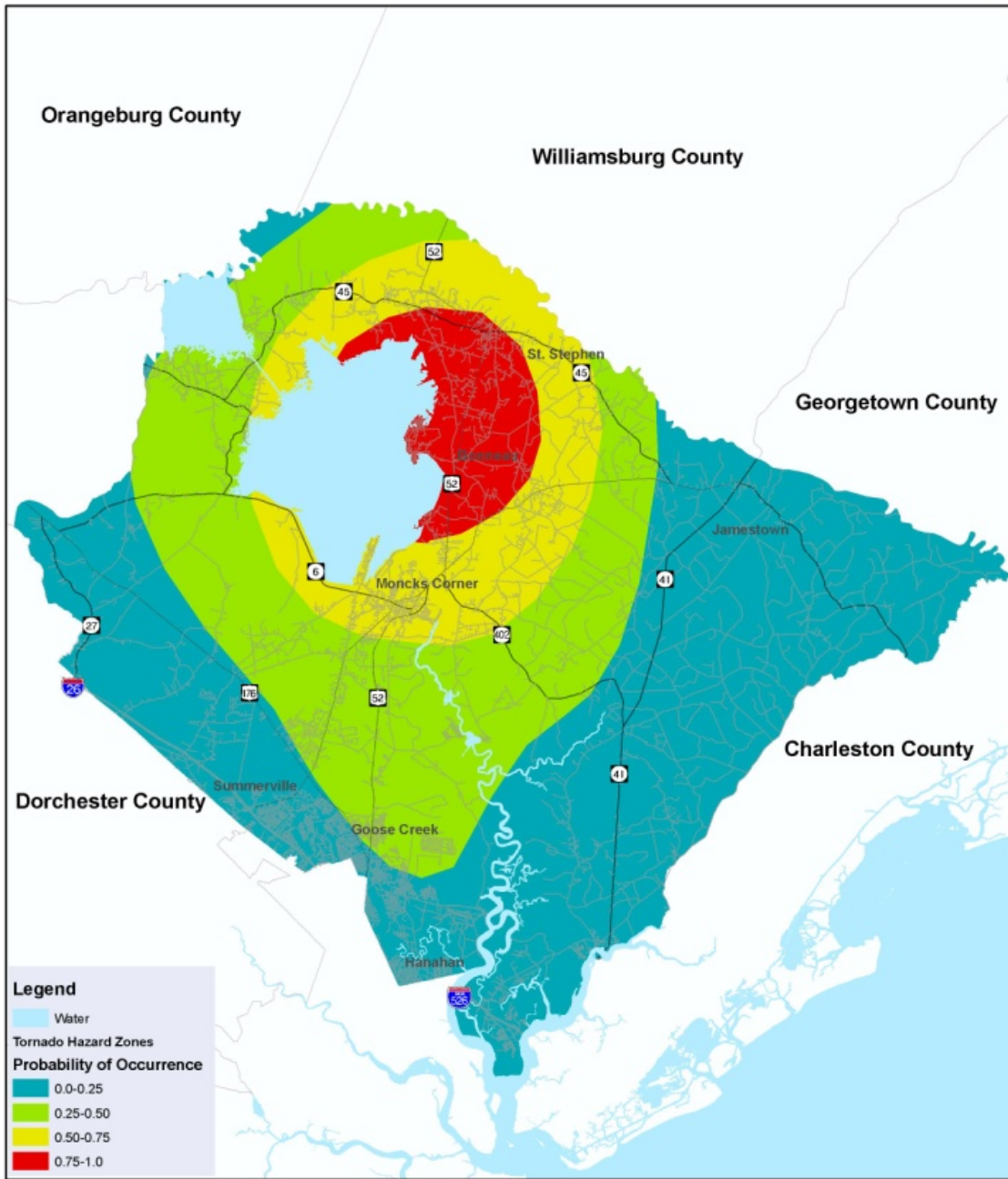


Hazard Vulnerable Zones Berkeley County Storm Hazard Zones

Data Source: NOAA Coastal Services Center,
USC Hazard Research Lab,
Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
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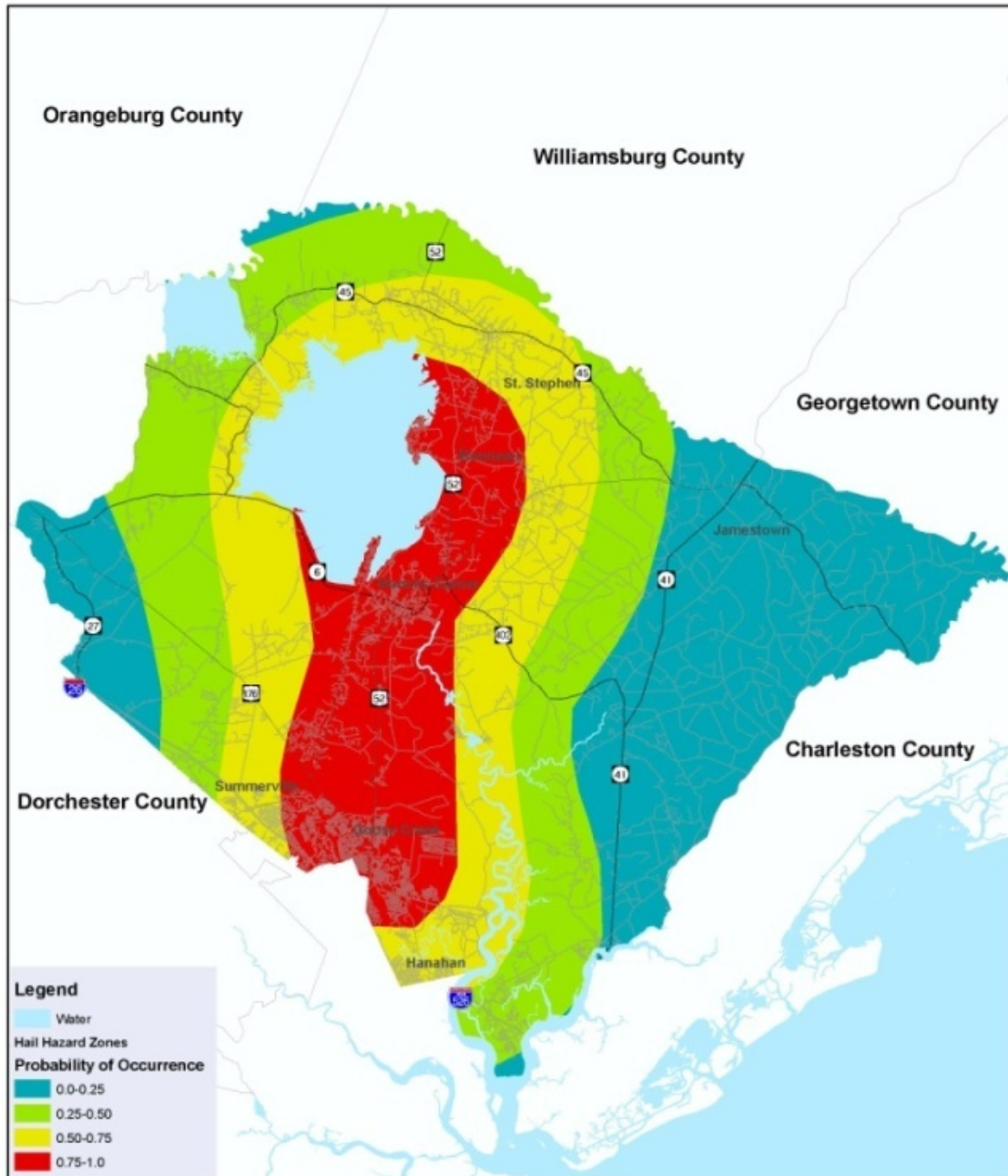


Hazard Vulnerable Zones Berkeley County Tornado Hazard Zones

Data Source: National Data Climatic Center (NCDC),
USC Hazard Research Lab,
Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
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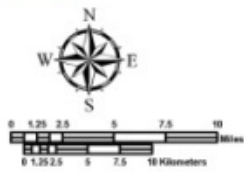
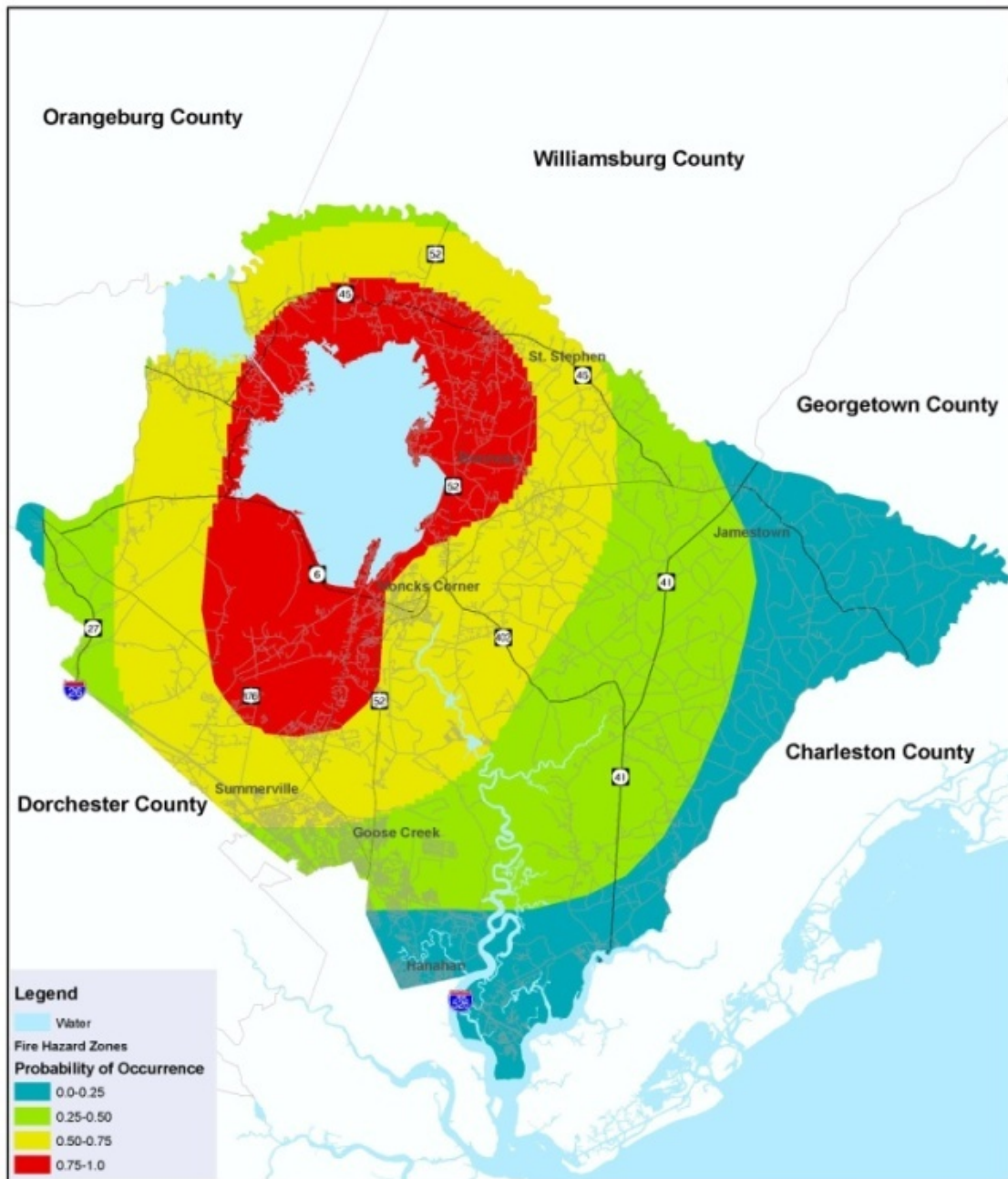


Hazard Vulnerable Zones Berkeley County Hail Hazard Zones

Data Source: NOAA SPC-Historical Severe Weather Service,
USC Hazard Research Lab
Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
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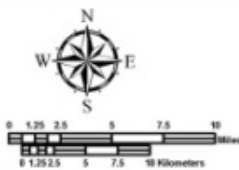
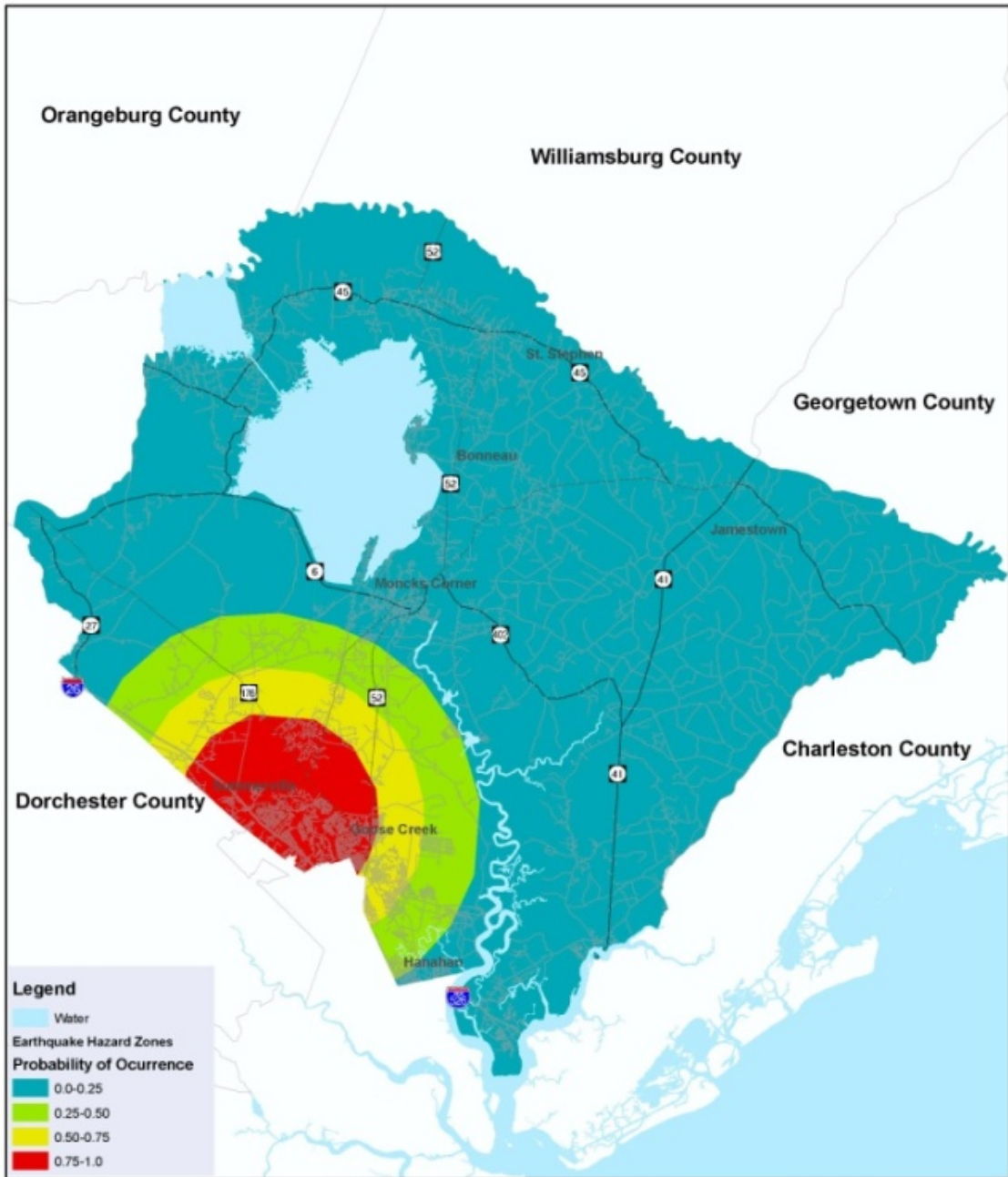


Hazard Vulnerable Zones Berkeley County Fire Hazard Zones

Data Source: SC Forestry Commission,
Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Map\Berkeley Hazards.mxd



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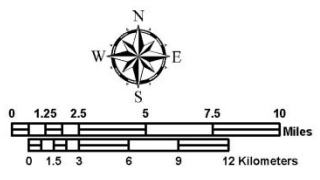
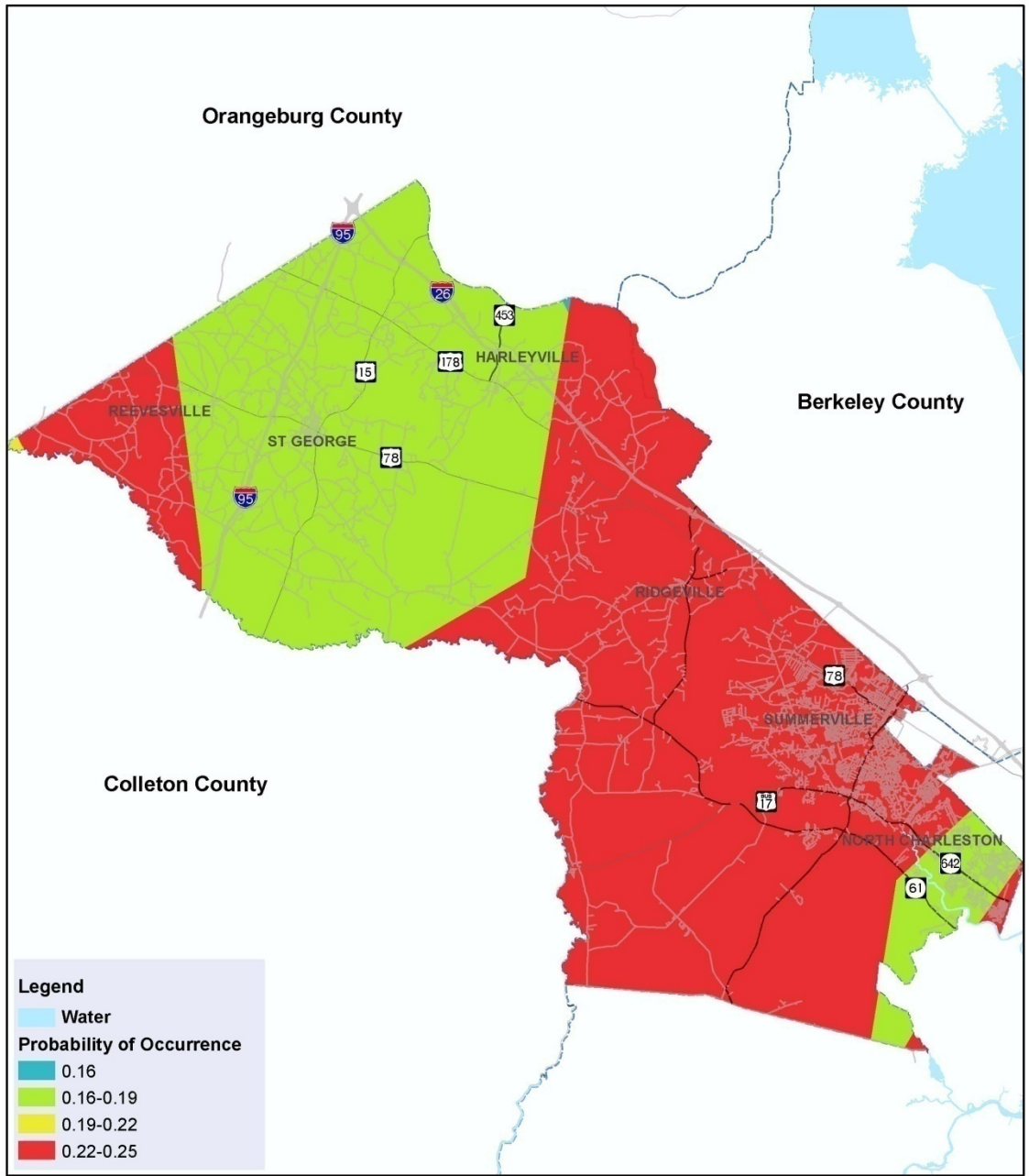


Hazard Vulnerable Zones Berkeley County Earthquake Hazard Zones

Data Source: USC Seismic Network,
USC Hazard Research Lab,
Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(\EMA-2009\BCH-IMP_2010\Map\Berkeley Hazards.mxd)



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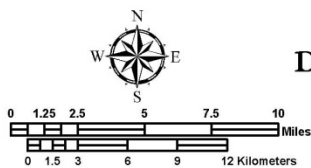
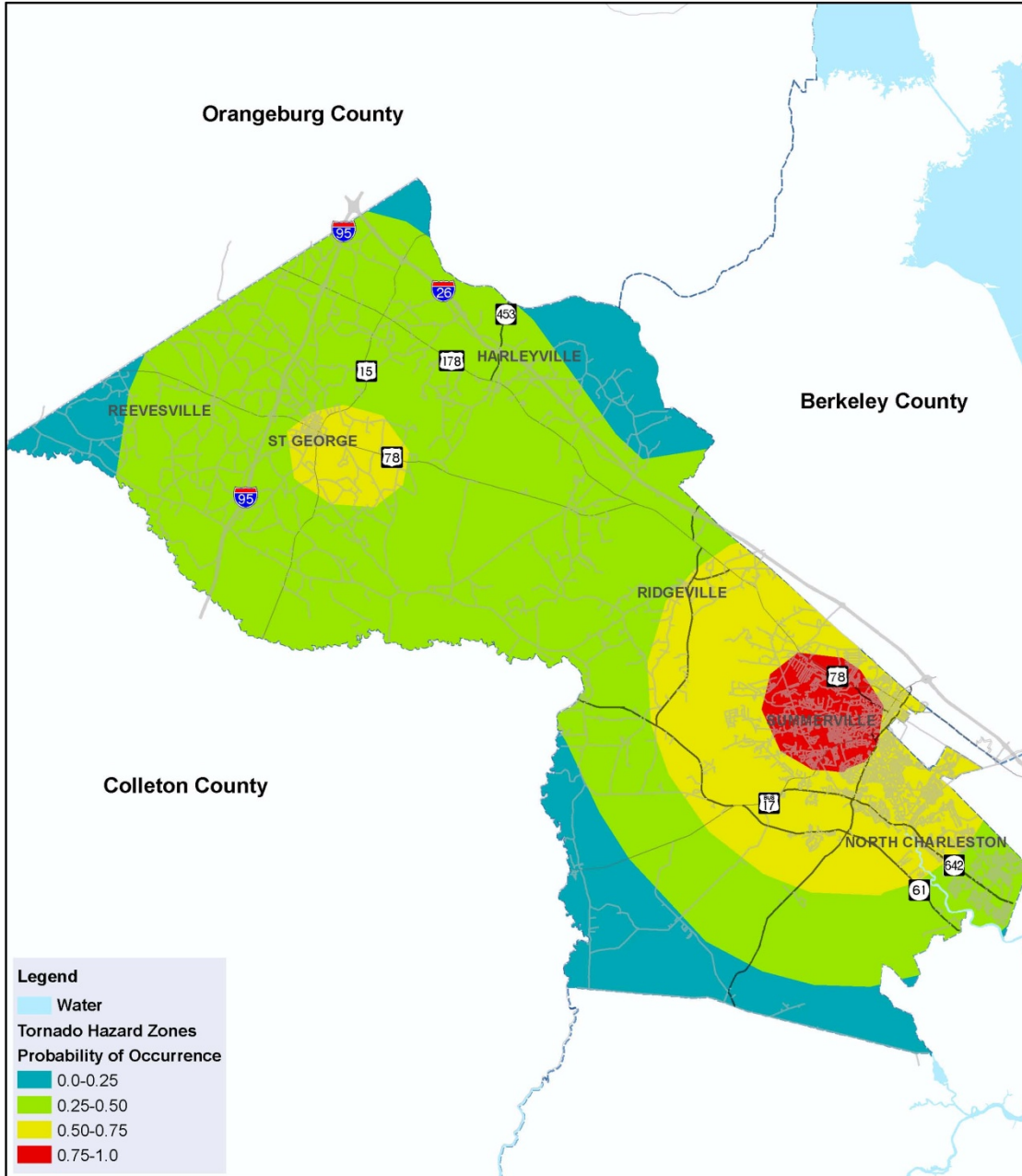
Hazard Vulnerable Zones

Dorchester County Storm Hazard Zones

Data Source: NOAA Coastal Services Center,
 USC Hazard Research Lab
 Census Tiger Files, Dorchester County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: V:\Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd

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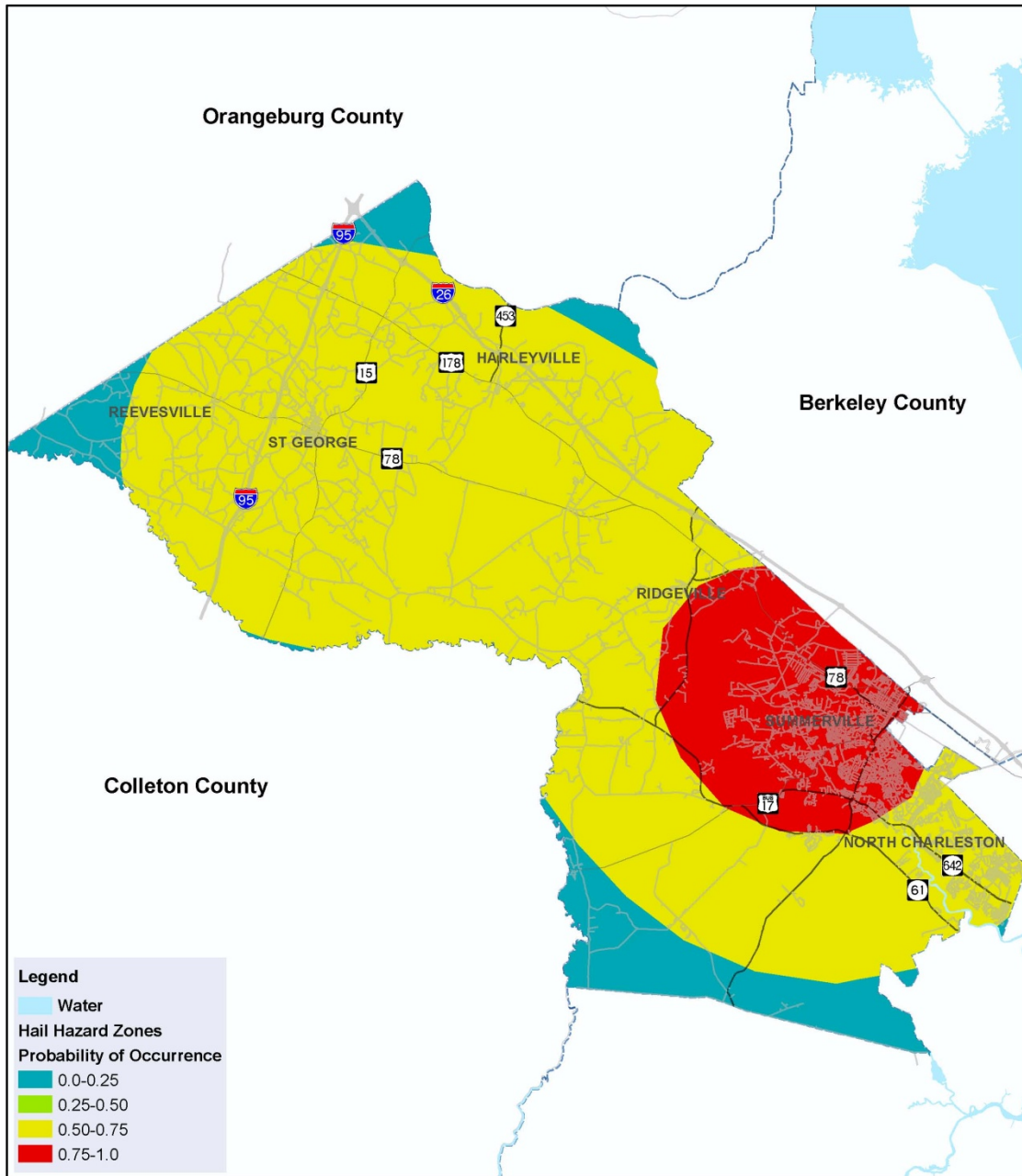


Hazard Vulnerable Zones Dorchester County Tornado Hazard Zones

Data Source: National Data Climatic Center,
USC Hazard Research Lab
Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
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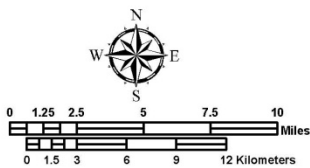


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Legend

- Water
- Hail Hazard Zones**
- Probability of Occurrence**
- 0.0-0.25
- 0.25-0.50
- 0.50-0.75
- 0.75-1.0



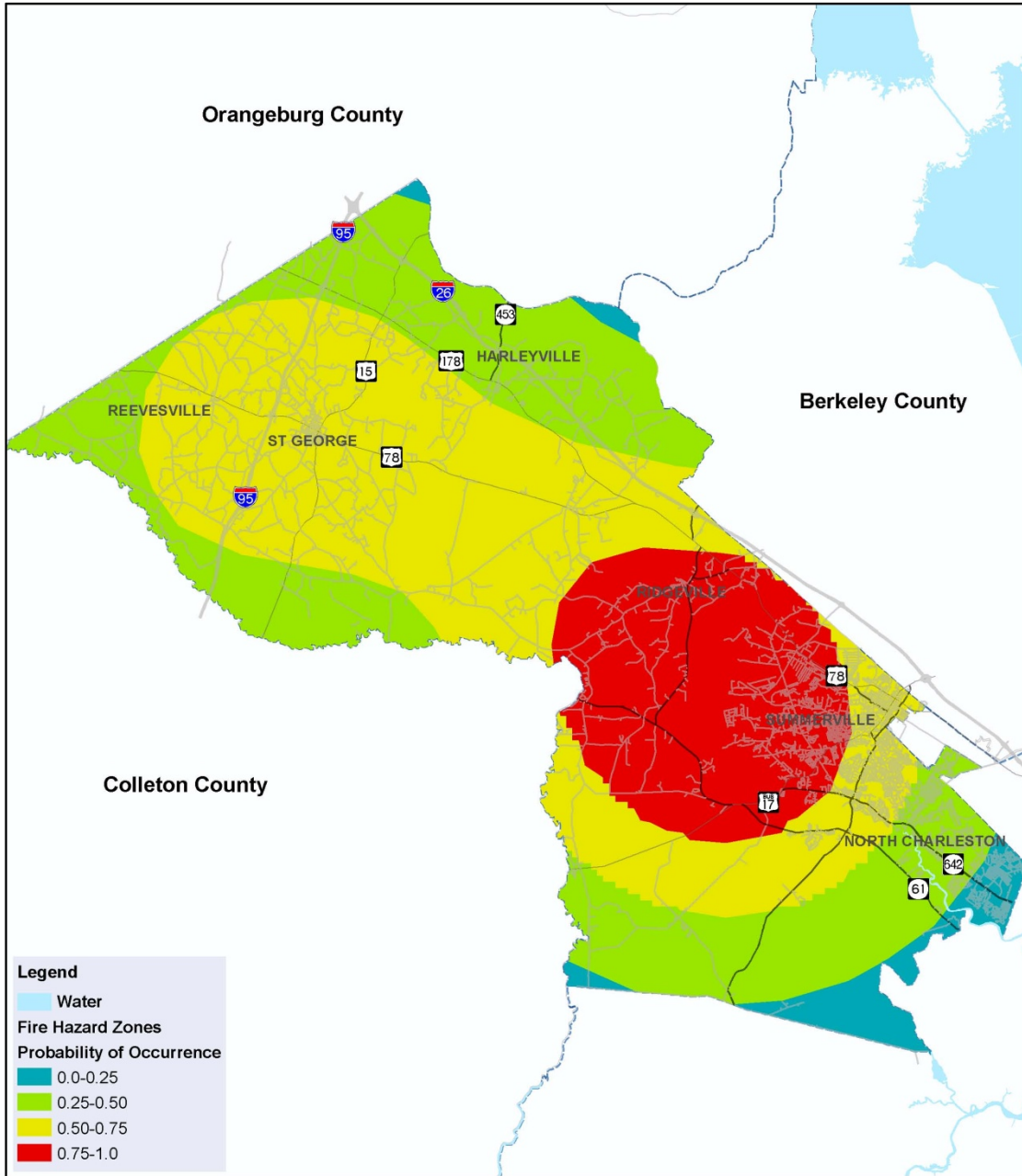
Hazard Vulnerable Zones Dorchester County Hail Hazard Zones

Data Source: NOAA SPC Historical Severe Weather Database,
Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
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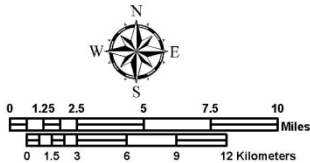


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North Charleston, South Carolina 29405
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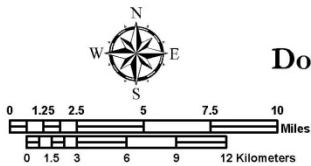
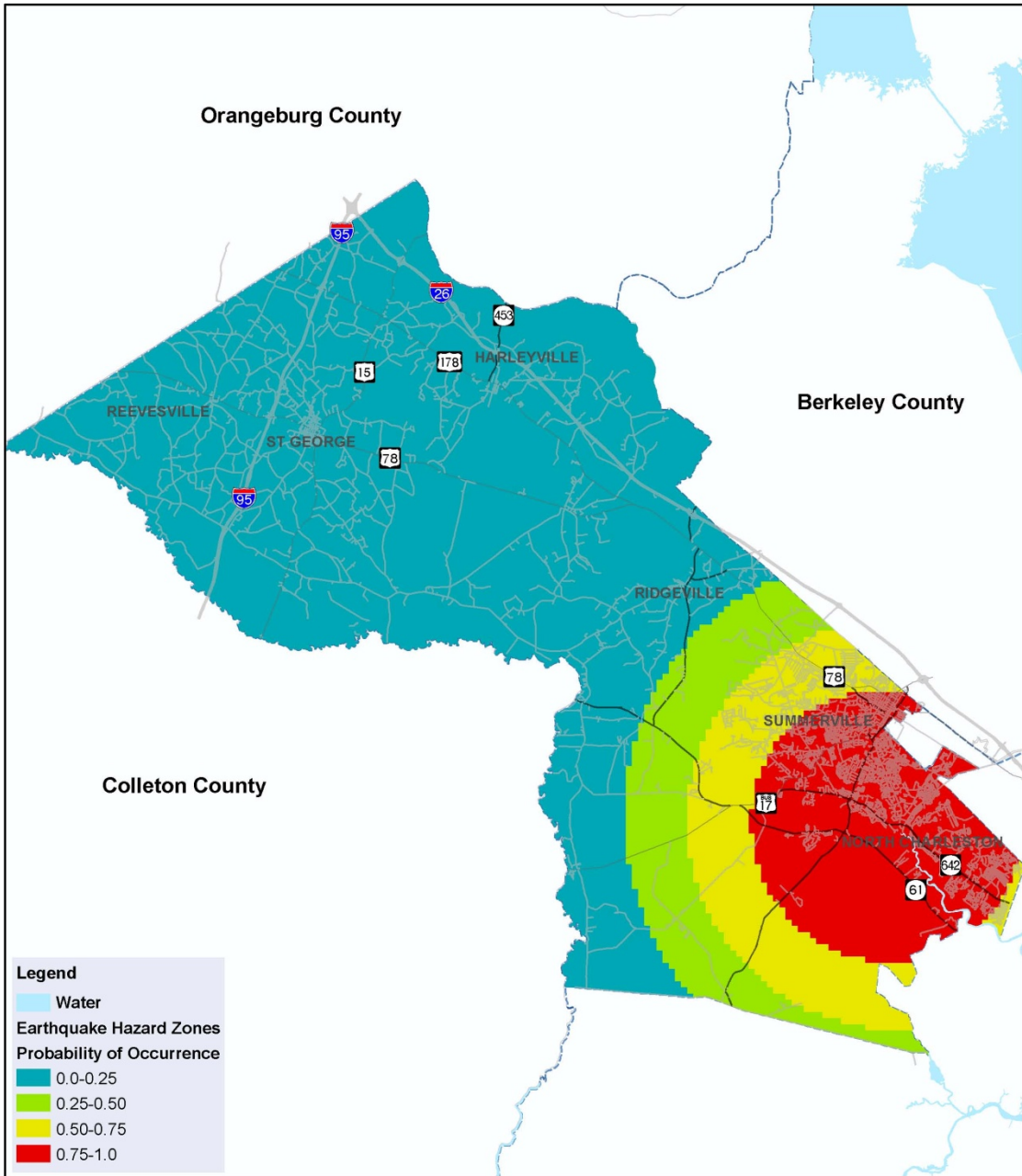
Hazard Vulnerable Zones Dorchester County Fire Hazard Zones



Data Source: SC Forestry Commission,
Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd



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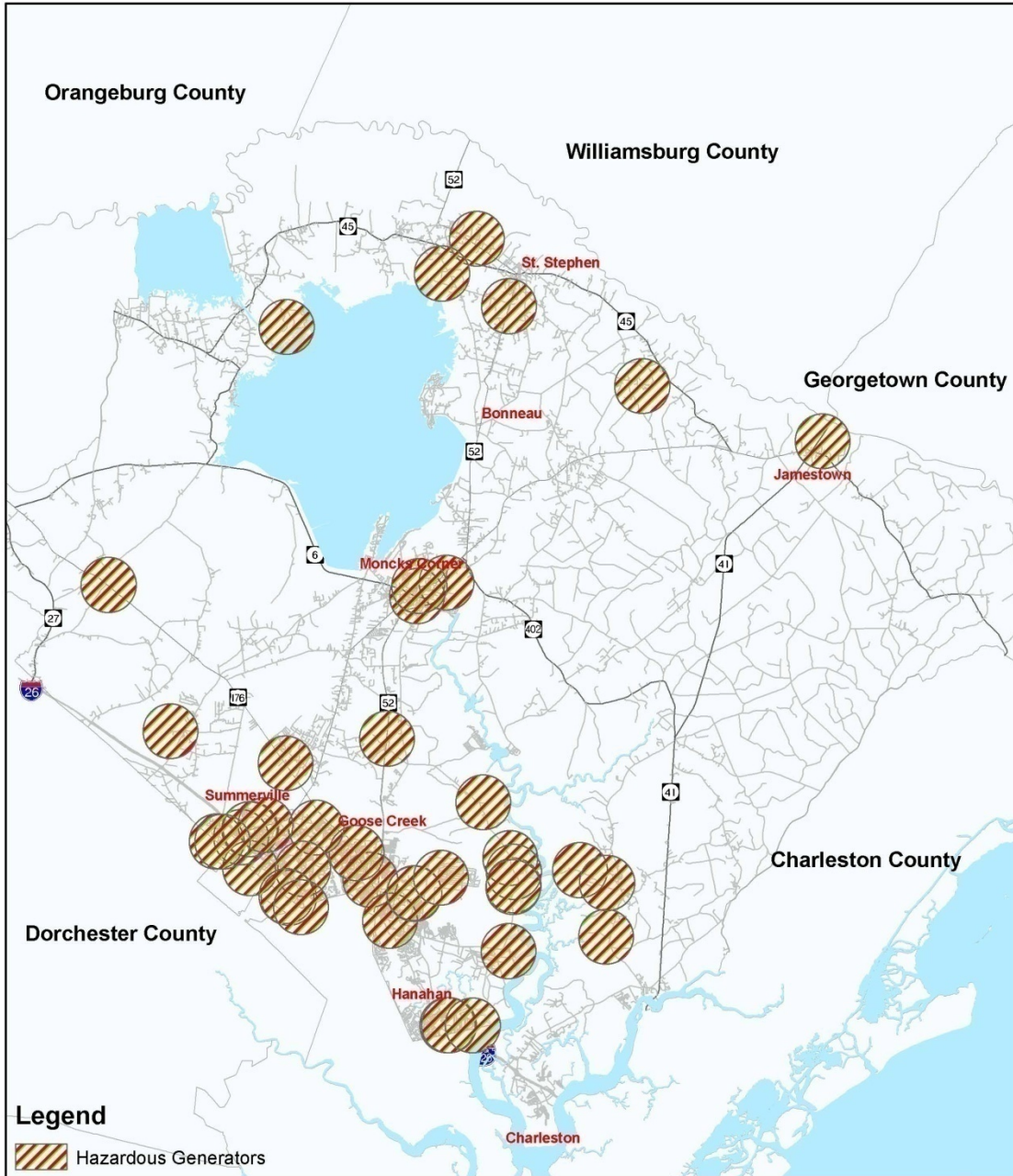
Hazard Vulnerable Zones Dorchester County Earthquake Hazard Zones

