

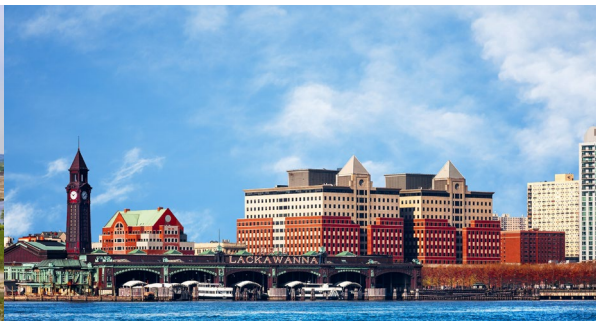


HUDSON COUNTY HAZARD MITIGATION PLAN



2020 Update

Appendices



Prepared for:
Hudson County Office of Emergency Management
Authorized by Hudson County Executive
Tom DeGise and Board of Chosen Freeholders



Prepared by:
Tetra Tech, Inc.
6 Century Drive, Suite 300
Parsippany, NJ 07054



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APPENDIX A. PLAN ADOPTION

The Hudson County and jurisdiction adoption resolutions will be included in this appendix upon receipt of the Federal Emergency Management Agency (FEMA) Approval Pending Adoption (APA) status. Please refer to Section 8 (Planning Partnership) for additional information on plan adoption procedures.

This appendix also includes an example resolution to be submitted by Hudson County and participating jurisdictions authorizing adoption of the Hudson County Hazard Mitigation Plan update.





RESOLUTION NO. XXXX-XX

A RESOLUTION OF THE **Governing Body** OF THE **Jurisdiction Name**

AUTHORIZING THE ADOPTION OF THE

2020 HUDSON COUNTY, NEW JERSEY HAZARD MITIGATION PLAN UPDATE

WHEREAS, all jurisdictions within Hudson County have exposure to hazards that increase the risk to life, property, environment, and the County and local economy; and

WHEREAS; pro-active mitigation of known hazards before a disaster event can reduce or eliminate long-term risk to life and property; and

WHEREAS, The Disaster Mitigation Act of 2000 (Public Law 106-390) established new requirements for pre and post disaster hazard mitigation programs; and

WHEREAS; a coalition of Hudson County jurisdictions with like planning objectives has been formed to pool resources and create consistent mitigation strategies within Hudson County; and

WHEREAS, the coalition has completed a planning process that engages the public, assesses the risk and vulnerability to the impacts of natural hazards, develops a mitigation strategy consistent with a set of uniform goals and objectives, and creates a plan for implementing, evaluating and revising this strategy;

NOW, THEREFORE, BE IT RESOLVED that the **[jurisdiction name]**:

- 1) Adopts in its entirety, the 2020 Hudson County Hazard Mitigation Plan Update (the "Plan") as the jurisdiction's Hazard Mitigation Plan and resolves to execute the actions identified in the Plan that pertain to this jurisdiction.
- 2) Will use the adopted and approved portions of the Plan to guide pre- and post-disaster mitigation of the hazards identified.
- 3) Will coordinate the strategies identified in the Plan with other planning programs and mechanisms under its jurisdictional authority.
- 4) Will continue its support of the Mitigation Planning Committee as described within the Plan.
- 5) Will help to promote and support the mitigation successes of all participants in this Plan.
- 6) Will incorporate mitigation planning as an integral component of government and partner operations.
- 7) Will provide an update of the Plan in conjunction with the County no less than every five years.

PASSED AND ADOPTED on this Xst, Xnd, Xrd, Xth day of **MONTH**, **YEAR**, by the following vote:

AYES:





NOES:

ABSENT:

ABSTAIN:

Elected Official, City/Town/Borough of _____

ATTEST: _____

Clerk, City/Town/Borough of _____





APPENDIX B. PARTICIPATION DOCUMENTATION

This appendix provides documentation to illustrate the significant efforts undertaken to support a broad and inclusive engagement of the participants during this hazard mitigation planning process.

B.1 Meeting and Workshop Participation

Table B-1 provides a broad overview of state, county, municipal and stakeholder personnel that attended meetings and workshops throughout the Hudson County HMP update planning process. All jurisdictions were encouraged to attend the kick-off meeting, risk assessment meeting, mitigation workshop and meet individually with the contract consultant. As discussed in Section 2 (Planning Process), primary and secondary points of contact were identified for each jurisdiction, but moreover, these points of contact were asked to work with their 'mitigation team' to ensure input was provided across all jurisdiction departments. Section 9, Table 9.X-19 in each municipal annex and Table 9.X-14 (in each MUA annex (Contributors to the Annex) summarize the additional individuals that participated in each jurisdiction, as well as their method of participation. During the planning process the consultant contacted each participant to offer support, explain the process, and facilitate the submittal and review of critical documents.

The participating jurisdictions agreed to abide by the Planning Partner Expectations and Planning Committee Guidelines which established the Steering Committee. Letters of Intent to Participate indicating jurisdiction planning efforts are included in this appendix. The Steering Committee served as the core of the working group. Participation is defined as having input to the hazard analysis (providing critical facility, hazard event, vulnerability data, hazard ranking), contributed to the Strengths, Weaknesses, Obstacles and Opportunities exercise, and as having participated in the mitigation workshop or alternate annex meetings as described in the HMP for the purpose of creating a mitigation strategy to be included in each jurisdiction annex in Section 9.





