

## Table of Contents

# Table of Contents

<b>Section 1</b>	<b>Executive Summary .....</b>	<b>1-1</b>
1.1	Overview .....	1-1
1.2	Conclusions .....	1-3
1.3	Recommendations for Economic Recovery and Sustainability.....	1-4
1.3.1	Mitigation Planning Strategies .....	1-4
1.3.2	Specific Mitigation and Recovery Measures .	1-5
1.3.3	Federal, State, and Local Agency Support, Assistance, and Coordination .....	1-8
<b>Section 2</b>	<b>Approach and Methodology .....</b>	<b>2-1</b>
2.1	Introduction .....	2-1
2.2	Community Selection .....	2-2
2.3	Pre-Disaster Conditions .....	2-4
2.4	Post-Disaster Conditions .....	2-5
<b>Section 3</b>	<b>State of New Jersey .....</b>	<b>3-1</b>
3.1	Pre-Disaster Conditions .....	3-1
3.1.1	Primary Industries and Employment .....	3-1
3.1.2	Tax Structure .....	3-4
3.1.3	Historic Flooding and Past Studies .....	3-4
3.2	Post-Disaster Conditions .....	3-4
3.2.1	PDA Data .....	3-4
3.2.2	CEGC/Department of Treasury Telephone Survey Data .....	3-6
3.3	Conclusions .....	3-7
3.3.1	Impacts to Primary Industries and Employment .....	3-7
3.3.2	Impacts to Tax Base .....	3-10
3.4	Recommendations .....	3-11
3.4.1	Mitigation Planning Strategies .....	3-11
3.4.2	Specific Mitigation and Recovery Measures .....	3-14
3.4.3	Federal, State, and Local Agency Support, Assistance, and Coordination .....	3-19
<b>Section 4</b>	<b>Bergen County/Borough of Lodi .....</b>	<b>4-1</b>
4.1	Pre-Disaster Conditions .....	4-1
4.1.1	Primary Industries and Employment .....	4-1
4.1.2	Historic Flooding and Past Studies .....	4-3
4.2	Post-Disaster Conditions .....	4-4
4.2.1	Revenues Lost .....	4-5
4.2.2	Annual Taxes Lost .....	4-6
4.2.3	Numbers of Employees .....	4-7
4.2.4	Structural Property Damage .....	4-7

---

4.2.5	Nonstructural Property and Equipment Damage .....	4-8
4.2.6	Inventory Damage .....	4-8
4.2.7	Utility-Related Losses .....	4-8
4.2.8	Business Reopenings .....	4-9
4.2.9	Rebuilding or Relocation .....	4-9
4.2.10	Category and Value of Economic Loss .....	4-9
4.3	Conclusions .....	4-9
4.4	Recommendations .....	4-11

## **Section 5      Mercer County/City of Trenton ..... 5-1**

5.1	Pre-Disaster Conditions .....	5-2
5.1.1	Primary Industries and Employment .....	5-2
5.1.2	Historic Flooding and Past Studies .....	5-3
5.2	Post-Disaster Conditions .....	5-5
5.2.1	Revenues Lost .....	5-6
5.2.2	Annual Taxes Lost .....	5-6
5.2.3	Numbers of Employees .....	5-7
5.2.4	Structural Property Damage .....	5-7
5.2.5	Nonstructural Property and Equipment Damage .....	5-7
5.2.6	Inventory Damage .....	5-7
5.2.7	Utility-Related Losses .....	5-8
5.2.8	Business Reopenings .....	5-8
5.2.9	Rebuilding or Relocation .....	5-8
5.2.10	Category and Value of Economic Loss .....	5-9
5.3	Conclusions .....	5-9
5.4	Recommendations .....	5-10

## **Section 6      Passaic County/Cities of Passaic and Paterson ..... 6-1**

6.1	Pre-Disaster Conditions .....	6-1
6.1.1	Primary Industries and Employment .....	6-1
6.1.2	Historic Flooding and Past Studies .....	6-4
6.2	Post-Disaster Conditions .....	6-5
6.2.1	Revenues Lost .....	6-8
6.2.2	Annual Taxes Lost .....	6-9
6.2.3	Numbers of Employees .....	6-9
6.2.4	Structural Property Damage .....	6-9
6.2.5	Nonstructural Property and Equipment Damage .....	6-10
6.2.6	Inventory Damage .....	6-11
6.2.7	Utility-Related Losses .....	6-11
6.2.8	Business Reopenings .....	6-12
6.2.9	Rebuilding or Relocation .....	6-12
6.2.10	Category and Value of Economic Loss .....	6-13
6.3	Conclusions .....	6-14
6.3.1	City of Passaic .....	6-14
6.3.2	City of Paterson .....	6-15