Data Source: USC Seismic Network,
USC Hazard Research Lab
Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
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(FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd

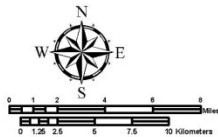


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XIII. Appendix F: Hazardous Materials Facilities



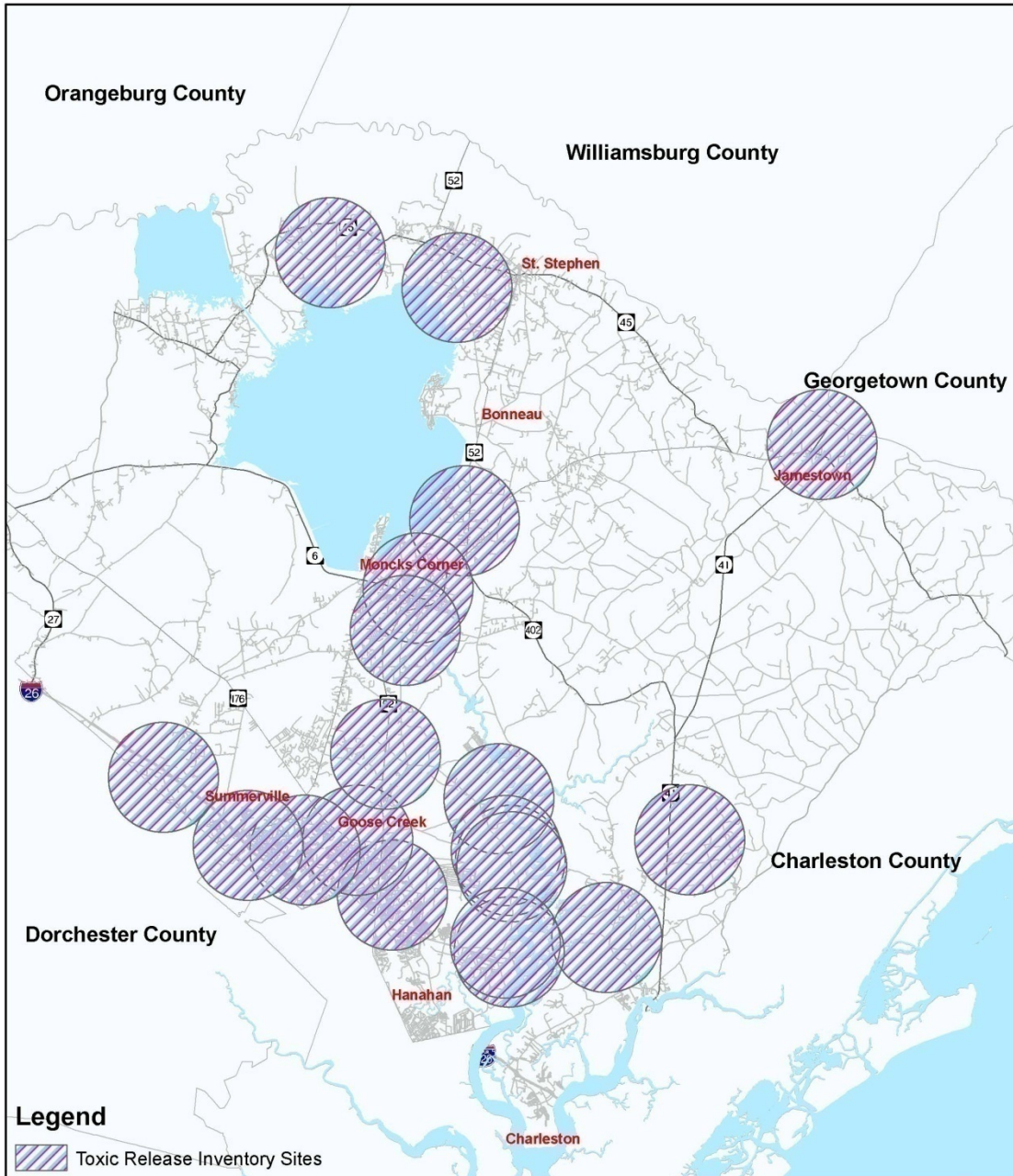
Hazardous Material Berkeley County High Risk Areas to Hazardous Generators Sites Contamination



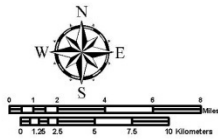
Data Source: EPA, USC-Hazards & Vulnerability
 Research Institute, Census Tiger Files, Berkeley County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: V:\Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd



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Legend
 Toxic Release Inventory Sites

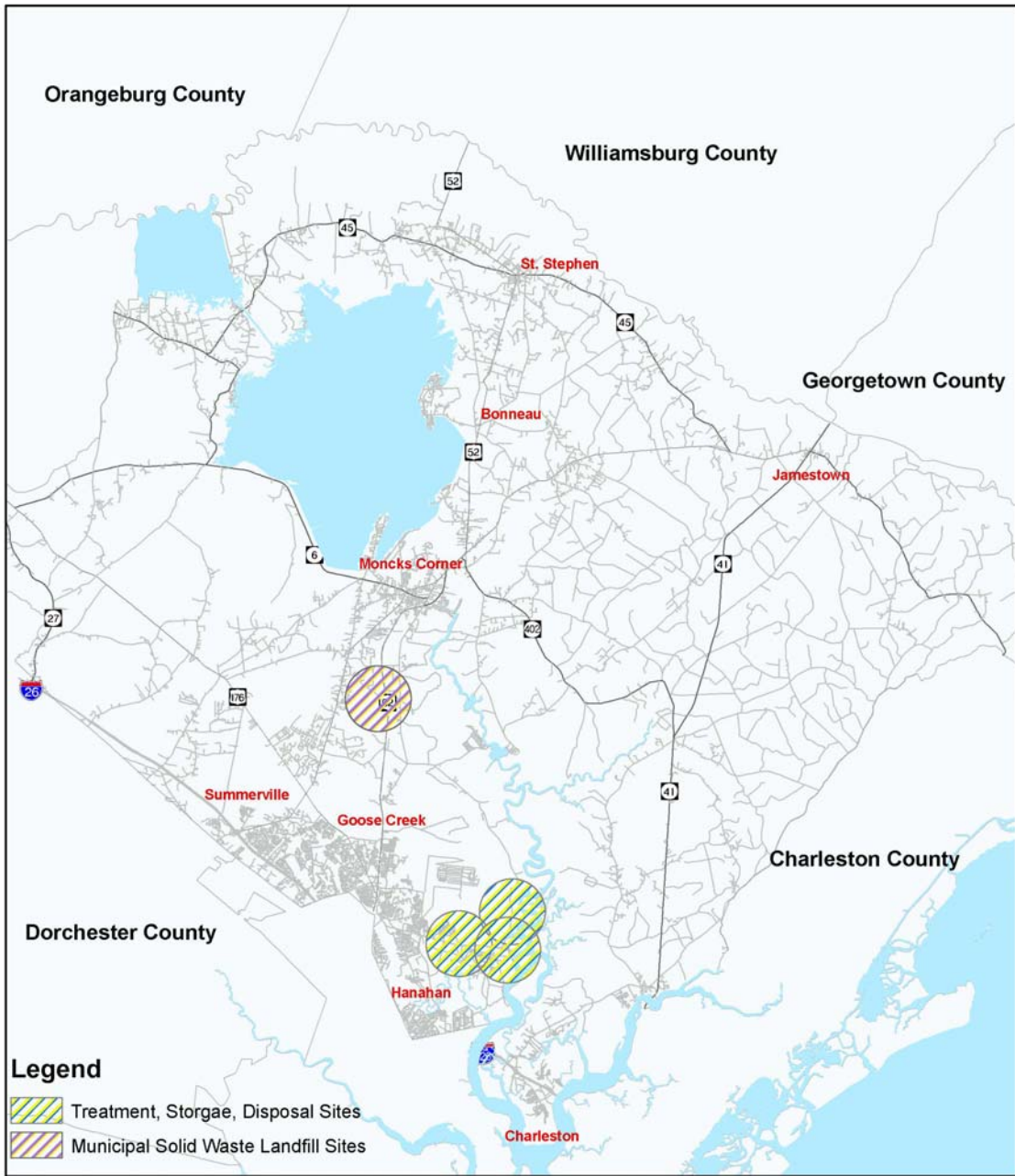


Hazardous Material Berkeley County High Risk Areas to Toxic Release Inventory Sites Contamination

Data Source: EPA, USC-Hazards & Vulnerability
 Research Institute, Census Tiger Files, Berkeley County GIS
 Projection: NAD_1983_UTM_Zone_17N
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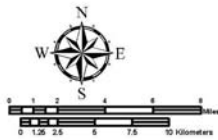


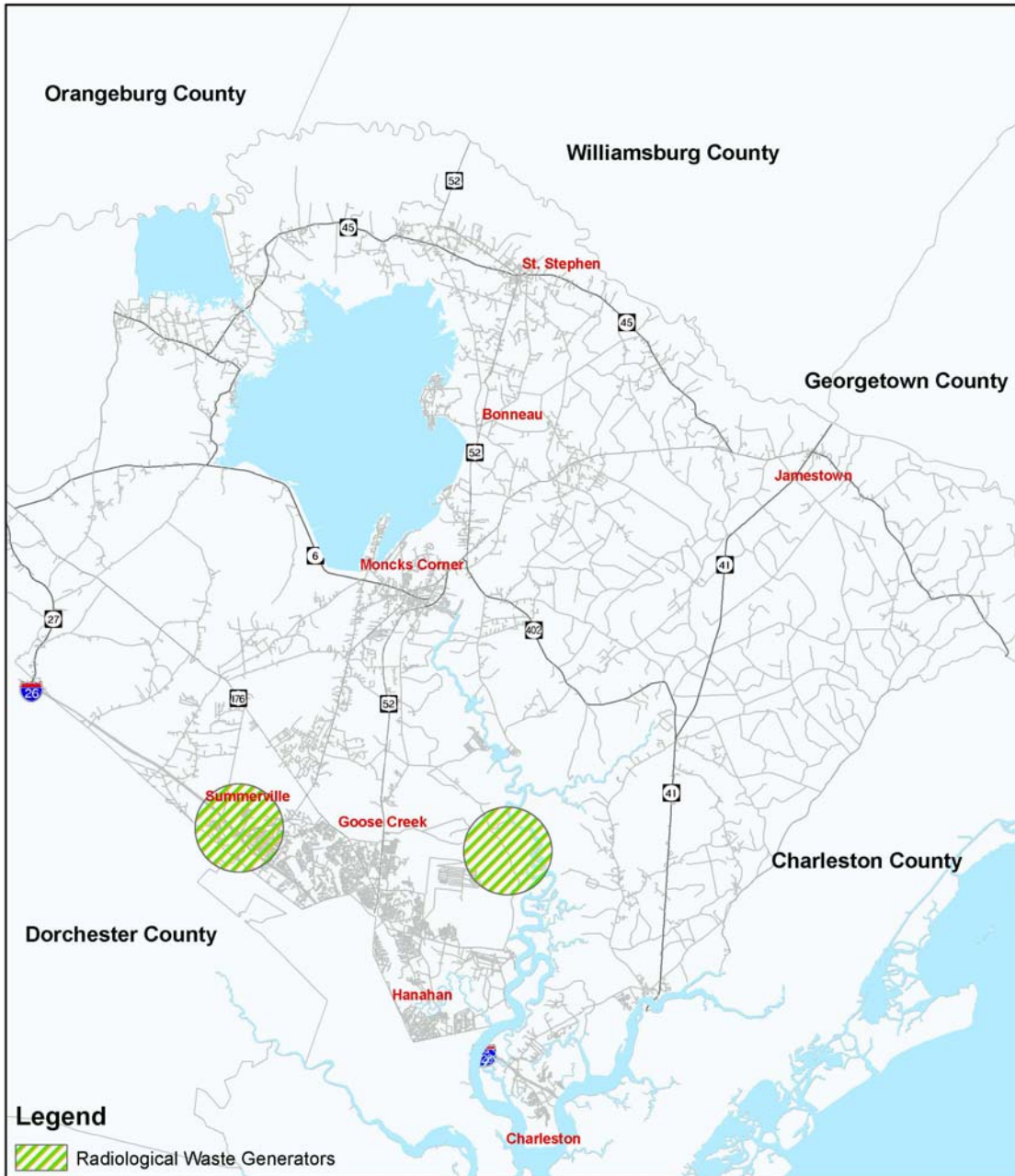
Hazardous Material Berkeley County High Risk Areas to TSD & MSW Sites Contamination

Data Source: EPA, USC-Hazards & Vulnerability
Research Institute, Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Map\Dorchester Hazards.mxd



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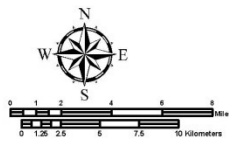
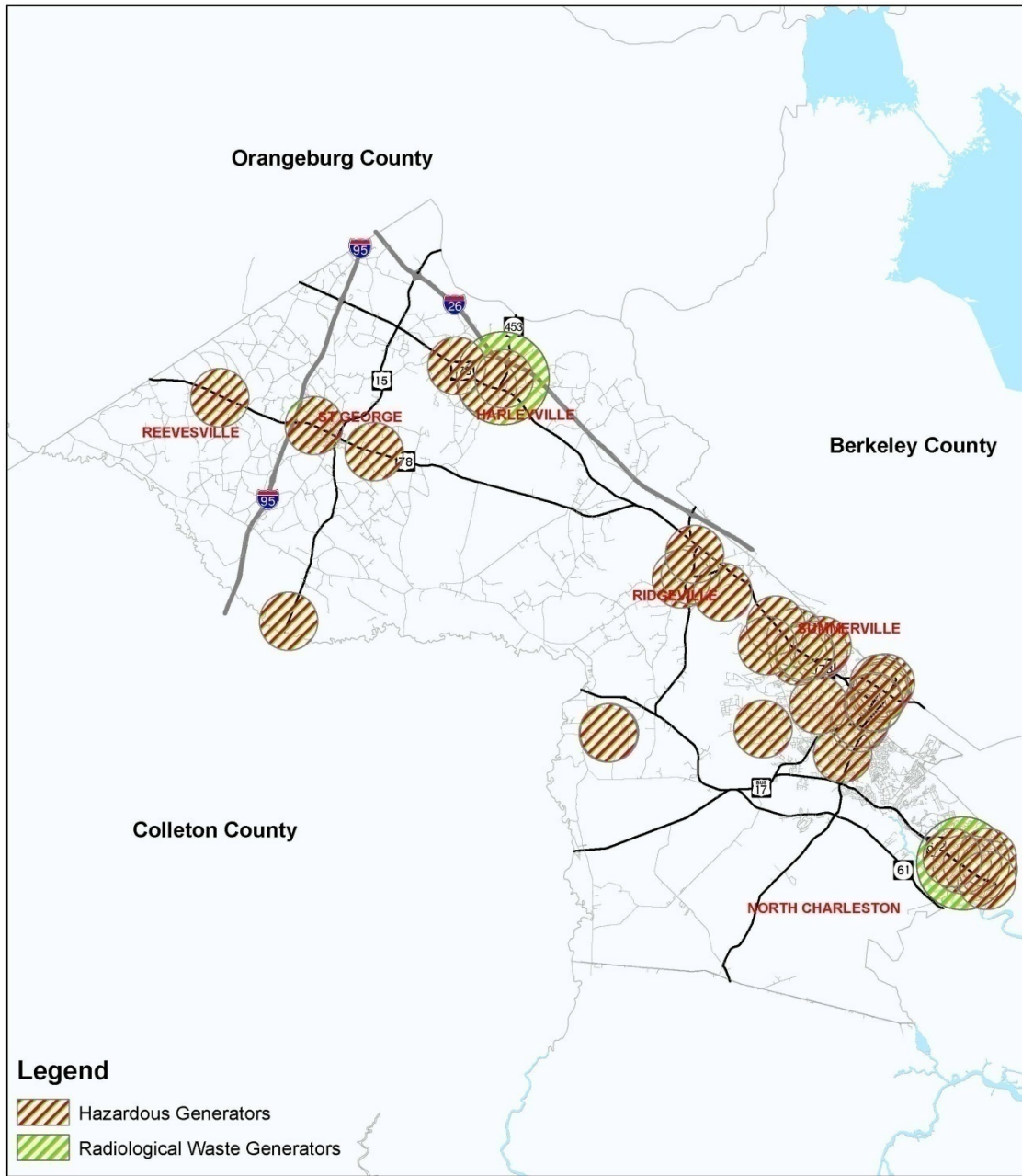


Hazardous Material Berkeley County High Risk Areas to Radiological Generators Sites Contamination

Data Source: EPA, USC-Hazards & Vulnerability
Research Institute, Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Map\Dorchester Hazards.mxd



