

SECTION 1. INTRODUCTION AND PLANNING PROCESS

I. INTRODUCTION 1-1

II. PAMLICO SOUND REGION 1-1

III. HAZARD MITIGATION LEGISLATION 1-2

IV. WHAT IS HAZARD MITIGATION AND WHY IS IT IMPORTANT
TO THE PAMLICO SOUND REGION? 1-3

 A. What is Hazard Mitigation? 1-3

 B. Why is Hazard Mitigation Important to the Pamlico Sound Region? 1-3

V. PLAN FORMAT 1-4

VI. INCORPORATION OF EXISTING PLANS, STUDIES, AND REPORTS 1-6

VII. PLANNING PROCESS 1-7

VIII. AUTHORITY FOR HMP ADOPTION AND RELEVANT LEGISLATION 1-12

SECTION 2. COMMUNITY PROFILES

I. INTRODUCTION 2-1

 A. Location 2-1

 B. Topography/Geology 2-2

 C. Climate 2-2

II. BEAUFORT COUNTY 2-3

 A. History 2-3

 B. Demographic Summary 2-3

 1. Population 2-3

 2. Housing 2-4

 3. Economy 2-8

III. CARTERET COUNTY 2-12

 A. History 2-12

 B. Demographic Summary 2-13

 1. Population 2-13

 2. Housing 2-13

 3. Economy 2-19

IV. CRAVEN COUNTY 2-24

 A. History 2-24

 B. Demographic Summary 2-24

 1. Population 2-24

 2. Housing 2-25

 3. Economy 2-30

V. HYDE COUNTY 2-34

 A. History 2-34

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

TABLE OF CONTENTS

B. Demographic Summary 2-35

 1. Population 2-35

 2. Housing 2-36

 3. Economy 2-38

VI. PAMLICO COUNTY 2-41

 A. History 2-41

 B. Demographic Summary 2-41

 1. Population 2-41

 2. Housing 2-42

 3. Economy 2-47

SECTION 3. HAZARD IDENTIFICATION

I. INTRODUCTION 3-1

II. HURRICANES 3-2

 A. July 5 to July 12, 1996 (Hurricane Bertha) 3-3

 B. August 23 to September 5, 1996 (Hurricane Fran) 3-4

 C. October 4 to 8, 1996 (Tropical Storm Josephine) 3-4

 D. August 19 to 30, 1998 (Hurricane Bonnie) 3-5

 E. August 24 to September 7, 1999 (Hurricane/Tropical Storm Dennis) 3-5

 F. September 7 to 18, 1999 (Hurricane Floyd) 3-6

 G. October 13 to 18, 1999 (Hurricane Irene) 3-6

 H. September 6 to 19, 2003 (Hurricane Isabel) 3-7

 I. July 31 to August 4, 2004 (Hurricane Alex) 3-8

 J. August 9 to 15, 2004 (Hurricane Charley) 3-8

 K. September 6 to 17, 2005 (Hurricane Ophelia) 3-9

 L. August 24 to September 1, 2006 (Tropical Storm Ernesto) 3-9

 M. August 26 to 27, 2011 (Hurricane Irene) 3-10

 N. October 22 to 31, 2012 (TS/Hurricane Sandy) 3-10

 O. Retired Names 3-10

 P. Extent 3-11

III. NOR'EASTERS 3-11

IV. FLOODING 3-12

V. SEVERE WINTER STORMS 3-15

VI. SEVERE THUNDERSTORMS/WINDSTORMS 3-16

VII. TORNADOS 3-17

VIII. WILDFIRE 3-19

IX. EARTHQUAKES 3-20

X. DAM/LEVEE FAILURE 3-22

XI. TSUNAMIS 3-24

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

TABLE OF CONTENTS

XII. COASTAL HAZARDS 3-25
 A. Coastal or Estuarine Erosion 3-25
 B. Rip Currents 3-26
 C. Storm Surge 3-27
XIII. DROUGHTS/HEAT WAVES 3-29
XIV. EXPLANATION OF HAZARDS NOT IDENTIFIED 3-31
XV. RANKING OF NATURAL HAZARD POTENTIAL 3-31
XVI. HAZARD DAMAGE AND LIKELIHOOD OF OCCURRENCE SUMMARY 3-32

SECTION 4. COMMUNITY CAPABILITY ASSESSMENT

I. AGENCY/ORGANIZATIONAL REVIEW 4-1
 A. Beaufort County 4-1
 1. Unincorporated Beaufort County 4-1
 2. Beaufort County Municipalities 4-3
 B. Carteret County 4-3
 1. Unincorporated Carteret County 4-3
 2. Carteret County Municipalities 4-4
 C. Craven County 4-5
 1. Unincorporated Craven County 4-5
 2. Craven County Municipalities 4-6
 D. Hyde County 4-7
 E. Pamlico County 4-8
 1. Unincorporated Pamlico County 4-8
 2. Pamlico County Municipalities 4-10
II. EXISTING POLICIES AND PROGRAM REVIEW 4-11
 A. Flood Damage and Prevention Ordinance 4-11
 B. North Carolina State Building Code 4-12
 C. Zoning Ordinance 4-12
 D. Subdivision Ordinance 4-13
 E. Capital Improvements Plan 4-13
 F. Coastal Area Management Act (CAMA) Plans 4-13
III. COMMUNITY CAPABILITY ASSESSMENT 4-14
IV. LEGAL CAPABILITY REVIEW 4-17
 A. Regulations 4-17
 1. General Police Power 4-17
 2. Building Codes and Building Inspections 4-18
 3. Land Use 4-18
 B. Acquisition 4-19
 C. Taxation 4-20
 D. Spending 4-20