## Table of Contents

---

6.4	Recommendations .....	6-16
6.4.1	City of Passaic .....	6-16
6.4.2	City of Paterson .....	6-18
<b>Section 7</b>	<b>Somerset County/Boroughs of Bound Brook and Manville .....</b>	<b>7-1</b>
7.1	Pre-Disaster Conditions .....	7-2
7.1.1	Primary Industries and Employment .....	7-2
7.1.2	Historic Flooding and Past Studies .....	7-6
7.2	Post-Disaster Conditions .....	7-7
7.2.1	Revenues Lost .....	7-10
7.2.2	Annual Taxes Lost .....	7-11
7.2.3	Numbers of Employees .....	7-11
7.2.4	Structural Property Damage .....	7-12
7.2.5	Nonstructural Property and Equipment Damage .....	7-12
7.2.6	Inventory Damage .....	7-13
7.2.7	Utility-Related Losses .....	7-14
7.2.8	Business Reopenings .....	7-14
7.2.9	Rebuilding or Relocation .....	7-15
7.2.10	Category and Value of Economic Loss ...	7-16
7.3	Conclusions .....	7-17
7.3.1	Bound Brook Borough .....	7-17
7.3.2	Manville Borough .....	7-18
7.4	Recommendations .....	7-19
7.4.1	Bound Brook Borough .....	7-19
7.4.2	Manville Borough .....	7-21
<b>Section 8</b>	<b>Essex County .....</b>	<b>8-1</b>
8.1	Pre-Disaster Conditions .....	8-1
8.2	Post-Disaster Conditions .....	8-1
8.3	Conclusions .....	8-2
<b>Section 9</b>	<b>Hunterdon County .....</b>	<b>9-1</b>
9.1	Pre-Disaster Conditions .....	9-1
9.2	Post-Disaster Conditions .....	9-2
9.3	Conclusions .....	9-2
<b>Section 10</b>	<b>Middlesex County .....</b>	<b>10-1</b>
10.1	Pre-Disaster Conditions .....	10-1
10.2	Post-Disaster Conditions .....	10-2
10.3	Conclusions .....	10-2
<b>Section 11</b>	<b>Morris County .....</b>	<b>11-1</b>
11.1	Pre-Disaster Conditions .....	11-1
11.2	Post-Disaster Conditions .....	11-2
11.3	Conclusions .....	11-2

---

<b>Section 12</b>	<b>Union County .....</b>	<b>12-1</b>
12.1	Pre-Disaster Conditions .....	12-1
12.2	Post-Disaster Conditions .....	12-2
12.3	Conclusions .....	12-2

## **Appendices**

Appendix A Resource Guide for Business Recovery .....	A1
Appendix B Deciding to Build Above Minimum Code Requirements	B1
Appendix C Survey Questions for Disaster-Impacted Municipalities .	C1
Appendix D Survey Questions for Disaster-Impacted Businesses .....	D1
Appendix E Reconnaissance Team Members .....	E1

## List of Figures and Tables

---

### Figures

Figure 2-1: County Designations and Communities Studied ..... 2-5

### Tables

Table 1-1:	Summary of Estimated Business-Related Losses .....	1-3
Table 3-1:	Number of Employees, Total Payroll, and Average Annual Salary by Industry and the Industry Percentage of Total Employment in New Jersey (1996) .....	3-3
Table 3-2:	1998 Top 20 Employers in New Jersey .....	3-3
Table 3-3:	New Jersey Tax Structure .....	3-4
Table 3-4:	Statewide Impacts by Sector .....	3-9
Table 4-1:	Primary Industries in Bergen County (1996) .....	4-2
Table 4-2:	Major Businesses in Lodi Borough.....	4-3
Table 4-3:	Summary of Economic Losses - Lodi Borough .....	4-10
Table 5-1:	Primary Industries in Mercer County (1996) .....	5-2
Table 5-2:	Major Businesses in Trenton .....	5-3
Table 5-3:	Summary of Economic Losses - City of Trenton .....	5-9
Table 6-1:	Primary Industries in Passaic County (1996) .....	6-2
Table 6-2:	Major Businesses in the City of Passaic .....	6-3
Table 6-3:	Major Businesses in the City of Paterson .....	6-4
Table 6-4:	Summary of Economic Losses - Cities of Passaic and Paterson .....	6-13
Table 7-1:	Primary Industries in Somerset County (1996) .....	7-2
Table 7-2:	Major Businesses in Bound Brook Borough.....	7-4
Table 7-3:	Major Businesses in Manville Borough .....	7-5
Table 7-4:	Summary of Economic Losses - Bound Brook and Manville Boroughs .....	7-16
Table 8-1:	Primary Industries in Essex County (1996) .....	8-2
Table 9-1:	Primary Industries in Hunterdon County (1996) .....	9-1
Table 10-1:	Primary Industries in Middlesex County (1996).....	10-1
Table 11-1:	Primary Industries in Morris County (1996).....	11-1
Table 12-1:	Primary Industries in Union County (1996).....	12-1

# List of Figures and Tables



# Acronyms

BFE	Base Flood Elevations
CDBG	Community Development Block Grant
CEGC	Commerce and Economic Growth Commission
cfs	cubic feet per second
CR	Community Relations
DEP	New Jersey Department of Environmental Protection
DFO	Disaster Field Office
DOC	U.S. Department of Commerce
DOL	U.S. Department of Labor
DOT	U.S. Department of Transportation
DRI	Disaster Recovery Initiative
ECP	Emergency Conservation Program
EDA	Economic Development Administration
EIDL	Economic Injury Disaster Loan
EMC	Emergency Management Coordinator
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIA	Flood Insurance Administration
FIRE	Finance, Insurance, and Real Estate
FIRM	Flood Insurance Rate Map
FMA	Flood Mitigation Assistance
FSA	Farm Service Agency
GSP	Gross State Product
HMGP	Hazard Mitigation Grant Program
HUD	U.S. Department of Housing and Urban Development
JIT	Just-in-Time
IA	Individual Assistance

---

IRS	Internal Revenue Service
NAHB	National Association of Home Builders
NFIP	National Flood Insurance Program
NGVD	National Geodetic Vertical Datum
NJDOT	New Jersey Department of Transportation
NJEDA	New Jersey Economic Development Administration
NJOEM	New Jersey Office of Emergency Management
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resource Conservation Service
PA	Public Assistance
PDA	Preliminary Damage Assessment
RBS	Rural Business Cooperative Development Service
RHS	Rural Housing Service
RLF	Revolving Loan Fund
RMA	Risk Management Agency
SBA	Small Business Administration
SHMO	State Hazard Mitigation Officer
UEZ	Urban Enterprise Zone
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey