

1. Record Nr.	UNINA9910817748103321
Titolo	Hurricane Hugo : Puerto Rico, the U.S. Virgin Islands, and South Carolina, September 17-22, 1989 // prepared by: Puerto Rico and the Virgin Islands: Joseph H. Golden ... [et al.] ; South Carolina: Earl J. Baker ... [et al.] ; for Committee on Natural Disasters ... [et al.]
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1994
ISBN	1-280-20400-1 9786610204007 0-309-55591-4 0-585-14501-6
Edizione	[1st ed.]
Descrizione fisica	1 online resource (296 p.)
Collana	Natural disaster studies ; ; v. 6
Altri autori (Persone)	GoldenJoseph H BakerEarl J
Disciplina	363.3/492
Soggetti	Hurricane Hugo, 1989 Hurricanes - South Carolina Hurricanes - Puerto Rico Hurricanes - Virgin Islands of the United States Buildings - Natural disaster effects - Puerto Rico Buildings - Natural disaster effects - South Carolina Buildings - Natural disaster effects - Virgin Islands of the United States
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references (p. 276).
Nota di contenuto	Hurricane Hugo -- Copyright -- Natural Disaster Studies -- Invitation For Discussion -- ACKNOWLEDGEMENTS -- PUERTO RICO AND THE U.S. VIRGIN ISLANDS -- SOUTH CAROLINA -- HURRICAN HUGO METEOROLOGY CHRONOLOGY -- HURRICANE HUGO WEATHER ANNOUNCEMENT TIMELINE -- Contents -- LIST OF ACRONYMS AND ABBREVIATIONS -- EXECUTIVE SUMMARY -- INTRODUCTION -- THE U. S. VIRGIN ISLANDS AND PUERTO RICO: SEPTEMBER 17-18, 1989 -- Meteorology/Storm History -- Warnings/Evacuations/Emergency Response -- Related Deaths -- Damages -- Physical Processes -- Conclusions and Recommendations -- Hurricane Models -- Wind-

Speed Data -- Informing Local Media -- Design Criteria -- Emergency Power Supply -- ALERT Rain Gage Network -- Emergency Broadcasts -- Evacuation Efforts and Shelters -- Coastal Zone Management -- SOUTH CAROLINA: SEPTEMBER 19-22, 1989 -- Meteorology -- Warnings and Evacuations -- Coastal Processes -- Related Deaths -- Damage to Buildings and Structures -- Damage to Lifelines -- Damage to Cultural Property -- Conclusions and Recommendations -- Forecast Uncertainty -- Wind-Speed Measurement -- Storm-Surge Maps -- Coastal Zone Management -- Schools as Shelters -- Vulnerability of Vital Buildings to Wind Damage -- Lifeline Protection and Backup Power -- Emergency Equipment -- Education and Training About Hurricane-Resistant Construction -- Evacuation from High-Risk Structures -- Storm Insurance -- Protection of Historic Properties -- Recovery Planning -- State Responsibility -- HURRICANE HUGO, SEPTEMBER 17-18, 1989: PUERTO RICO AND THE U.S. VIRGIN ISLANDS -- 1 Meteorology -- INTRODUCTION -- AIRCRAFT RECONNAISSANCE -- MESOSCALE VARIATIONS IN STORM AND STRUCTURE -- IMPACTS ON THE ISLANDS -- UNIQUE DATA -- SURFACE-WIND-SPEED OBSERVATIONS -- FORECAST PERFORMANCE -- References -- 2 Hydrology -- INTRODUCTION -- PRECIPITATION -- St. Croix -- St. John and St. Thomas.

Puerto Rico -- FLOODING -- LANDSLIDES -- SUMMARY AND RECOMMENDATIONS -- References -- 3 Emergency Planning and Response in Puerto Rico -- INTRODUCTION -- OPERATIONS OF THE WEATHER SERVICE FORECAST OFFICE IN SAN JUAN -- Reasons for WSFO Success/Effectiveness -- U.S. ARMY CORPS OF ENGINEERS DECISION-ARC METHODOLOGY -- EVACUATIONS -- FATALITIES AND HOMELESSNESS -- DAMAGE AND ECONOMIC EFFECTS -- COMPARISON OF WSFO AND SLOSH METHODOLOGIES -- DISASTER-RELATED PROGRAMS -- Sheltering -- WATER AND POWER SUPPLIES AFTER HUGO LANDFALL -- El Carraizo Dam -- Autoridad de Energia Electrica -- RECOMMENDATIONS -- References -- 4 Surface Wind Speeds and Property Damage -- INTRODUCTION -- SOURCES OF DATA -- ASSESSMENT OF SURFACE WIND SPEEDS -- St. Croix -- St. Thomas -- Vieques -- Culebra -- Puerto Rico -- DESIGN WIND SPEEDS -- U.S. Virgin Islands -- Puerto Rico -- Caribbean Region -- SUMMARY OF MAXIMUM WIND SPEEDS -- PROPERTY DAMAGE -- St. Croix -- St. Thomas -- Vieques -- Culebra -- Puerto Rico -- SUMMARY -- References -- 5 Lifelines -- INTRODUCTION -- ELECTRICAL DISTRIBUTION SYSTEMS -- COMMUNICATIONS -- WATER SUPPLIES -- The Flooding of El Carraizo Pumping Plant -- AIRPORTS -- OTHER TRANSPORTATION SYSTEMS -- OTHER LIFELINE SYSTEMS -- SUMMARY -- References -- 6 Coastal Processes -- INTRODUCTION -- STORM SURGE AND SHORE PROCESSES -- SHORELINE DESCRIPTIONS -- COMPARISON WITH THE SOUTH CAROLINA SHORELINE -- GENERAL OVERVIEW OF HUGO'S IMPACT -- STORM SURGE, PREDICTED AND OBSERVED -- SAND OVERWASH -- COASTAL FLOODING -- WAVE ATTACK -- DEGRADATION OF RECREATIONAL BEACH RESOURCES -- "SETTING UP" THE SHORELINE FOR WINTER STORM DAMAGE -- SOME UNIQUE UNDERSEA WATER DATA NEAR ST. CROIX -- SUMMARY -- RECOMMENDATIONS -- References -- 7 Conclusions and Recommendations -- AERIAL RECONNAISSANCE -- Conclusions -- Recommendations -- PREDICTION MODELS -- Conclusions. Recommendations -- SURFACE-WIND-SPEED DATABASE -- Conclusions -- Recommendations -- COMMUNICATION WITH THE NEWS MEDIA -- Conclusions -- Recommendations -- WIND MODELS RELATING AIRCRAFT-MEASURED WINDS TO SURFACE WINDS -- Conclusions -- Recommendations -- ALERT AUTOMATIC RAIN GAGE NETWORK AND