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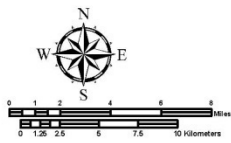
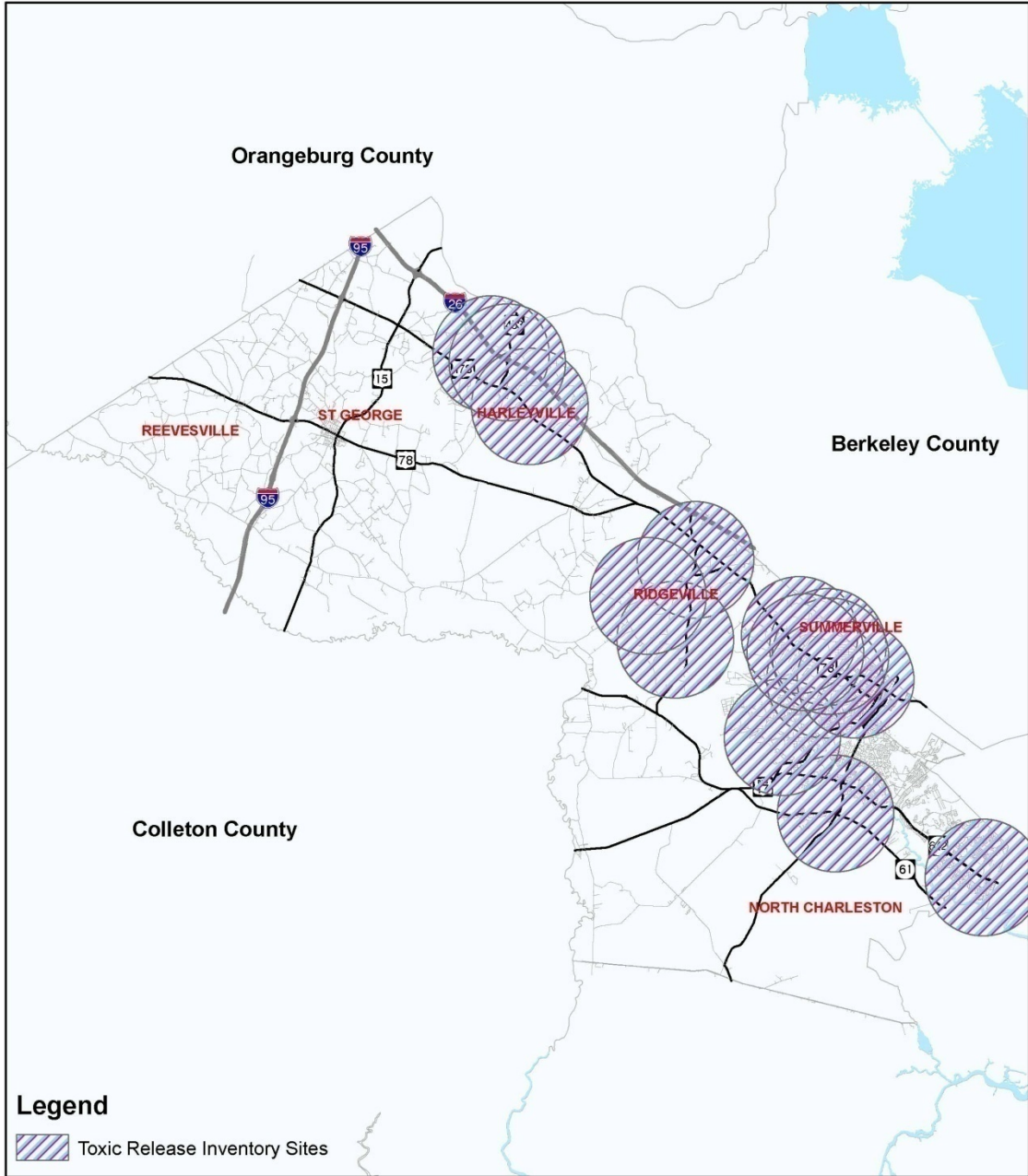


Hazardous Material Dorchester County High Risk Areas to Hazardous and Radiological Contamination

Data Source: EPA, USC-Hazards & Vulnerability
Research Institute, Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd



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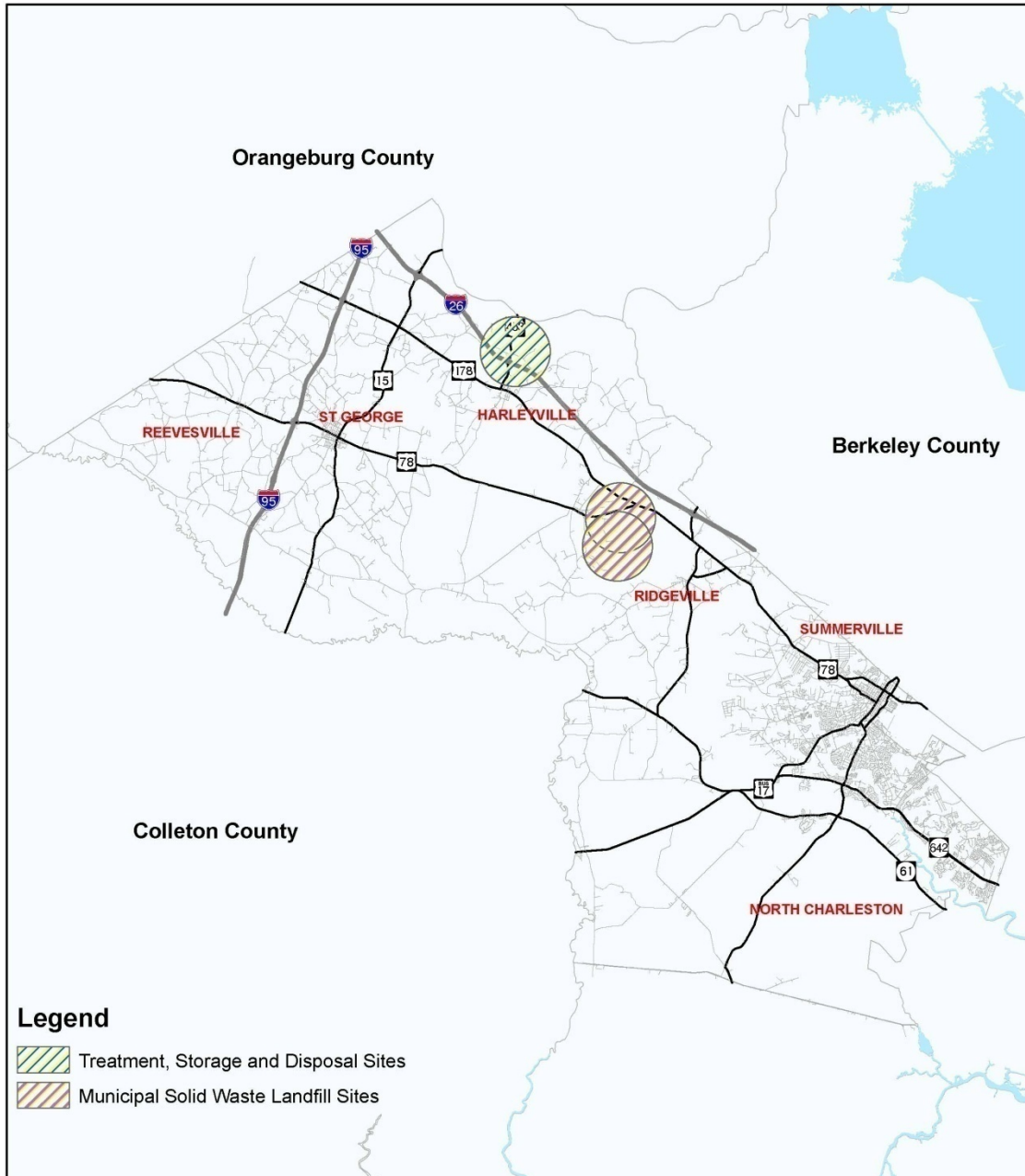


Hazardous Material Sites Dorchester County High Risk Areas to Toxic Release Inventory Contamination

Data Source: EPA, USC-Hazards & Vulnerability
Research Institute, Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd



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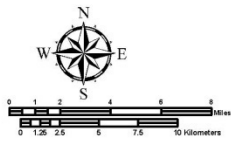
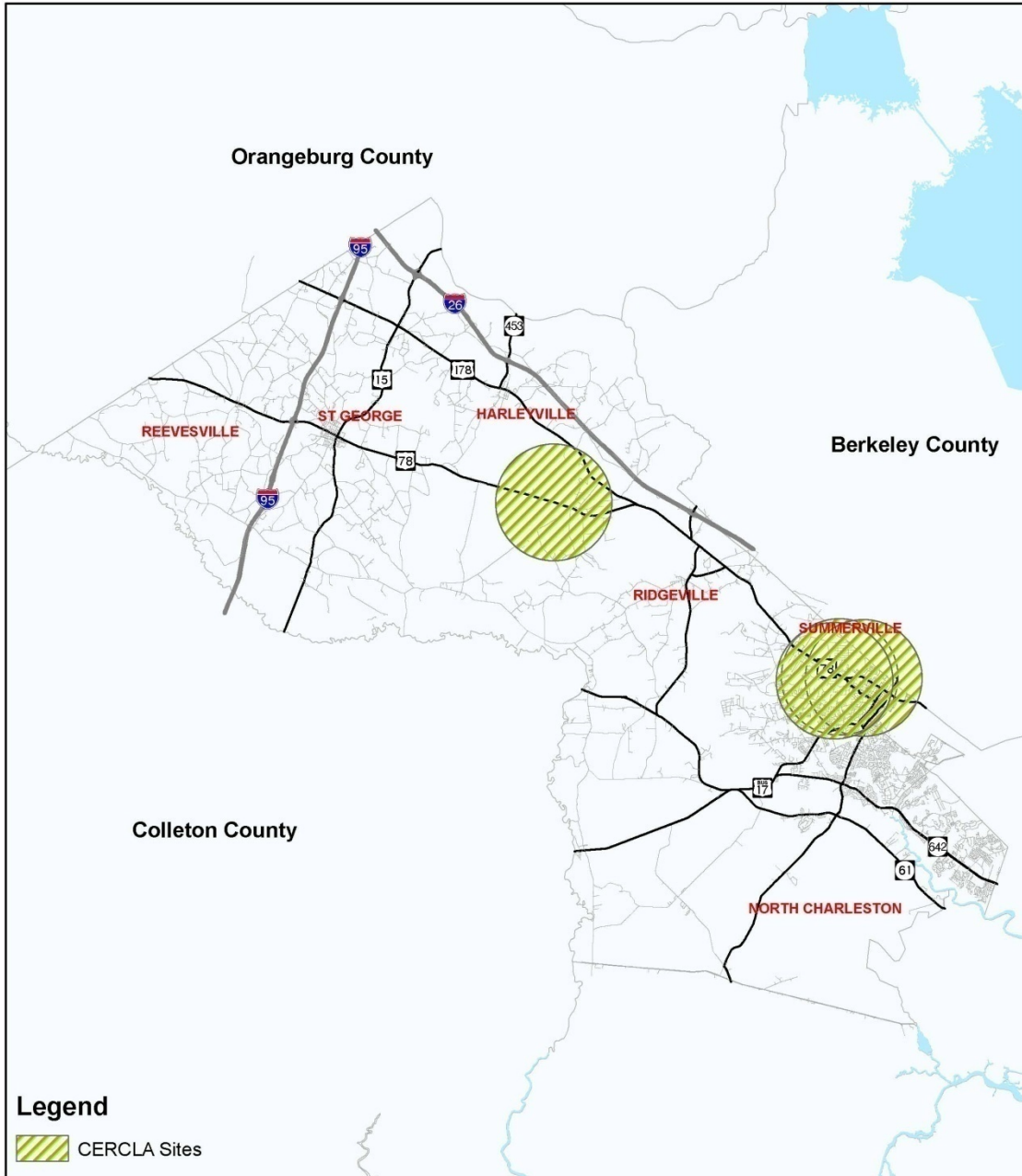


Hazardous Material Sites Dorchester County High Risk Areas to TSD & MSW Landfill Contamination

Data Source: EPA, USC-Hazards & Vulnerability
Research Institute, Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
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(FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd



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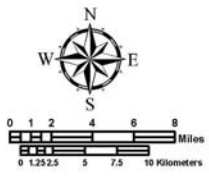
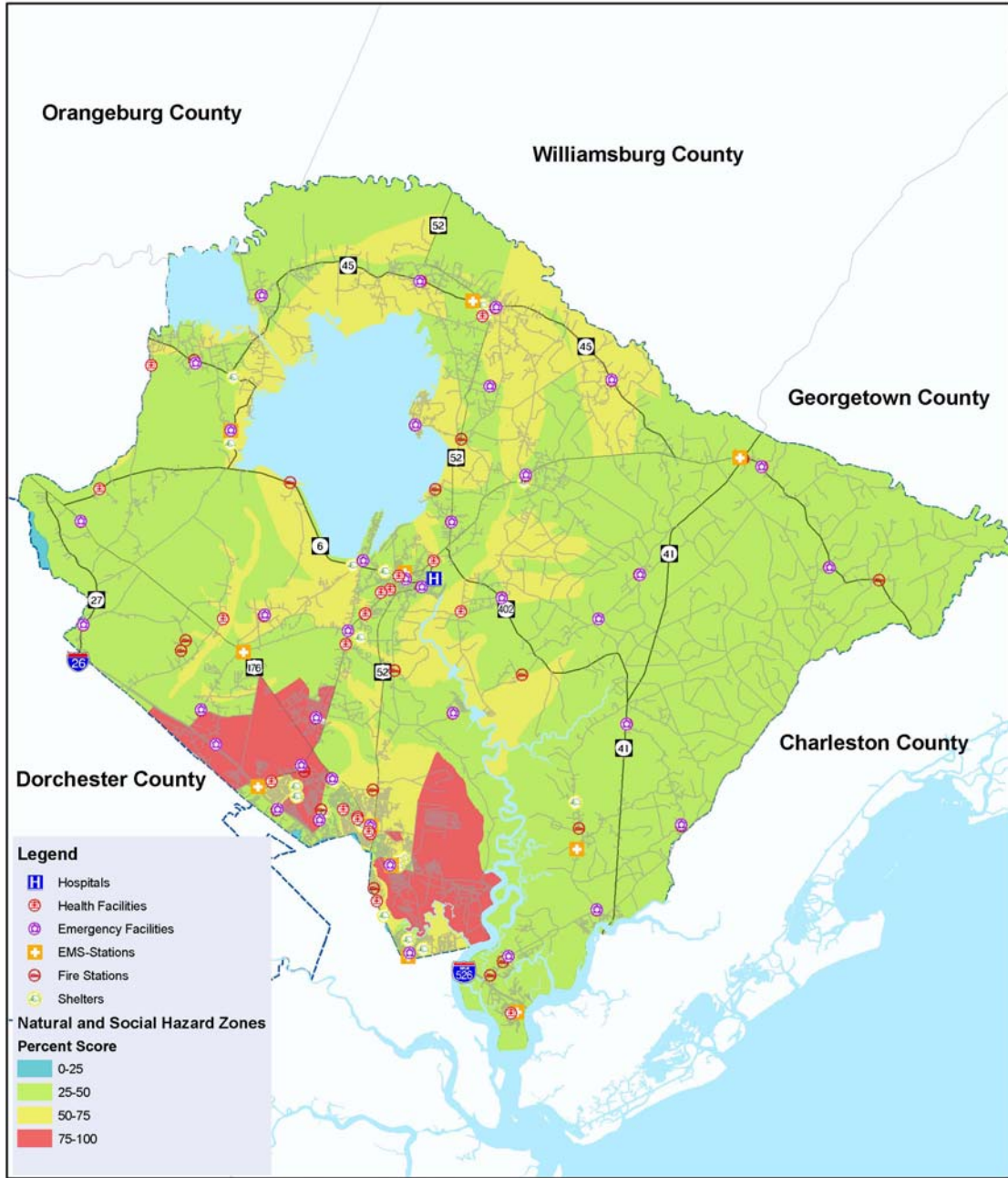
Hazardous Material Sites Dorchester County High Risk Areas to CERCLA Sites Contamination

Data Source: DHEC, USC-Hazards & Vulnerability
Research Institute, Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Map\Dorchester Hazards.mxd



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XIV. Appendix G: Critical Facilities in Vulnerable Areas

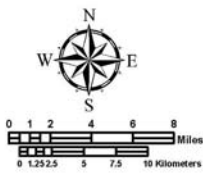
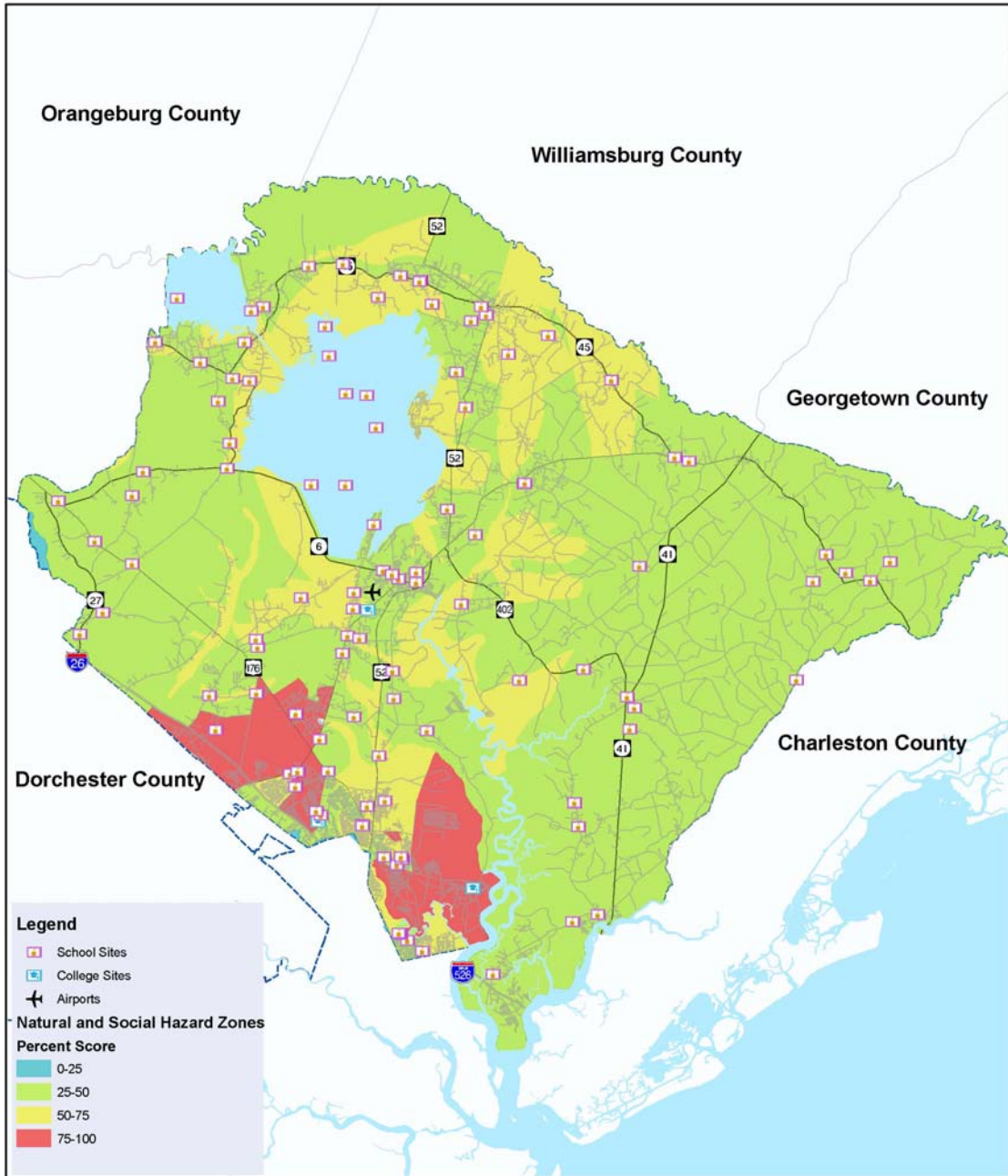


Critical Facilities in Vulnerable Zones
Berkeley County Health, Emergency and Shelter Facilities