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

TABLE OF CONTENTS

V. FISCAL CAPABILITY REVIEW 4-21
VI. POLITICAL ACCEPTABILITY REVIEW 4-21

SECTION 5. VULNERABILITY ASSESSMENT

I. INTRODUCTION 5-1
II. DEVELOPMENT VULNERABILITY 5-1
 A. Vulnerability to Non-Specific Hazards 5-2
 1. Beaufort County Existing Vulnerability 5-2
 2. Beaufort County Future Vulnerability 5-2
 3. Carteret County Existing Vulnerability 5-3
 4. Carteret County Future Vulnerability 5-3
 5. Craven County Existing Vulnerability 5-4
 6. Craven County Future Vulnerability 5-4
 7. Hyde County Existing Vulnerability 5-4
 8. Hyde County Future Vulnerability 5-5
 9. Pamlico County Existing Vulnerability 5-5
 10. Pamlico County Future Vulnerability 5-5
 B. Flooding 5-6
 1. Flood Insurance Rate Maps (FIRMS) 5-6
 2. Beaufort County Existing Vulnerability 5-6
 3. Beaufort County Future Vulnerability 5-7
 4. Carteret County Existing Vulnerability 5-7
 5. Carteret County Future Vulnerability 5-8
 6. Craven County Existing Vulnerability 5-8
 7. Craven County Future Vulnerability 5-9
 8. Hyde County Existing Vulnerability 5-9
 9. Hyde County Future Vulnerability 5-9
 10. Pamlico County Existing Vulnerability 5-9
 11. Pamlico County Future Vulnerability 5-10
 C. Drought/Extreme Heat 5-10
III. FRAGILE AREAS 5-10
IV. CRITICAL FACILITIES 5-11
V. REPETITIVE LOSS STRUCTURES 5-22
VI. KEY ISSUES REGARDING HURRICANES/FLOODING 5-23
VII. CHANGE IN LAND USE FORM 5-24

SECTION 6. MITIGATION STRATEGIES

I. INTRODUCTION 6-1
II. 2010/2011 MITIGATION PROGRESS REPORTS 6-2
 A. Public Participation 6-2

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

TABLE OF CONTENTS

B. Monitoring and Evaluation 6-2
C. Incorporation of Mitigation Plan into Other Planning Mechanisms 6-2
D. Mitigation Strategy Progress 6-2
III. MITIGATION STRATEGIES 6-3
IV. COMMUNITY RATING SYSTEM STRATEGY 6-37

SECTION 7. PLAN MAINTENANCE AND IMPLEMENTATION PROCEDURES

I. INTRODUCTION 7-1
II. IMPLEMENTATION 7-1
III. ROLE OF THE MITIGATION ADVISORY COMMITTEE IN IMPLEMENTATION & MAINTENANCE . 7-2
IV. EVALUATION, MONITORING, AND UPDATING 7-2
V. CONTINUED PUBLIC INVOLVEMENT 7-4
VI. INCORPORATION INTO EXISTING PLANS AND DOCUMENTS 7-4

TABLES

Table 1 Beaufort County/Municipalities Population, 1990-2010 2-3
Table 2 Beaufort County/Municipalities Summary of Housing Units by Tenure, 2010 2-4
Table 3 Beaufort County/Municipalities Housing Units by Year Structure Built, 2010 2-5
Table 4 Beaufort County/Municipalities Civilian Unemployment Rate 2-8
Table 5 Beaufort County Employment by Industry, 2010 2-9
Table 6 Beaufort County and North Carolina Per Capita Income, 2000 and 2010 2-10
Table 7 Carteret County/Municipalities Population, 1990-2010 2-13
Table 8 Carteret County/Municipalities Summary of Housing Units by Tenure, 2010 2-14
Table 9 Carteret County/Municipalities Housing Units by Year Structure Built, 2010 2-16
Table 10 Carteret County/Municipalities Civilian Unemployment Rate 2-20
Table 11 Carteret County Employment by Industry, 2010 2-21
Table 12 Carteret County and North Carolina Per Capita Income, 2000 and 2010 2-22
Table 13 Craven County/Municipalities Population, 1990-2010 2-24
Table 14 Craven County/Municipalities Summary of Housing Units by Tenure, 2010 2-25
Table 15 Craven County/Municipalities Housing Units by Year Structure Built, 2010 2-27
Table 16 Craven County/Municipalities Civilian Unemployment Rate 2-30
Table 17 Craven County Employment by Industry, 2010 2-31
Table 18 Craven County and North Carolina Per Capita Income, 2000 and 2010 2-32
Table 19 Hyde County Population, 1990-2010 2-35
Table 20 Hyde County Census Designated Places, 2010 2-35
Table 21 Hyde County/Census Designated Places Summary of Housing Units by Tenure, 2010 2-36
Table 22 Hyde County/Census Designated Places Housing Units by Year Structure Built, 2010 2-37
Table 23 Hyde County/Census Designated Places Civilian Unemployment Rate 2-38
Table 24 Hyde County Employment by Industry, 2010 2-39
Table 25 Hyde County and North Carolina Per Capita Income, 2000 and 2010 2-40