BACKUP POWER SUPPLY FOR WATER REGULATORY STRUCTURES --
Conclusions -- Recommendations -- EBS NETWORK, SHELTER
READINESS, AND INTERGOVERNMENTAL RESPONSE -- Conclusions --
Recommendations -- TECHNOLOGY TRANSFER TO IMPROVE BUILDING
CODES AND CONSTRUCTION PRACTICES -- Conclusions --
Recommendations -- COASTAL ZONE MANAGEMENT PLAN --
Conclusions -- Recommendations -- HURRICANE HUGO, SEPTEMBER
21-22, 1989: SOUTH CAROLINA -- 8 Introduction -- IMMEDIATE POST-
STORM ENVIRONMENT -- INSURANCE CLAIMS -- FEDERAL ASSISTANCE
FOR INDIVIDUALS, FAMILIES, AND BUSINESSES -- VOLUNTEER
ORGANIZATIONS -- FEDERAL ASSISTANCE TO STATE AND LOCAL
GOVERNMENT -- References -- 9 Meteorology -- OVERVIEW -- STORM
TRACK -- MOTION AND TRACK FORECAST PERFORMANCE -- INTENSITY
PREDICTION -- WIND MEASUREMENTS BY RECONNAISSANCE AIRCRAFT
-- ESTIMATION OF SURFACE WINDS USED IN PRELANDFALL ADVISORIES
-- LANDFALL OF HURRICANE HUGO -- Radar Structure and Track --
Wind Asymmetries -- Storm Surge -- Local Statements and Data
Acquisition -- SURFACE WINDFIELD AT LANDFALL -- Flight-Level
Windfield Prior to Landfall -- Surface Data Processing -- Surface-
Windfield Analysis at 0400 UTC -- Validation of Public Advisories --
Solutions for the Problem of Sparse Wind Observations --
POSTLANDFALL WINDFIELDS -- Windfield at 0300 EDT (Hugo Near
Columbia, South Carolina) -- Windfield at 0600 EDT (Hugo Near
Charlotte, Noah Carolina) -- GUST ENVELOPE AND FUJITA'S DAMAGE-
DIRECTION ANALYSIS -- FINDINGS AND RECOMMENDATIONS --
Forecast Tools -- Wind Measurement -- Overland Tracking --
References -- 10 Warning and Response.
INTRODUCTION -- FORECASTS -- PUBLIC RESPONSE -- Evacuation
Rates -- Evacuation Timing -- Type of Refuge -- Evacuation
Destinations -- USE AND EVALUATION OF EVACUATION -- Surge Maps
-- Clearance Times -- Behavioral Assumptions -- Decision Aids --
DECISION MAKING -- References -- 11 Coastal Processes --
INTRODUCTION -- STORM SURGE -- COASTAL EROSION -- DISCUSSION
-- CONCLUSIONS -- References -- 12 Water Erosion and Damage to
Coastal Structures -- INTRODUCTION -- DAMAGE DESCRIPTIONS --
Seabrook Island -- Folly Beach -- Charleston and Vicinity -- Sullivan's
Island and Isle of Palms -- McClellanville and Vicinity -- Northern Coast
of South Carolina -- PERFORMANCE ASSESSMENT -- Foundations --
Elevation -- Setback -- Appurtenant Structures -- Structural Member
Connections -- Coastal Structures -- Seawalls -- Revetments, Groins,
and Jetties -- Piers -- CONCLUSIONS -- RECOMMENDATIONS --
References -- 13 Wind Damage to Buildings and Structures --
INTRODUCTION -- NONENGINEERED BUILDINGS AND STRUCTURES --
Signage and Canopies -- MARGINALLY ENGINEERED BUILDINGS AND
STRUCTURES -- FULLY ENGINEERED STRUCTURES -- Other Structures
-- Water Tank -- Light Standards -- Bridge -- Crane -- CODES --
CONCLUSIONS -- RECOMMENDATIONS -- General -- Nonengineered
Buildings and Structures -- Marginally Engineered Buildings and
Structures -- Fully Engineered Building and Structures -- 14 Lifelines
-- INTRODUCTION -- POWER SUPPLY SYSTEMS -- Power Plants and
Substations -- Transmission Lines -- Distribution Lines --
TRANSPORTATION SYSTEMS -- Roads and Bridges -- Airports --
COMMUNICATIONS SYSTEMS -- Telephone -- Radio and Television --
WATER AND WASTEWATER SYSTEMS -- Water -- Wastewater --
CONCLUSIONS -- RECOMMENDATIONS -- 15 Damage to Cultural
Property -- INTRODUCTION -- CHARLESTON, SOUTH CAROLINA --
Response -- Libraries, Archives, and Museums -- Landscaping --
RECOMMENDATIONS.