Data Source: US Census Bureau,
 USC Hazard Research Lab, SCEMD
 Census Tiger Files, Berkeley County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: V:\Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Map\Berkeley Hazards.mxd

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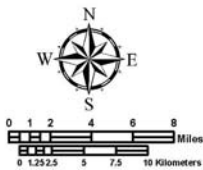
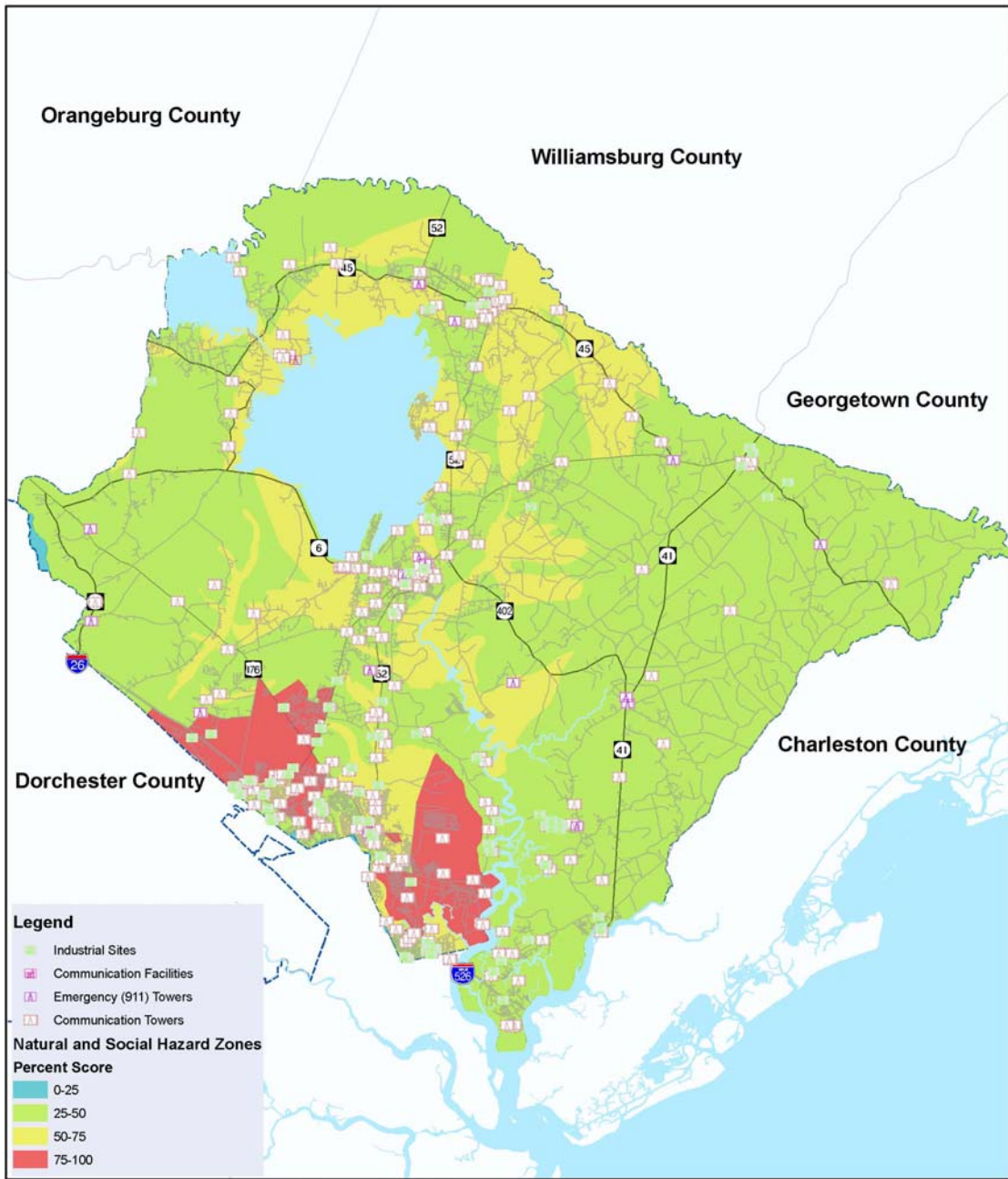
Critical Facilities in Vulnerable Zones

Berkeley County Schools, Colleges and Airports



Data Source: US Census Bureau,
 USC Hazard Research Lab, SCEMD
 Census Tiger Files, Berkeley County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: V:\Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Map\Berkeley Hazards.mxd

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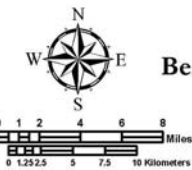
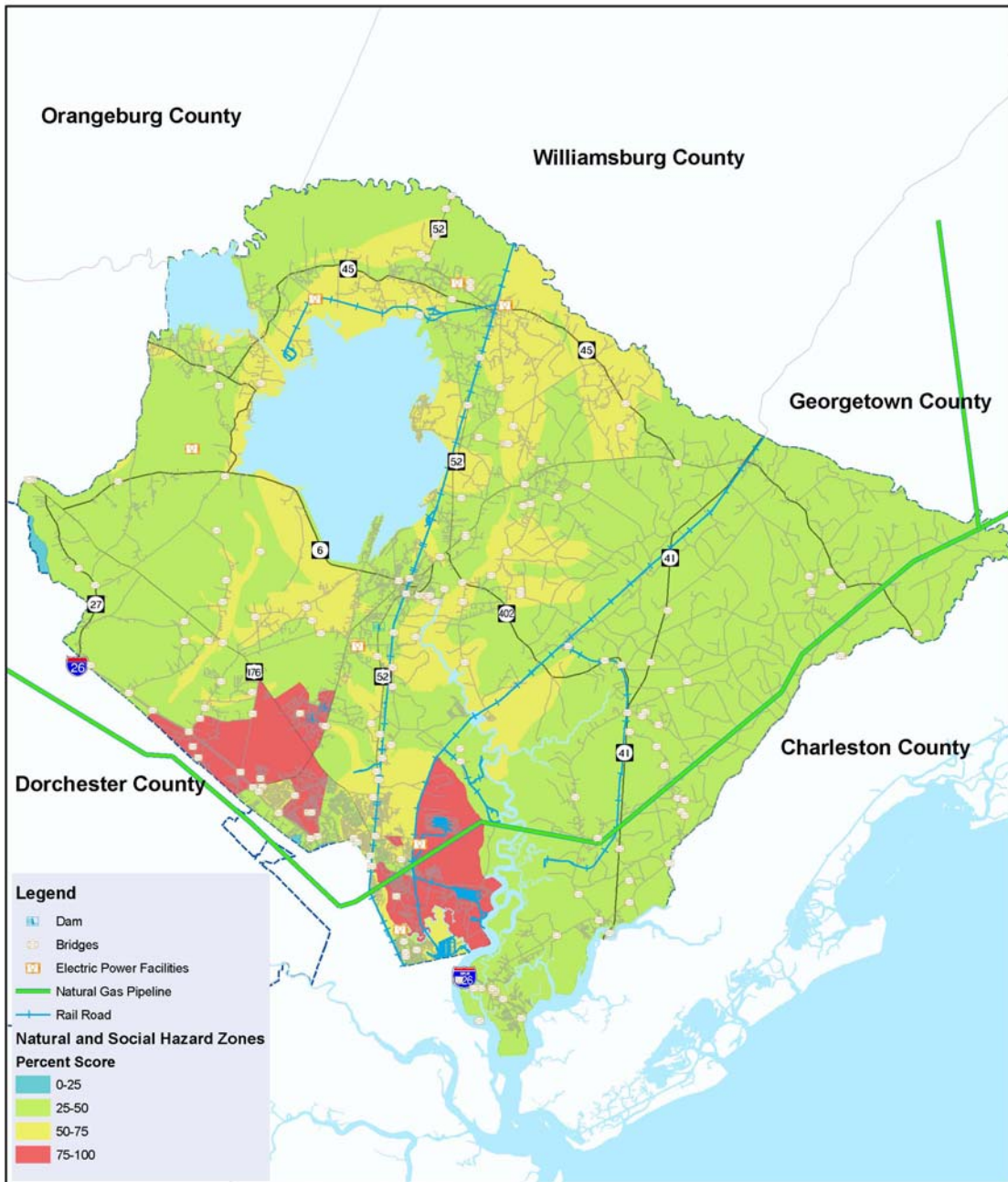
Critical Facilities in Vulnerable Zones

Berkeley County Industrial and Communication Facilities

Data Source: US Census Bureau,
 USC Hazard Research Lab, SCEMD
 Census Tiger Files, Berkeley County GIS
 Projection: NAD, 1983, UTM, Zone, 17N
 Data Path: V:\Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Map\Berkeley Hazards.mxd



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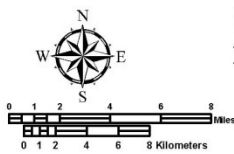
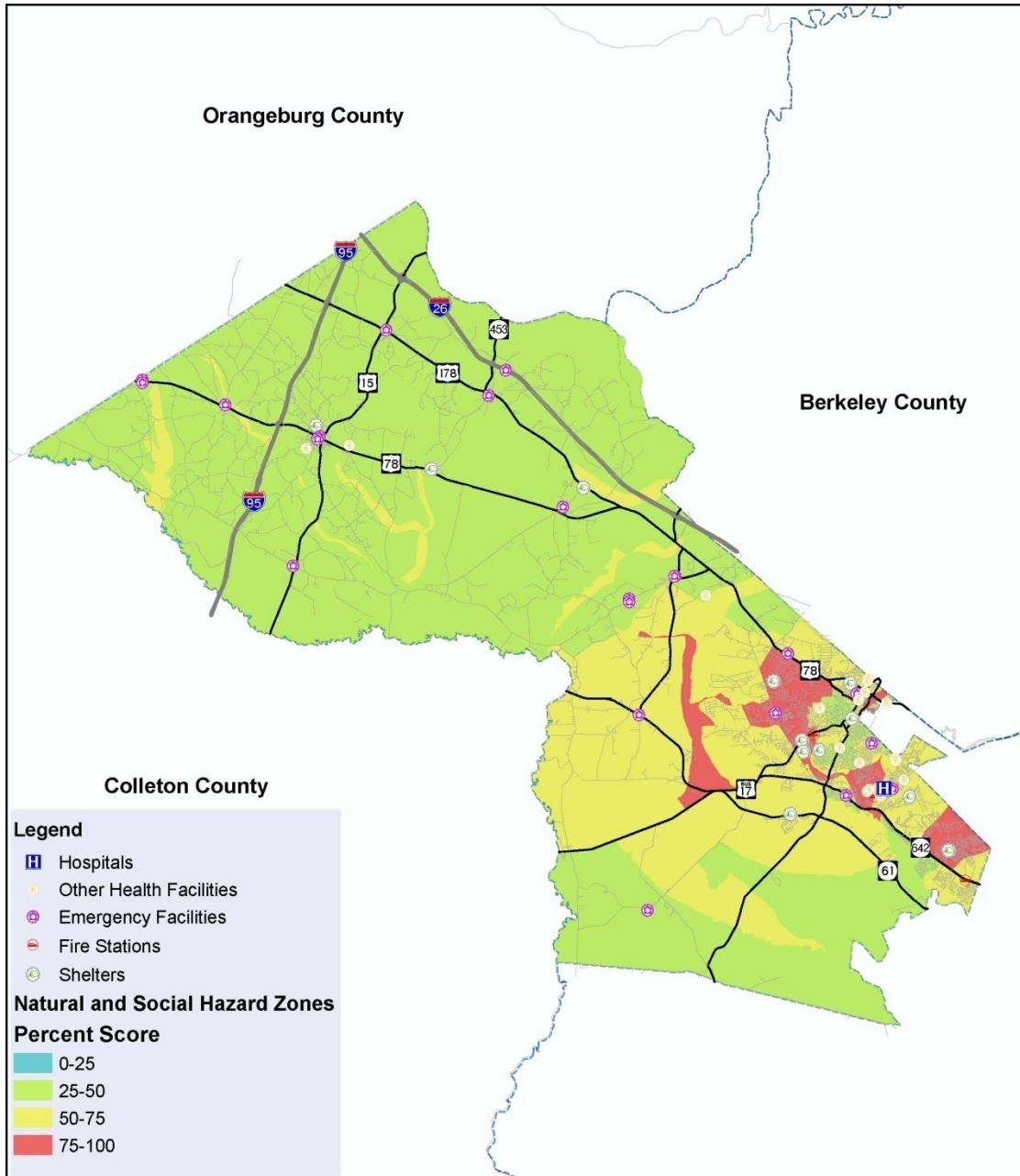
Critical Facilities in Vulnerable Zones

Berkeley County Dam, Bridges, Electric and Natural Gas Structures



Data Source: US Census Bureau,
USC Hazard Research Lab, SCEMID
Census Tiger Files, Berkeley County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
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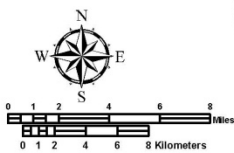
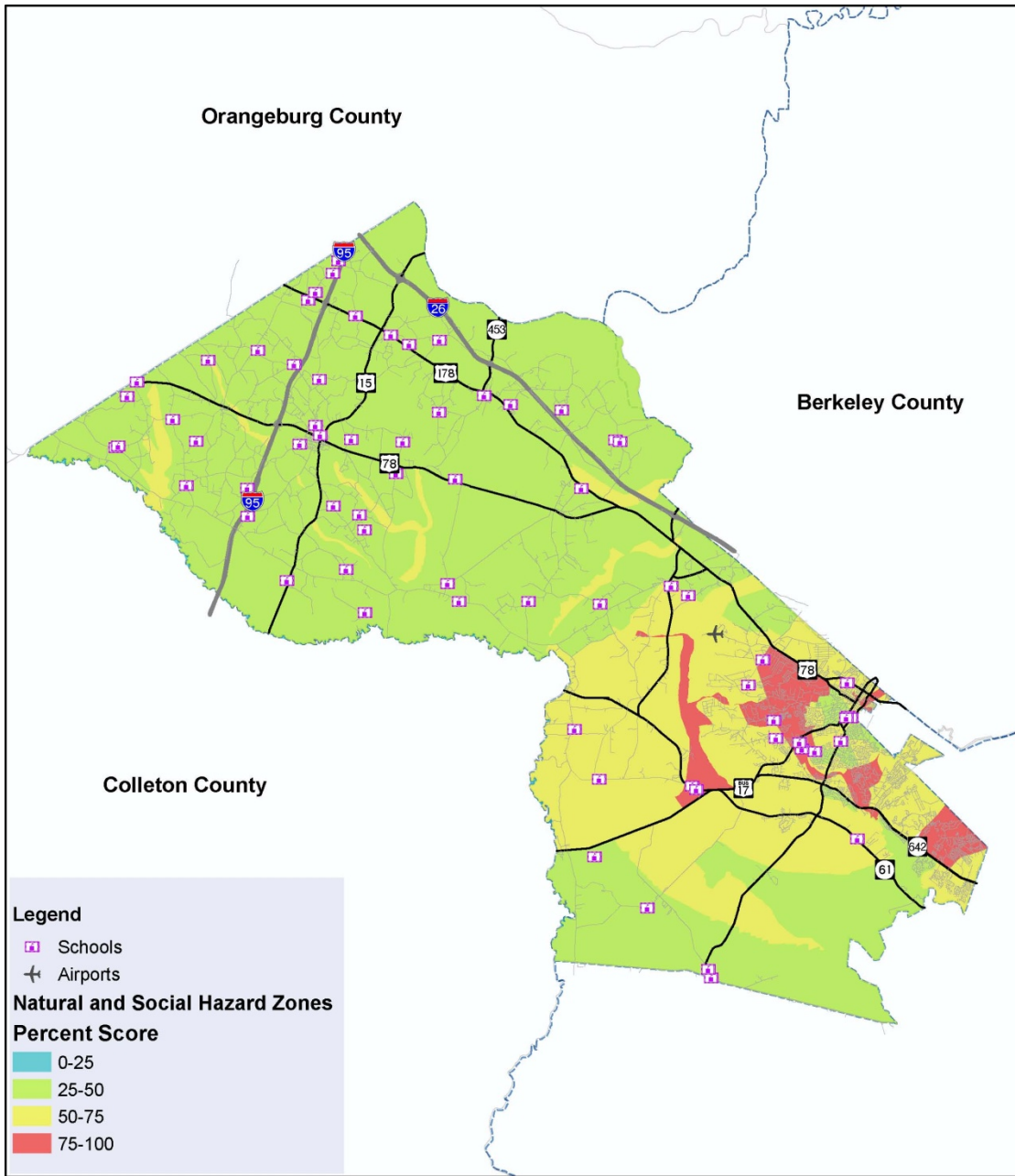
Critical Facilities in Vulnerable Zones

Dorchester County Health, Emergency and Shelter Facilities



Data Source: USGS,
 Census Tiger Files, Dorchester County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: V:\Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd

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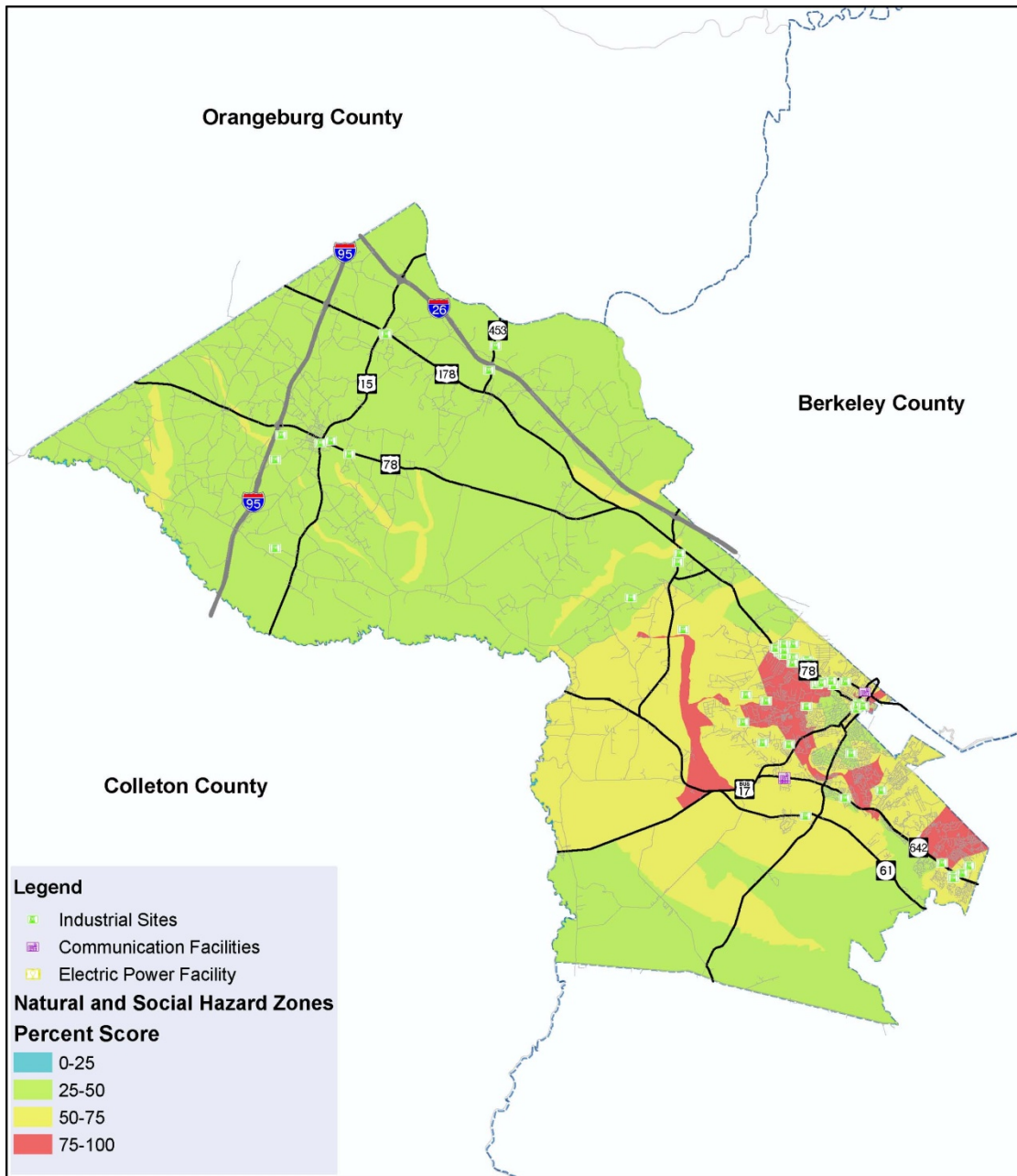
Critical Facilities in Vulnerable Zones