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

TABLE OF CONTENTS

Table 26	Pamlico County/Municipalities Population, 1990-2010	2-41
Table 27	Pamlico County/Municipalities Summary of Housing Units by Tenure, 2010	2-42
Table 28	Pamlico County/Municipalities Housing Units by Year Structure Built, 2010	2-44
Table 29	Pamlico County/Municipalities Civilian Unemployment Rate	2-47
Table 30	Pamlico County Employment by Industry, 2010	2-49
Table 31	Pamlico County and North Carolina Per Capita Income, 2000 and 2010	2-49
Table 32	The Dolan-Davis Nor'easter Intensity Scale	3-11
Table 33	Enhanced Fujita Tornado Scale	3-18
Table 33	Beaufort, Carteret, Craven, Hyde, and Pamlico Counties Acres of Timberland by Ownership Class	3-19
Table 35	Modified Mercalli Scale of Earthquake Intensity	3-20
Table 36	Dams in or Affecting the Pamlico Sound Region	3-22
Table 37	Pamlico Sound Region Rip Currents, 2002-2013	3-27
Table 38	Storm Surge Affecting the Pamlico Sound Region, 2001-2013	3-29
Table 39	Pamlico Sound Region Ranking of Hazard Potential	3-31
Table 40	Pamlico Sound Region Hazard Impact	3-32
Table 41	Agency/Organizational Review for Beaufort County	4-2
Table 42	Agency/Organizational Review for Carteret County	4-3
Table 43	Agency/Organizational Review for Craven County	4-5
Table 44	Agency/Organizational Review for Hyde County	4-7
Table 45	Agency/Organizational Review for Pamlico County	4-9
Table 46	Beaufort County Jurisdictional Functions/Capabilities	4-14
Table 47	Carteret County Jurisdictional Functions/Capabilities	4-15
Table 48	Craven County Jurisdictional Functions/Capabilities	4-15
Table 49	Hyde County Jurisdictional Functions/Capabilities	4-16
Table 50	Pamlico County Jurisdictional Functions/Capabilities	4-16
Table 51	Beaufort County Non-Specific Hazards Development Vulnerability	5-2
Table 52	Carteret County Non-Specific Hazards Development Vulnerability	5-3
Table 53	Craven County Non-Specific Hazards Development Vulnerability	5-4
Table 54	Hyde County Non-Specific Hazards Development Vulnerability	5-4
Table 55	Pamlico County Non-Specific Hazards Development Vulnerability	5-5
Table 56	Pamlico Sound Region Flood Hazard Areas	5-6
Table 57	Beaufort County Floodprone Structures	5-7
Table 58	Carteret County Floodprone Structures	5-7
Table 59	Craven County Floodprone Structures	5-8
Table 60	Hyde County Floodprone Structures	5-9
Table 61	Pamlico County Floodprone Structures	5-9
Table 62	Pamlico Sound Region Critical Facilities	5-11
Table 63	Pamlico Sound Region Repetitive Loss Properties	5-22
Table 64	Pamlico Sound Region Development Activity	5-24

PAMLICO SOUND REGIONAL HAZARD MITIGATION PLAN

TABLE OF CONTENTS

Table 65	Pamlico Sound Regional Mitigation Strategies	6-6
Table 66	Beaufort County Mitigation Strategies	6-7
Table 67	Carteret County Mitigation Strategies	6-16
Table 68	Craven County Mitigation Strategies	6-25
Table 69	Hyde County Mitigation Strategies	6-30
Table 70	Pamlico County Mitigation Strategies	6-34
Table 71	CRS Related Benefits	6-38

FIGURES

Figure 1	Regional Location Map	2-1
Figure 2	DART Locations - Conceptual Plan	3-25
Figure 3	Storm Surge	3-27

APPENDICES

Appendix A	Maps
Appendix B	Local Government Participation Documentation
Appendix C	Public Involvement Documentation
Appendix D	NCEM Review Comments
Appendix E	Hazard Inventory
Appendix F	Funding Sources
Appendix G	2010/2011 Mitigation Progress Report
Appendix H	CRS Summary of Steps
Appendix I	Adoption Resolutions