Dorchester County School and Airport Facilities



Data Source: USGS,
 Census Tiger Files, Dorchester County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: V:\Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd

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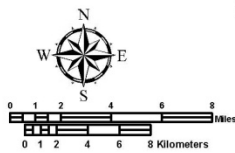
Legend

- Industrial Sites
- Communication Facilities
- Electric Power Facility

Natural and Social Hazard Zones

Percent Score

- 0-25
- 25-50
- 50-75
- 75-100



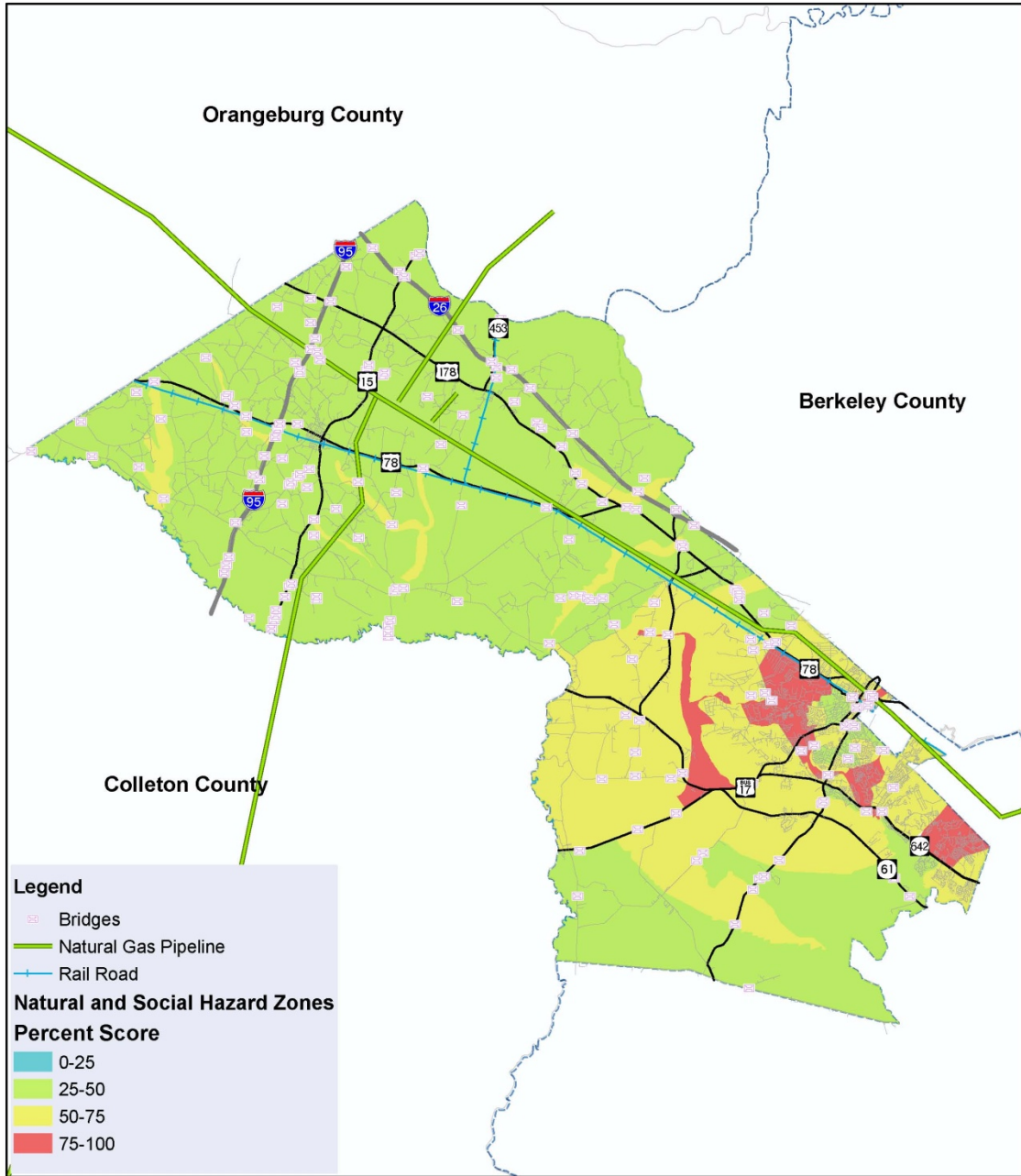
Critical Facilities in Vulnerable Zones

Dorchester County Industrial, Communication and Electric Power Facilities



Data Source: USGS,
Census Tiger Files, Dorchester County GIS
Projection: NAD_1983_UTM_Zone_17N
Data Path: V:\Planning Services\Hazard Mitigation Plan Update
(FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd

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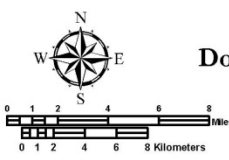
Legend

- Bridges
- Natural Gas Pipeline
- Rail Road

Natural and Social Hazard Zones

Percent Score

- 0-25
- 25-50
- 50-75
- 75-100



Critical Facilities in Vulnerable Zones

Dorchester County Bridges, Natural Gas and Rail Road Structures



Data Source: USGS,
 Census Tiger Files, Dorchester County GIS
 Projection: NAD_1983_UTM_Zone_17N
 Data Path: V:\Planning Services\Hazard Mitigation Plan Update
 (FEMA-2009)\BDHMP_2010\Maps\Dorchester Hazards.mxd

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XV. Appendix H: Alternative Funding Sources

The following is a list of alternative funding sources that may be utilized to fund some of the mitigation goals, objectives and plans discussed in the BDHMP. These sources are nongovernmental funding sources to which each jurisdiction may apply for grants and loans.

FUNDING SOURCE	INTERESTS	PHONE #	ADDRESS
JANUARY			
The Acron Foundation Inc.	Community based projects dedicated to building a sustainable future	(510) 834-2995 or (510) 834-2998	c/o Common Counsel Foundation 1221 Preservation Park Way Oakland, CA 94612-1206
Eastman Kodak Charitable Trust	Env. Conservation, education, senior and youth organization, health care programs, community centers , and volunteer services	(716) 724-1980 (716) 724-1376 fax	343 State Street Rochester, NY 14650-0517
Gannet foundation	Education, neighborhood improvement , economic development, youth development, community problem solving , disadvantaged people, environmental conservation and cultural enrichment	(703) 284-6000	1100 Wilson Boulevard Arlington, VA 22234
The Home Depot, Inc.	Arts and humanities, the environment, social services, education and civic and Public affairs	(770) 433-8211	Director of Community Affairs 2455 Paces ferry Road Atlanta, GA 30339-4024
The Levinson (Max and Anna) Foundation	the environment, social causes and Israel/Jewish concerns	(505) 982-3662 or 982-3665	Charlotte Talbeth, Executive Director PO Box 6309 Santa Fe, NM
MARCH			
Borden Foundation, Inc.	art, education, humanities, environment, health, and social services	(614) 225-4580 or 225-4340	180 East Broad Street Columbus, Ohio, 43215-3799
Goyce Mertz-Gilmore Foundation	Arts, civil rights, community dev. , neighborhood dev., environment, energy, peace	(212) 475-1137	218 E. 18th St. New York, NY 10003-3697
The Home Depot, Inc.	Arts and humanities, the environment, social services, education and civic and public affairs	(770) 433-8211	Director of Community Affairs 2455 Paces ferry Road Atlanta, GA 30339-4024
National environmental Education and Training The Foundation INC.	Dollar for each NEETF dollar awarded, environmental education/interpretation, Sustainable community development	(202) 833-2933 or (202) 261-6464	Vice President of Programs 1707 H. Street, NW, Suite 99 Washington, DC 20009

MAY			
Kieckhefer (J.W.) Foundation	Family planning, social services , education, ecology, and conservation	(520) 445-4010	116 East Gurley Street PO Box 750 Prescott, AZ 86302
JUNE			
The Acron Foundation Inc.	Community based projects dedicated to building a sustainable future	(510) 834-2995 or (510) 834-2998	c/o Common Counsel Foundation 1221 Preservation Park Way Oakland, CA 94612-1206
Motorola Foundation	Higher education, employee matching gifts, social services and youth agencies. Engineering and technology education, Environmental education.		
Phillips Petroleum Company	Education, the environment, civic, youth health, welfare , culture and the arts		Phillips Building 16th floor Bartlesville, OK 74004
Urban park and Recreation Recovery (UPARR)	Rehabilitation grants that focus on neighborhood recreation sites that have deteriorated to the point where the communities' health and safety are endangered, or the communities range of quality recreation opportunities are impaired	AZ, CO, NM, TX, OK (402) 221-3358 OR 3292 OR 3205	Midwest Regional Office National Park Service 1709 Jackson St. Omaha, NE 68102-2571
JULY			
Ben & Jerry's foundation	General environment, wildlife/fisheries/habitat Sustainable community development racism, and sexism. Primarily funds grassroots organizations	(802) 846-1500	30 Community Drive South Burlington, VT 05403-6828
Borden Foundation, Inc.	art, education, humanities, environment, health, and social services	(614) 225-4580 or 225-4340	180 East Broad Street Columbus, Ohio, 43215-3799
AUGUST			
Sustainable Development Challenge Grants	Community based projects that promote environmentally and economically sustainable development	(202) 260-6812	U.S. Environmental Protection Agency, SDGC, Office of the Administrator (MC 1306) Ariel Rios

			Building, 1200 Pennsylvania Ave, NW Washington, DC 20460
The Levinson (Max and Anna) Foundation	the environment, social causes and Israel/Jewish concerns	(505) 982- 3662 or 982-3665	Charlotte Talbeth, Executive Director PO Box 6309 Santa Fe, NM
Phillips Petroleum Company	Education, the environment, civic, youth health, welfare , culture and the arts		Phillips Building 16th floor Bartlesville, OK 74004
SEPTEMBER			
Sustainable Development Challenge Grants	Community based projects that promote environmentally and economically sustainable development	(202) 260- 6812	U.S. Environmental Protection Agency, SDGC, Office of the Adminstrator (MC 1306) Ariel Rios Building, 1200 Pennsylvania Ave, NW
The David and Lucile Packard Foundation	Africa, Arts, community dev. , education, environment, natural resources, etc.	(605) 948- 7658	300 2nd St. Ste. 200 Los Altos, CA 94022
OCTOBER			
Sustainable Development Challenge Grants	Community based projects that promote environmentally and economically sustainable development	(202) 260- 6812	U.S. Environmental Protection Agency, SDGC, Office of the Adminstrator (MC 1306) Ariel Rios Building, 1200 Pennsylvania Ave, NW Washington, DC 20460
Enron Foundation	Arts, humanities, civic and public affairs , education, the environment, health, and social services	(713) 853- 6161	1400 Smith Street Houston, TX 77002- 7369
Georgia-Pacific Corporation	Arts & humanities, education, environment health issues, and social services . Partnerships with G-P/NPCA which supports National Parks	(404) 652- 4000	133 Peachtree Street NE Atlanta, GA 30303
National Fish and Wildlife Foundation: Bring Back the Natives (BBN) (NFWF)	To restore watersheds where federal land agencies have land management	(415) 778- 0999 (415) 778- 0998	Wetern Region Partnership Office: 116 New Montgomery Street

	responsibilities		Suite 203 San Francisco, CA 94015
NOVEMBER			
Sustainable Development Challenge Grants	Community based projects that promote environmentally and economically sustainable development	(202) 260-6812	U.S. Environmental Protection Agency, SDGC, Office of the Administrator (MC 1306) Ariel Rios Building, 1200 Pennsylvania Ave, NW
Crosswicks Foundation	Humanities, civic and public affairs , education, the environment, health and social services	(860) 626-0523	924 West End Avenue New York, NY 10025
National Gardening	The National Gardening Association awards 400 Youth Garden Grants to schools, neighborhood groups, community centers , camps, clubs, treatment facilities, and intergenerational programs throughout the United States.		Youth Garden Grants Program National Gardening Association 1100 Dorset Street South Burlington, VT 05403
Ben & Jerry's Foundation	General environment, wildlife/fisheries/habitat Sustainable community development racism, and sexism. Primarily funds grassroots organizations	(802) 846-1500	30 Community Drive South Burlington, VT 05403-6828
DECEMBER			
The David and Lucile Packard Foundation	Africa, Arts, community dev. , education, environment, natural resources, etc.	(605) 948-7658	300 2nd St. Ste. 200 Los Altos, CA 94022
YEAR-ROUND			
AMR/American Airlines Foundation AMR Corps	Community development , education programs, recycling, environment, economic development	(817) 967-9784	PO Box 619616 Mail Drop 5575 DWF Airport, TX 75261-9616
Armstrong Foundation	Resources conservation with grants for conferences/seminars, general support , and research	(601) 442-0122	PO Drawer 2299 Natchez, MS 39121
BHP Copper North America	Civic and public affairs , education, the environment, and social services . Emphasis	(520) 575-5674	Public Relations Coordinator North America

	is given to communities where the company		7400 North Oracle Road, Suite 200 Tucson, AZ 85704
Bingham (William) Foundation	Humanities, civic and public affairs , education, the environment, and social services	(216) 331- 6350	Director 20325 Center Ridge Road, Suite 629 Rocky River, OH 44116- 3554
Burlington Northern Santa Fe Foundation	Education, cultural organizations, civic services involving youth, environmental organizations, parks and recreation facilities and human services	(708) 924- 5615	5601 W 26th Street Lycero, IL 60804
Carthage Foundation	Grants for capital, conference/simians, fellowship, general support , operating expenses, project, research and seed money	(412) 392- 2900	Three Mellon Bank Center 525 William Penn Place, Ste. 3900 Pittsburgh, PA 15219- 1708
Civil Works Projects, U.S. Department of Defense, Army Corps of Engineers	Provides help to communities with a variety of resource problems and opportunities including flood controls , outdoor recreation, environmental restoration, and water quality control	Texas (214) 767-2400	Military & Environmental Restoration Division Southwestern District 1110 Commerce Street Dallas, TX 75242-0216
Circuit City Foundation, Circuit City Stores, Inc.	Arts and the humanities, civic and public affairs, education, the environment, health and social services	(804) 527- 4000	Executive Director 9950 Maryland Drive Richmond, VA 23233
Claiborne Foundation	Devoted to the conservation of of nature and the amelioration of human distress , by linking	(212) 333- 2536 fax 956- 3531	650 Fifth Avenue, 10th floor New York, NY 10019
Dana Corporation	Air quality, environment, general , water resources	(419) 535- 4601	Dana Corporation Administrator PO Box 1000 Toledo, OH 43697
Dingman (Michael D.) Foundation	Arts and humanities, civic and public affairs , education, the environment, and social services	(603) 929- 2203	Assistant Secretary 1 Liberty Lane Hampton, NH 03842
Dreyfus (Max and Victoria) Foundation	Arts and culture, civic affairs , education, the environment, health, and social services	(914) 682- 2008	Office Administrator 50 Main Street, Suite 1000 White Plains, NY 10606

Economic Development	Provides grants to states, counties and cities	(202) 482-5265	Herbert Hoover Bldg Dept. of
Grants for Public Works and Development of Facilities	designated as redevelopment areas by EDA for public works projects that can include developing trail and greenway facilities		Commerce, Rm. H7326 Washington, DC 20230
Emerson Charitable Trust	Arts, civic affairs , education, health, science, and social services . With a strong emphasis on cultural aspects and youth education	(314) 553-3722	Senior vice President 8000 W. Florissant Ave Mail Station 3621 St. Louis, MO 63136
El Paso Energy Foundation	Supports environmental and conservation programs, higher education, community and civic projects, human services , and cultural programs	(915) 496-3455	President PO Box 1492 El Paso, TX 79978-1492
Eureka Company	No specific interest, but generally focuses on social services , health, and the environment (wildlife, fisheries, habitat, and sustainable community development).	(309) 823-5742	Director, Public Relations 1201 E. Bell Street Bloomington, IL 61701
Ferguson (Michael D.) Charitable Foundation	General environment, wildlife, fisheries, habitat, Sustainable community development		124 E. Main St. Rexburg, ID 83440-1912
Gund (Geoffrey) Foundation	Arts and humanities, civic and public affairs , education, the environment, health, and social services .	(212) 689-3075	40 E. 94th Street, #28-E New York, NY 10128
Halliburton Foundation Inc.	Arts and humanities, civic and public affairs , education, the environment, health, social services	(214) 978-2600	Vice President & Secretary 3600 Lincoln Plaza 500 North Akard Street Dallas, TX 75201
Heinz (Vira I.) Endowment	Sustainable urban design, environment enterprise and innovation, energy and the environment, watershed protection and ecosystem management	(412) 338-2615	30 CNG Tower 625 Liberty Avenue Pittsburgh, PA 15222
Hoechst Cleanese Foundation, Inc.	Education, health and human services , environmental protection, equal opportunity, art and culture, and civic and public affairs	(908) 231-2880 (908) 231-2431	Route 202-206 North PO Box 2500 Somerville, NJ 08876-1258
Jain Foundation	Arts, humanities, the environment and social services		President 23650 Morrill Cutoff Road Los Gatos, CA 95033-9222

Kerr Foundation	Arts, humanities, civic and public affairs , education, the environment, health and social services	(405) 749-7991	12501 North May Ave. Oklahoma City, OK 73120
Mellon (Andrew W.) Foundation, The	Higher education, cultural affairs, art, population conservation and environment and public affairs	(212) 838-8400	140 East New York, NY 10021
Mooty (John W.) Foundation Trust	Civic affairs, education, health, the environment, and social services	(612) 343-2839	3400 City Center Minneapolis, MN 55402
Penn (William) Foundation	Children, communities and the natural environment	(215) 988-1830 (215) 988-1823 fax	Two Logan Square, 11th fl 100 North 18th Street Philadelphia, PA 19103-2757
Poinsettia (Paul and Magdalena Ecke) Foundation	Art and humanities, civic and public affairs , education, the environment, and social services	(619) 431-5600	Financial Officer 5600 Avenida Encinas, # 100 Carlsbad, CA 92008
Sulzberger Foundation	Arts and humanities, civic affairs, and public affairs , environment, health, and social services	(212) 556-1750	President 229 West 43rd Street, rm. 1031 New York, NY 10036
True North Foundation	Communities and the environment	(907) 223-5285	PO Box 271308 Fort Collins, CO 80527-1308
Teast (Charlotte and Donald) Foundation	Sustainable communities, Arts, humanities, civic and public affairs , education, the environment, health and social services	(214) 373-6039	Trust Officer 7502 Greenville Ave, Suite 250 Dallas, TX 75231
Ungar Foundation	Arts, humanities, civic and public affairs , education, the environment, and social services	(518) 325-7159	Director C/O Skytop Ranch 325 Sky Farm Rd Copake, NY 12516
Wallace Global Fund, Inc.		(202) 452-1530	1990 M. Street NW Suite 250 Washington, DC 20036
Wardlaw (Edna) Charitable Trust	Civic and public affairs , the environment, and social services	(404) 827-6921	Trust Officer C/O Sun Trust Bank Atlanta PO Box 4655 Atlanta, GA 30302-4655

Wishnick (Robert I.) Foundation	Arts and humanities, civic and public affairs , education, the environment, science, and social services	(212) 371-1844	President & Director 1 American Lane Greenwich, CT 06831
Land O'Lakes Foundation	Arts and humanities, civic and public affairs , education, the environment, health and social services	(612) 481-2212	Executive Director PO Box 62150 St. Paul, MN 55164-0150
Money-Arnez Foundation	Animals, children, youth services, education, environment, natural resources, human services	(706) 571-6594	PO Box 40 Columbus, GA 31902
Urban Park and Recreation Recovery Program	Rehabilitation grants that focus on neighborhood park and recreation sites and facilities that have deteriorated to the point where health and safety are endangered or the community's range of quality recreation services is impaired	See web	See web
Watershed Protection and Flood Prevention Program	Provides technical and financial assistance to address resource and related economic problems on a watershed basis	(202) 720-3534	Department of Agriculture Natural Resources Conservation Service PO Box 2890 Washington, DC 20013-9770
GRANT DIRECTORIES			
http://www.lgean.org/html/whatsnew.cfm#wn2			
www.sonoran.org			

XVI. Appendix I: Public Notifications

The following table includes media outlets notified of Berkeley-Charleston-Dorchester Council of Governments Board of Directors meetings. The notification includes an agenda indicating time, place, and opportunity for public comment. Copies of the agendas for the Board of Directors meetings occurring August 24 and December 4, 2009, follow. Thereafter appear the agendas of Berkeley County Council and Dorchester County Council, respectively, at which the BDHMP was presented to the public.

POST & COURIER
134 COLUMBUS STREET
CHARLESTON, SC 29403

BERKELEY INDEPENDENT
PO BOX 427
MONCK'S CORNER, SC 29461

NEWS EDITOR
THE EAGLE-RECORD
PO BOX 278
ST. GEORGE, SC 29477

MS. ELLEN PRIEST
SUMMERVILLE JOURNAL SCENE
PO BOX 715
SUMMERVILLE, SC 29483

GOOSE CREEK
GAZETTE/BERKELEY IND.
PO BOX 304
GOOSE CREEK, SC 29445

JIM FRENCH
THE CHRONICLE
PO BOX 20548
CHARLESTON, SC 29413-0548

SULLY WHITE
THE MOULTRIE NEWS
134 COLUMBUS STREET
CHARLESTON, SC 29403

HANAHAN NEWS/N. CHAS.
1928 E. MONTAGUE AVENUE
NORTH CHARLESTON, SC
29419

CHARLESTON REG. BUS.
JOURNAL
389 JOHNNIE DODDS BLVD,
STE. 200
MT. PLEASANT, SC 29464

RON MENCHACA
POST & COURIER
6296 RIVERS AVE - SUITE 100
NORTH CHARLESTON, SC
29406

NEWS DIRECTOR
WCBD TV 2
210 W. COLEMAN BLVD.
MT. PLEASANT, SC 29464

ASSIGNMENT EDITOR
WCIV TV 4
888 ALLBRITTON BLVD.
MT. PLEASANT, SC 29464

NEWS DIRECTOR
WCSC TV 5
2126 CHARLIE HALL BLVD.
CHARLESTON, SC 294014

CITADEL COMMUNICATIONS
4230 FABER PLACE DR., SUITE
100
NORTH CHARLESTON, SC
29405

KIRKMAN BROADCASTING
60 MARKFIELD DRIVE
CHARLESTON, SC 29407

CLEAR CHANNEL
COMMUNICATIONS
950 HOUSTON NORTHCUTT
BLVD
MT. PLEASANT, SC 29464

JABAR COMMUNICATIONS
5081 RIVERS AVENUE
NORTH CHARLESTON, SC
29406

THE CHARLESTON CITY PAPER
1049 B MORRISON DRIVE
CHARLESTON, SC 29403

NEWS EDITOR
WTAT - FOX 24
4301 ARCO LANE
CHARLESTON, SC 29406

XVII. Appendix J: Meeting sign in sheets

Please Sign In!
Berkeley-Dorchester Hazard Mitigation Plan
 2:00 pm, Monday, September 21, 2009

Name	Organization or Neighborhood (If Applicable)	Best Way to Contact You (Postal Address, Phone Number, or E-mail Address)
1 DAVID A. MILLER	Town of Marcus Cove	843-719-7991 DAVID.MILLER@TOWN-MC.COM
2 Shea McShakin	Sente Capor	(943) 761-8000 x: 5174 romcapi@sentecapcor.com
3 Megan Barkes	Michaux Conservancy	XXXXXXXXXX mbarkes@noisatasc.com
4 Robert Moyers	Dorchester County END	rmoyers@dorchestercounty.net
5 Doug Tompkins	BCWS	dtompkins@bcwsa.com
6 Susan Konneraad-Campbell	CAROL	Kamm.ame.knology.net
7 Tom Smith	Berkeley Co. EPD	t.smith@berkeleycountyss.gov
8 Mirelyn Robinson	Town of Summerville	BS14223 mrobinson@summerville.sc.gov
9 DANIEL BRU-YISRAEL	GOOSE CREEK	843 797 6220 dbruyisrael@co.yofgoosecreek.com
10		

Please Sign In!

Berkeley-Dorchester Hazard Mitigation Plan Update

Introductory meeting: 2:00 pm, Monday, July 27, 2009

Name	Organization or Neighborhood (if Applicable)	Best Way to Contact You (Postal Address, Phone Number, or E-mail Address)
1 ERIL GREENWAY	BERKELEY COUNTY	egreenway@berkeleycounty.sc.gov, 843-499-2413
2 Megan Barkes	Michaux Conservancy	mbarkes@noisetts.com 843-529-3693
3 Tom Smith	Berkeley Co. E.P.D.	tsmith@berkeleycounty.sc.gov 843-719-4817
4 Greg Rives	Berkeley County GIS	grives@berkeleycounty.sc.gov 843-719-4894
5 Monica L. Eustace	Dorchester County Planning	meustace@dorchestercounty.net 832-0008
6 Dennis L. Clark	Dor. County EMD	dclarke@dorchestercounty.net 832-0342
7 Doc Tompkins	BCWS	dtompkins@bcwsa.com 200-6886
8 Rick Williams	City of N. Ches	RWilliams@northcharleston.org 780-2561
9 Johnny Cribb	City of Hanahan	j.c.ribb@cityofhanahan.com 554-4221
10 Ann Speers	DHEC Region 7	Speers.a.d@dhcc.sc.gov 953-0052

Please Sign In!

Berkeley-Dorchester Hazard Mitigation Plan Update

Introductory meeting: 2:00 pm, Monday, July 27, 2009

Name	Organization or Neighborhood (If Applicable)	Best Way to Contact You (Postal Address, Phone Number, or E-mail Address)
1	John J Simkovich	843-953-0075 SIMKOVICH@DHEC.SC.GOV
2	DANIEL BEN-ISRAEL	843 797 6920 x118 dben-yisrael@cityofgoosecreek.com
3	Susan Kammeraad-Campbell	843-209-8415 Susan@jugglingboardpress.com
4	Jason L Ward	(843)832-0100
5	Franco Fuda	843 670 4084 bonneau_chief@tds.net
6	Roy Pipkin	Town Hall 843-257-2234 Roy@hmc.sc.gov
7		
8		
9		
10		

BCDCOG FULL BOARD OF DIRECTORS MEETING

August 24, 2009

Initial	NAME	REPRESENT	ADDRESS	PROXY	EMAIL ADDRESS
	SUMMEY, KEITH	CHAIRMAN	PO Box 190016, North Charleston, SC 29419-9016		
<i>TS</i>	AIKEN, TYRONE	Town of Lincolnville	PO Box 536, Lincolnville, SC 29483		<i>teammey@balleroute.net</i>
	ALSTON, WILLIAM	Town of Awendaw	6470 Highway 17 North, Awendaw, SC 29429		
<i>WB</i>	BALDWIN, OPAL	Town of Ravenel	5962 Highway 165-Suite 100, Ravenel, SC 29470		
<i>CR</i>	BECKMANN, CARL	City of Folly Beach	PO Box 48, Folly Beach, SC 29439		
<i>OT</i>	BLACKWELL, MINNIE	City of Hanahan	1255 Yeamans Hall Road, Hanahan, SC 29406	<i>JCR</i>	
<i>MB</i>	BROWN, AARON	Summerville Town Council	104 Civic Center, Summerville, SC 29483		
<i>RB</i>	BROWN, ROBERT	Chas. Co. Leg. Delegation	5925 Highway 162, Hollywood, SC 29449		
<i>JB</i>	BROWNLEE, SAM	Charleston County	PO Box 1456, Johns Island, SC 29457		
	CALLANAN, TIMOTHY	Berkeley County Council	7069 Schooner Street, Daniel Island, SC 29492		
	CLARK, MARY	Town of James Island	PO Box 12240, James Island, SC 29422		
	CRONIN, RICHARD	City of Isle of Palms	PO Drawer 508, Isle of Palms, SC 29451		
<i>DL</i>	DAVIS, DAN	Berkeley County	PO Box 6122, Moncks Corner, SC 29461		
	DAVIS, STEVE	Berkeley County Council	431 E. Main Street, Moncks Corner, SC 29461		
<i>DP</i>	DEMPSEY, LESTER	Durchester County Leg. Delegation	248 Parlor Drive, Ladson, SC 29418		
<i>FT</i>	FELTNER, JAMIE	Dorchester County Council	203 Mayfield Street, Summerville, SC 29485		
<i>LR</i>	HARGETT, LARRY	Dorchester County Council	615 Farington Drive, Summerville, SC 29485		
	HART, SAMUEL	City of North Charleston	4789 Hassell Street, Charleston, SC 29406		
<i>MT</i>	HEITZLER, MICHAEL	City of Goose Creek	PO Box 1768, Goose Creek, SC 29445		
	HOEY, JR., JACK	Charleston County	1208 Caudery Court, Mount Pleasant, SC 29464		





**BCDCOG FULL BOARD OF DIRECTORS MEETING
August 24, 2009**

Initial	NAME	REPRESENT	ADDRESS	PROXY	MAIL ADDRESS
	JAMES, RALPH	Dorchester County Council	402 Railroad Ave., St. George, SC 29477		
<i>JD</i>	JEFFERSON, JOSEPH	Berkeley Co. Leg. Delegation	1375 Colonel Maham Dr., Pineville, SC 29468		
	JOHNSTON, ANNE	Town of St. George	PO Box 904, St. George, SC 29477		
	JUNE, ALLEN	Town of Bonneau	PO Box 352, Bonneau, SC 29431		
<i>CPK</i>	KELLER, ANNE	Town of St. Stephen	PO Box 394, St. Stephen, SC 29479		
<i>Jim</i>	MALLARD, TIM	Charleston Co Leg Delegation	3095 South Shore Drive, Charleston, SC 29407	✓	
<i>Jan</i>	MILLER, MARY	North Charleston Sewer District	5314 Trudy Street, Charleston Heights, SC 29417		
<i>dy</i>	MITCHELL, EARL	Charleston County Council	2011 Savage Road, Charleston, SC 29407		
<i>e</i>	MORGAN, ELAINE	Berkeley Co Leg Delegation	PO Box 905, Moncks Corner, SC 29461		
	MORINELLI, DEB	City of Charleston Council	2810 Garden Creek Road, Charleston, SC 29414		
<i>dy</i>	PEAGLER, WILLIAM	Town of Moncks Corner	PO Box 1840, Moncks Corner, SC 29461	<i>Mark Hahn</i>	
	PINCKNEY, JR., CALDWELL	Berkeley County Council	2509 Highway 311, Cross, SC 29436		
<i>E.P.</i>	PLATT, EUGENE	James Island PSD	734 Gilmore Court, Charleston, SC 29412		
<i>M.P.</i>	PROFIT, MATHEW L.	Dorchester County Council	406 Cleveland Street, Summerville, SC 29483		
<i>dy</i>	PRYOR, TEDDIE	Charleston County Council	2700 Crestline Drive, North Charleston, SC 29405		
<i>dy</i>	RAWL, VICTOR	Charleston County Council	2835 Preakness Stakes, Charleston, SC 29414		
<i>dy</i>	REID, ROBERT J.	Charleston County Council	PO Box 21177, Charleston, SC 29413		
<i>dy</i>	RILEY, JR. JOSEPH P.	City of Charleston	PO Box 652, Charleston, SC 29402		
	ROSE, MICHAEL	Dorchester County Leg. Delegation	409 Central Avenue, Summerville, SC 29483		
	SIEGRIST, PHILLIP	Charleston County Leg Delegation	1139 Plantation Lane, Mt. Pleasant, SC 29464	<i>RD</i>	

PROXY


BCDCOG FULL BOARD OF DIRECTORS MEETING

August 24, 2009

Initial	NAME	REPRESENT	ADDRESS	PROXY
	SMITH, CARL	Town of Sullivan's Island	PO Box 427, Sullivan's Island, SC 29482	
	SMITH, KRUGER	Town of Mt. Pleasant	PO Box 745, Mt. Pleasant, SC 29464	
	SUMMEY, ELLIOTT	Charleston County Council	4975 Centre Pointe Drive, North Charleston, SC 29418	KRM - KEVIN MITCHELL 
	WARING, LOUIS	City of Charleston Council	PO Box 80085-0085, Charleston, SC 29416	
	WERT, WILLIAM	Town of Kiawah Island	21 Beachwalker Drive, Kiawah Island, SC 29455	
	WHIPPER, SETH	Chas. Co. Les. Delegation	PO Box 70070, North Charleston, SC 29405	
	WILLIAMS, JAMES	Town of Ridgeville	PO Box 238, Ridgeville, SC 29472	

BCDCOG FULL BOARD OF DIRECTORS MEETING
December 27, 2009

	SUMMEY, KEITH	CHAIRMAN	PO Box 190016, North Charleston, SC 29419-9016	
	AIKEN, TYRONE	Town of Lincolnville	PO Box 536, Lincolnville, SC 29483	
	BALDWIN, OPAL	Town of Ravenel	5962 Highway 165-Suite 100, Ravenel, SC 29470	
	BECKMANN, CARL	City of Folly Beach	PO Box 48, Folly Beach, SC 29439	
	BLACKWELL, MINNIE	City of Hanahan <i>PROXY CAB3</i>	1255 Yeamans Hall Road, Hanahan, SC 29406	
	BROWN, AARON	Summerville Town Council	104 Civic Center, Summerville, SC 29483	
	BROWN, ROBERT	Chas. Co. Leg. Delegation	5925 Highway 162, Hollywood, SC 29449	
	BROWNLEE, SAM	Charleston County	PO Box 1456, Johns Island, SC 29437	
	CALLANAN, TIMOTHY	Berkeley County Council	7069 Schooner Street, Daniel Island, SC 29492	
	CLARK, MARY	Town of James Island	PO Box 12240, James Island, SC 29422	<i>Mary G. Johnson - Berkeley</i>
	CRONIN, RICHARD	City of Isle of Palms	PO Drawer 508, Isle of Palms, SC 29451	
	DAVIS, DAN	Berkeley County	PO Box 6122, Moncks Corner, SC 29461	
	DAVIS, STEVE	Berkeley County Council	431 E. Main Street, Moncks Corner, SC 29461	
	DEMPSEY, LESTER	Dorchester County Leg. Delegation	248 Parlor Drive, Ladson, SC 29418	
	FELTNER, JAMIE	Dorchester County Council	203 Mayfield Street, Summerville, SC 29485	
	HARGETT, LARRY	Dorchester County Council	615 Fairington Drive, Summerville, SC 29485	
	HART, SAMUEL	City of North Charleston	4789 Hassell Street, Charleston, SC 29406	
	HEITZLER, MICHAEL	City of Goose Creek	PO Box 1768, Goose Creek, SC 29445	
	HOYER, JR., JACK	Charleston County	1208 Cudbery Court, Mount Pleasant, SC 29464	
	JAMES, RALPH	Dorchester County Council	402 Railroad Ave., St. George, SC 29477	

Proxy

Absent

9
 BCDCOG FULL BOARD OF DIRECTORS MEETING
 December 2, 2009

<i>APR</i>	JEFFERSON, JOSEPH	Berkeley Co. Leg. Delegation	1375 Colonel Maham Dr., Pineville, SC 29468	
	JOHNSTON, ANNE	Town of St. George	PO Box 904, St. George, SC 29477	
	JUNE, ALLEN	Town of Bonneau	PO Box 352, Bonneau, SC 29431	
<i>APR</i>	KELLER, ANNE	Town of St. Stephen	PO Box 394, St. Stephen, SC 29479	
<i>APR</i>	MALLARD, TIM	Charleston Co Leg Delegation	3095 South Shore Drive, Charleston, SC 29407	
<i>APR</i>	MILLER, MARY	North Charleston Sewer District	5314 Trudy Street, Charleston Heights, SC 29417	
<i>APR</i>	MITCHELL, EARL	Charleston County Council	2011 Savage Road, Charleston, SC 29407	
<i>APR</i>	MORGAN, ELAINE	Berkeley Co Leg Delegation	PO Box 905, Moncks Corner, SC 29461	
<i>APR</i>	MORINELLI, DEB	City of Charleston Council	2810 Garden Creek Road, Charleston, SC 29414	
<i>APR</i>	PEAGLER, WILLIAM	Town of Moncks Corner	PO Box 1840, Moncks Corner, SC 29461	
<i>APR</i>	PINCKNEY, JR., CALDWELL	Berkeley County Council	2509 Highway 311, Cross, SC 29436	
<i>APR</i>	PLATT, EUGENE	James Island PSD	734 Gimore Court, Charleston, SC 29412	
<i>APR</i>	PROFIT, MATHEW L.	Dorchester County Council	406 Cleveland Street, Summerville, SC 29483	
	PRYOR, TEDDIE	Charleston County Council	2700 Crestline Drive, North Charleston, SC 29405	
	RAWL, VICTOR	Charleston County Council	2835 Preakness Stakes, Charleston, SC 29414	
<i>APR</i>	REID, ROBERT J.	Charleston County Council	PO Box 21177, Charleston, SC 29413	
<i>APR</i>	RILEY, JR. JOSEPH P.	City of Charleston	PO Box 652, Charleston, SC 29402	<i>APR</i>
<i>APR</i>	ROBINSON, SAMUEL	Town of Awendaw	PO Box 520, Awendaw, SC 29429	
<i>APR</i>	ROSE, MICHAEL	Dorchester County Leg. Delegation	409 Central Avenue, Summerville, SC 29483	<i>APR</i>
	SIEGRIST, PHILLIP	Charleston County Leg Delegation	1139 Plantation Lane, Mt. Pleasant, SC 29464	

BCDCOG FULL BOARD OF DIRECTORS MEETING
December 3rd, 2009

	SMITH, CARL	Town of Sullivan's Island	PO Box 427, Sullivan's Island, SC 29482		
	SUMMEY, ELLIOTT	Charleston County Council	4975 Centre Pointe Drive, North Charleston, SC 29418		
	SWAILS, BILLY	Town of Mt. Pleasant	PO Box 745, Mt. Pleasant, SC 29464		
	WARING, LOUIS	City of Charleston Council	PO Box 80085-0085, Charleston, SC 29416		
	WERT, WILLIAM	Town of Kiawah Island	21 Beachwalker Drive, Kiawah Island, SC 29455		
	WHIPPER, SETH	Chas. Co. Les. Delegation	PO Box 70070, North Charleston, SC 29405		
	✓ WILLIAMS, JAMES	Town of Ridgeville	PO Box 238, Ridgeville, SC 29472		

BCDCOG FULL BOARD OF DIRECTORS MEETING
December 3rd, 2009

	SMITH, CARL	Town of Sullivan's Island	PO Box 427, Sullivan's Island, SC 29482		
	SUMMEY, ELLIOTT	Charleston County Council	4975 Centre Pointe Drive, North Charleston, SC 29418		
	SWAILS, BILLY	Town of Mt. Pleasant	PO Box 745, Mt. Pleasant, SC 29464		
	WARING, LOUIS	City of Charleston Council	PO Box 80085-0085, Charleston, SC 29416		
	WERT, WILLIAM	Town of Kiawah Island	21 Beachwalker Drive, Kiawah Island, SC 29455		
	WHIPPER, SETH	Chas. Co. Les. Delegation	PO Box 70070, North Charleston, SC 29405		
	WILLIAMS, JAMES	Town of Ridgeville	PO Box 238, Ridgeville, SC 29472		

BCDCOG Full Board of Directors Meeting

Guest Sign-In Sheet

December 4, 2009

ST	Sheila K... 147 Br... 147 Br...	147 Br...	147 Br...	SVP 1147@yahoocd
WL	GOLIGHTLY	MPW	525 Olde Bridge Ct	wlgolightly@comcast.net
BA	SWA.15	MT/PC	MT/PC, SC	
	Burdette	MT/PT/Trn	" "	
	PAUL SMITH	BP BARBER		PSM111@BFBACBSA.COM
	Eric King	BP Barber		eking@bpbarber.com
	Tyann Ak...	Lenox in the		
	Kristen Ch...	Dorchester Sp...		Kchrisper@edistrict.com
	Beth Simmon...	Cheshire (West	842 Summer Hill Rd	Bettyjane@msn.com
	Katie Zimmerm...	CLL		katie.zimmerm...@sccc.org
	Robert Em...	Robert Em...		
	James Mc...	" "		
	Sue Fries	Culter City	4045 Andy Way Dr.	jess@cltcity.org
	Clay Duffin	MPW		
	KEVIN MITCHELL	TOMP		
	SUE STEVENS	CLLA		
	Neil Druil	Town of Am...		

XVIII. Appendix K: Meeting Agendas

Berkeley-Dorchester Hazard Mitigation Plan Update

Barrett Lawrimore Boardroom

Berkeley-Charleston-Dorchester Council of Governments

1362 McMillan Avenue, North Charleston, SC 29405

Agenda

2:00 pm, Monday, July 27, 2009

- I. **Welcome and Introductions**
- II. **Presentation – “BDHMP” – Alec Brebner**
- III. **Roles**
 - a. **BCDCOG staff**
 - b. **Planning Committee role**
 - c. **Public**
- IV. **Timeline**
 - a. **July-August**
 - i. **Risk assessment**
 - ii. **Survey development**
 - b. **August meeting – Revisit goals**
 - c. **August-September**
 - i. **Revise goals and implementation strategies**
 - ii. **Hold public meeting**
 - d. **September meeting – Review 1st draft of document**
- V. **Related Efforts**
 - a. **Charleston County Hazard Mitigation Planning**
 - b. **Creating Resilient Communities**
 - c. **CARRI (Community and Regional Resilience Initiative)**
- VI. **Discussion**
- VII. **Adjourn**

Berkeley-Dorchester Hazard Mitigation Plan Update

Barrett Lawrimore Boardroom

Berkeley-Charleston-Dorchester Council of Governments

1362 McMillan Avenue, North Charleston, SC 29405

Agenda

2:00 pm, Monday, August 24, 2009

- I. **Welcome and Introductions**
- II. **Presentation – Alec Brebner and Ileana La Torre, BCDCOG**
 - a. **Hazards Assessment: Social and Biophysical Vulnerabilities**
 - b. **Risk Assessment**
- III. **Goals and Objectives**
 - a. **Discuss Plan goals and objectives**
 - b. **Discuss survey, incl. target audience**
- IV. **Stakeholder Comments/Updates**
- V. **Discuss Next Steps**
- VI. **Adjourn**

Berkeley-Dorchester Hazard Mitigation Plan Update

Barrett Lawrimore Boardroom

Berkeley-Charleston-Dorchester Council of Governments

1362 McMillan Avenue, North Charleston, SC 29405

Agenda

2:00 pm, Monday, September 21, 2009

- I. **Welcome and Introductions**
- II. **Presentation – Alec Brebner and Ileana La Torre, BCDCOG**
 - a. **Risk Assessment**
 - b. **Local Government Action Plans – funding sources and strategies**
- III. **Stakeholder Comments/Updates**
- IV. **Discuss Next Steps**
- V. **Adjourn**

BERKELEY-CHARLESTON-DORCHESTER COUNCIL OF GOVERNMENTS
BOARD OF DIRECTORS MEETING

August 24, 2009

11:00 am

Barrett Lawrimore Conference Room
1362 McMillan Avenue – Suite 100
North Charleston, SC 29405

AGENDA

- I. Call to Order
 - a. Invocation / Pledge of allegiance
 - b. Announcement of Proxies
 - c. Introduction of Guest
- II. Approval of Minutes: June 22, 2009 Council Meeting (Attachment A)
- III. Community & Regional Resilience Institute (CARRI) - Update
- IV. Water Quality Planning
 - A. 208 Water Quality Management Plan Minor Amendment
 - B. Service Area Agreement – Summerville CPW / North Charleston Sewer District
 - C. Daniel Island Waste Water Treatment Plan – Charleston Water System
 - D. Johns Island Junction Project
- V. Energy ARRA Project Prioritization Recommendations – Request for Approval
- VI. Berkeley-Dorchester Hazard Mitigation Plan Presentation – Alec Brebner, Planning Director
- VII. Resolution in support of an application to OEA for Joint Land Use Study (JLUS) – Request for Approval
- VIII. FTA Section 5316/5317 Selection Committee Recommendations – Request for Approval
- IX. BCD Mobility Management Program Status Report – Vonie Gilreath, Mobility Manager
- X. Minority Business Development / Entrepreneurial Initiative Update – Sandi Riddle, Economic Development Manager
- XI. Staff Reports
 - a. Planning Services – Alec Brebner, Planning Director
 - b. Economic Development / Revolving Loan Fund – Sandi Riddle, Economic Development Manager
 - c. Community Development – Darryl Bullock
 - d. Financial Status
 - e. Executive Director
- XII. Other Business
- XIII. General Public Comment
- XIV. Chairman's Time

BERKELEY-CHARLESTON-DORCHESTER COUNCIL OF GOVERNMENTS

BOARD OF DIRECTORS MEETING

December 4, 2009

11:00 am

Barrett Lawrimore Conference Room

(a) 1362 McMillan Avenue – Suite 100

North Charleston, SC 29405

AMENDED AGENDA

- I. Call to Order
 - a. Invocation / Pledge of Allegiance
 - b. Announcement of Proxies
 - c. Introduction of Guest

- II. Approval of Minutes: November 6, 2009 Council Meeting (Attachment A)

- III. Presentation of the FY 08/09 Audit – Robert Milhous, CPA, PA

- IV. New Carolina Transportation and Logistics Cluster Report – Peter Wertimer

- V. Berkeley / Dorchester Hazard Mitigation Plan Update – Alec Brebner

- VI. Water Quality Management Planning
 - a. Total Maximum Daily Load (TMDL) Allocation – Request for Approval
 - b. 208 Water Quality Management Plan – Amendment Request
 1. Dorchester County St. George Wastewater Treatment Plant Expansion – Request for Approval
 2. Town of Mount Pleasant / MPW Service Area Expansion – Request for Approval

- VII. ARRA Energy Funds – Status Report

- VIII. Mobility Management Project – Status Report

- IX. Community & Regional Resilience Institute (CARRI) Update – Jeff Burns

- X. Revolving Loan Fund / Financial Status Report

- XI. Other Business

- XII. General Public Comment

- XIII. Chairman’s Time

XIX. Appendix L: Meeting Minutes

Berkeley-Dorchester Hazard Mitigation Plan

Plan Update 1st Meeting

Questions/Comments/Suggestions

2:00 pm, July 27, 2009, 1362 McMillan Avenue Suite 100, Charleston, SC 29405

Members in Attendance: Eric Greenway (Berkeley County), Megan Barkes (Michaux Conservancy), Tom Smith (Berkeley County), Greg Rines (Berkeley County), Monica L. Eustace (Dorchester County), Dennis L. Clark (Dorchester County), DouL Tompkins (Berkeley County), Rick Williams (City of North Charleston), Johnny Cribb (City of Hanahan), Ann Sports (DHEC Region 7), John J. Simkoxich (DHEC Region 7), Daniel Ben-Yisrael (City of Goose Creek), Susan Kammeraad-Campbell (CARRI and CofC), Jason L. Ward (Dorchester County), Franco Fida (Town of Bonneau) and Roy Pipkin (Town of Jamestown).

Welcome/Introduction: Alec Brebner, BCDCOG, welcomed the attendees and explained the reason of the meeting. Each member was asked to introduce him or herself and tell the group which jurisdiction/organization they were from and what their position was with this entity. Mr. Brebner gave a presentation on the Berkeley-Dorchester Hazard Mitigation Plan Update and the requirements for the plan update.

Questions/Comments: There were no questions or comments during the presentation. At the end of the presentation, Alec Brebner asked for some comments/concerns/questions, and Mr. Clark raised the point of why it took so long to start working on the update of the plan. Mr. Brebner mentioned that it was a money issue. He mentioned that not until July 14, 2009 had the BCDCOG received the approval to start using the SC Emergency Management Division Planning Grant.

Related Efforts: Mr. Brebner mentioned that other ongoing projects such as *Creating Resilient Communities* and *CARRI* groups were working on similar efforts. Findings from these projects could be incorporated into the BDHMP, like some hazard and biodiversity data collected by *Creating Resilient Communities* group and the transportation information gathered by the *CARRI* group.

On other note Mr. Brebner mentioned that a survey similar to the one used in the previous plan will be created to prioritize the goals and objectives for the multi-jurisdictional plan. This survey will also help local jurisdictions assess if the goals and objectives should be change. Each local government will be asked to develop an action plan, with COG staff assistance, to implement the goals and objectives.

Timeline: Alec Brebner discussed that BCDCOG will be working on the risk assessment section and survey development within the months of July and August. At this point he asked to schedule the following meetings for the group to revisit the goals and objectives and to stay updated with the ongoing review process. The meetings were schedule for: Monday August 24, 2009 at 2:00 pm and Monday September 21, 2009 at 2:00 pm. Mr. Brebner mentioned that staff should have a first draft ready to send by September 27, 2009, which is the deadline set by SCEMD. The federal deadline is March 27, 2010.

Discussion/Suggestions: Mr. Clark suggested targeting the right people at local jurisdictions to ensure involvement of the community and success in the update process of the plan. He also suggested outreaching local jurisdictions by sending them a summary of the meeting, the

timeline for the project and a copy of their goals and objective section to actively involve them. He mentioned that the right person should be contacted to not lose time and efforts. Other comments included involving the Department of Health and Environmental Control (DHEC) Environmental Quality Control (EQC) office....

Berkeley-Dorchester Hazard Mitigation Plan

Meeting Summary/Comments/Questions

2:00 pm, August 24, 2009, 1362 McMillan Ave. Suite 100, Charleston, SC 29405

Introduction: Alec Brebner, BCDCOG, welcomed the attendees and provided some background information of the meeting. Each member was asked to introduce him or herself and tell the group which jurisdiction/organization they were from and what their position was with this entity. Mr. Brebner, assisted by Ms. Ileana La Torre (BCDCOG), gave a presentation on the Risk Assessment for Berkeley and Dorchester counties. The objective of the presentation was to present the progress in the risk analysis for both of these counties and the information to be included to finish the vulnerability analysis. For more detailed information please refer to the presentation available at <http://www.bcdcog.com/berkeleydorchesterhazardmit.htm>.

Questions/Comments: At the end of the presentation, it was asked if the BCDCOG staff was going to include information on vehicles transporting hazardous materials. Information of transportation routes could be included in the analysis to present those areas at risk due to their proximity to these routes. Mr. Tom Smith mentioned that Berkeley County does have some information that may be beneficial to include in the risk analysis and that he would like to meet with BCDCOG staff to discuss which data and how could it be integrated into the plan.

Mr. Brebner mentioned that funding situation of the project and that because of this BCDCOG staff did not have the chance to start working on the plan earlier. He mentioned that the adoption of the plan by local governments will be after March 27, 2009. A question was asked about if the action plans of local governments could be integrated into their comprehensive plans. Mr. Brebner answered that incorporating these action plans into their comprehensive plan is beneficial and that efforts could be streamlined by doing this.

The goals and objectives of the previous plan were discussed. Attendees provided comments and suggestions on the current goals and objectives and added additional information when necessary. Detailed information is available at <http://www.bcdcog.com/berkeleydorchesterhazardmit.htm>.

XX. Appendix M: Public Comments

THE MONTHLY MEETING OF BERKELEY COUNTY COUNCIL is scheduled to be held on **MONDAY DECEMBER 14, 2009**, following Public Hearings and the meetings of certain Committees at 6:00 p.m., in the **ASSEMBLY ROOM, BERKELEY COUNTY ADMINISTRATION BUILDING, 1003 HIGHWAY 52, MONCKS CORNER, S. C.**

CALL TO ORDER

APPROVAL OF MINUTES:

Special Meeting of Council	November 9, 2009
Public Hearings: Bills Numbered: 09-41, 09-43 and 09-50	November 23, 2009
Regular Council Meeting	November 23, 2009

PUBLIC DISCUSSION - Requests to be heard must be made prior to call to Order and comments must be limited to Agenda items only.

COMMENTS ON ANY PUBLIC DISCUSSION ITEM WILL BE LIMITED TO THREE (3) MINUTES PER SPEAKER. (A TOTAL OF 30 MINUTES WILL BE ALLOTTED FOR THIS PUBLIC DISCUSSION PERIOD.)

EXECUTIVE SESSION to discuss matters relating to the proposed location, expansion, or the provision of services encouraging location or expansion of industries, or other businesses in the area served by the county; or discussions of negotiations incident to proposed contractual arrangements and proposed sale or purchase of property, the receipt of legal advice where the legal advice relates to a pending, threatened, or potential claim or other matters covered by the attorney-client privilege, settlement of legal claim, or the position of the County in other adversary situations involving the assertion against the County of a claim.

CHAIRMAN OF COUNTY COUNCIL

THIRD READING:

1. **Bill No. 09-45**, an ordinance to modify the official Zoning and Development Standards Map of Berkeley County, South Carolina, Re: **John & Miriam Mitchum**, located 2,000 +/- L.F. from the intersection of N. Highway 52 and 17A on North Highway 17A, Moncks Corner, **TMS #123-00-02-030** (3.0 Acres), from **GC, General Commercial District** to **F-1, Agricultural District**. Council District No. 8.

[Recommended by Committee on Land Use]

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4. **Committee on Justice and Public Safety.**
Council Member, Mr. Steve C. Davis, Chairman.
 - a. Berkeley County Hazard Mitigation Plan.
5. **Committee on Water and Sanitation.**
Council Member, Mr. Timothy J. Callanan, Chairman.
 - a. Re-structuring of Convenience Center employees.
6. **Committee on Planning and Development.**
Council Member, Mrs. Cathy S. Davis, Chairman.
 - a. Presentation Re: dilapidated structures, unclean lots and land, and code enforcement.
7. **Committee on Community Services.**
Council Member, Mr. Caldwell Pinckney, Jr., Chairman.
8. **Committee on Human Services.**
Council Member, Mr. Dennis Fish, Chairman.

NOMINATIONS FOR MEMBERSHIP ON BOARDS, COMMISSIONS, ETC.

ACCOMMODATIONS TAX ADVISORY COMMITTEE

AERONAUTICS COMMISSION

BCD RURAL TRANSPORTATION MANAGEMENT ASSOCIATION

CHARLESTON AREA TRANSPORTATION STUDY

DEVON FOREST SPECIAL TAX DISTRICT

LIBRARY BOARD

MENTAL HEALTH BOARD

PIMLICO SPECIAL TAX DISTRICT

SANGAREE SPECIAL TAX DISTRICT

SPECIAL FIRE TAX DISTRICT ADVISORY COMMISSION

ZONING APPEALS BOARD

CORRESPONDENCE

UNFINISHED BUSINESS

NEW BUSINESS

ANNOUNCEMENTS

**AGENDA
DORCHESTER COUNTY COUNCIL
DORCHESTER COUNTY HUMAN SERVICES BUILDING
COUNCIL CHAMBERS, SUMMERVILLE
JANUARY 4, 2010
7:00 P.M.**

1. INVOCATION AND PLEDGE OF ALLEGIANCE

2. CHAIRMAN'S TIME – MR. JAMIE FELTNER

- Requests to Address Council
- Adoption of Minutes from the December 7, 2009, County Council Meeting
- Dorchester County Employee Recognition Program
- Dorchester County Retirement Recognition Program
- 2nd Reading for An Ordinance Restricting the Hours of Operation of Commercial Establishment Which Allow for the On-Premises Consumption of Alcohol Beverages
- Correspondence

3. COUNCIL MEMBER'S TIME, MR. LARRY HARGETT

- Reconsideration of Resolution #09-24, "A Resolution Directing the Dorchester County Planning Commission to Conduct Studies and to Develop and Make Recommendations for a Capital Improvements Plan and Impact Fee Ordinance as Provided for in the South Carolina Development Impact Fee Act as More Fully Set Forth in Section 6-1-910, *et seq.* Code of Laws of South Carolina (1976),as Amended"

COUNCIL MEMBER'S TIME, MR. RICHARD ROSEBROCK

- Adoption of Resolution #10-02, "A Resolution Expressing the Support of Dorchester County Council for Senate Bill S0735"

4. GUESTS

- Ms. Charlotte Allen, CPA, WebsterRogers, LLP, - Presentation of Fiscal Year 09 Audit
- Mr. John Dumas, Presentation of Framed Copy of the New County Seal
- Ms. Vonie Gilreath, Mobility Manager, Berkeley-Charleston-Dorchester Council of Governments – Presenting the Trident Rideshare Program and the Berkeley-Dorchester Hazard Mitigation Plan
- Mrs. Ashley McDonald, Deputy County Administrator - Recommendation Recovery Audit and Recommendation on Non-violent Offenders Electronic Monitoring Devices

5. COUNTY ADMINISTRATOR'S TIME – MR. JASON WARD

- Request for Qualifications for Consulting Services Old Courthouse and Jail Structural Engineering and Hazardous Materials Analysis and Detention Center Planning
- Update on Available Debt Capacity after \$12 Million General Obligation Bonds and Other Capital Improvements Projects