Table B-1. Meeting Participation

Name	Title / Position	Steering Committee Member	Primary POC	Secondary POC	NFIP Floodplain Administrator/ Flood SME (MUAs only)	Attended Meeting(s)	Attended Steering Committee Meeting #1 (4/18/19)	Attended Planning Partnership Kickoff Meeting #1 (5/29/19)	Attended Steering Committee Meeting #2 (10/4/19)	Attended Risk Assessment Meeting (10/18/19)	Attended Mitigation Strategy Workshop (1/9/20)	Attended Stakeholder Workshop (2/19/20)	Attended Additional Annex Support Meeting(s)
Hudson County													
Francesca Giarratana	Director, Division of Planning	X	X			X		X	X		X	X	X
James Woods	Coordinator, Hudson County OEM	X		X		X	X	X	X	X	X		X
George Johns	Deputy Coordinator, Hudson County OEM	X				X	X		X	X	X	X	X
Jeff Brzozowski	Deputy Coordinator, Hudson County OEM					X						X	X
Peter Nevins	Emergency Management Planner, OEM	X				X	X	X	X	X	X	X	X
Nick Kormash	Critical Infrastructure H.C.P.O.	X											
Chin Micko	JTTF H.C.P.O.	X											
Kevin O'Reilly (Alt.)	Critical Infrastructure H.C.P.O.	X											
David Drumeler	County Deputy Administrator	X				X		X					
Sean O'Connor	County Communications	X				X		X					
Kevin Force	Principal Planner, Division of Planning					X	X		X				
Daryl Krasnuk	GIS Specialist, Division of Planning	X				X		X		X	X	X	X
Thomas Malavasi	County Engineer	X				X		X			X	X	X
Ralph Sax	Director Roads & Private Property	X				X		X			X		X
Carrie Nawrocki (Alt)	Executive Director, Hudson Regional Health Commission	X				X							X
Angela DeQuina	Deputy Director, Hudson Regional Health Commission	X				X	X	X	X	X	X		X
Norman Guerra	Hudson County Improvement Authority	X											
Michael Guerra	Hudson County Improvement Authority					X		X					





Name	Title / Position	Steering Committee Member	Primary POC	Secondary POC	NFIP Floodplain Administrator/ Flood SME (MUJAs only)	Attended Meeting(s)	Attended Steering Committee Meeting #1 (4/18/19)	Attended Planning Partnership Kickoff Meeting #1 (5/29/19)	Attended Steering Committee Meeting #2 (10/4/19)	Attended Risk Assessment Meeting (10/18/19)	Attended Mitigation Strategy Workshop (1/9/20)	Attended Stakeholder Workshop (2/19/20)	Attended Additional Annex Support Meeting(s)
Amina Ghoul	Hudson County Improvement Authority					X		X					
Alyssa Berdnik	Hudson Regional Health Commission/ Planner					X		X	X	X	X		X
Edwin Morales	Hudson County MIS					X				X			
Randi Moore	Hudson County Division of Housing and Community Development					X							X
City of Bayonne													
Edwardo Ferrante Jr	OEM Coordinator		X			X							X
Keith Weaver	BFD Chief of Department			X		X							X
Robert Russo	City Engineer				X	X							X
Suzanne Macki	Planner					X		X		X	X		X
Marcella Traina	Intern, Planning Department					X							X
Gary Chmielewski	Management Specialist					X							X
Thomas Cotter	DPW Director					X							X
Borough of East Newark													
Joseph R. Smith	Former Mayor		X										
Anthony Monteiro	Chief of Police / OEM			X		X					X	X	X
Dino Grilo	Mayor		X			X					X		X
Massiel Ferrara	Planner					X				X			X
Marc Sadonis	Construction Official/Zoning Officer				X								
Jordan Cecinini	Planner												X
Town of Guttenburg													
Richard Delafuente	OEM Coordinator		X			X					X		X
Justin Mack	Deputy OEM Coordinator			X		X		X		X	X		X





Name	Title / Position	Steering Committee Member	Primary POC	Secondary POC	NFIP Floodplain Administrator/ Flood SME (MUJAs only)	Attended Meeting(s)	Attended Steering Committee Meeting #1 (4/18/19)	Attended Planning Partnership Kickoff Meeting #1 (5/29/19)	Attended Steering Committee Meeting #2 (10/4/19)	Attended Risk Assessment Meeting (10/18/19)	Attended Mitigation Strategy Workshop (1/9/20)	Attended Stakeholder Workshop (2/19/20)	Attended Additional Annex Support Meeting(s)
Cosmo A Cirillo	Town Administrator												
Jorge Gonzalez	Construction Code Official				X								
Massiel Ferrara	Planner					X				X			X
Town of Harrison													
Harold Stahl	OEM Coordinator/Fire Director		X			X					X		X
Rocco Russomanno	Town Engineer			X	X	X		X			X		X
Gabriel Dos Santos	Chief Financial Officer					X							X
Robert Van Riper	Department of Public Works					X							X
Elena Gable	Planner					X							X
Joan Woods	Administrators Office/Shelter OEM					X							X
City of Hoboken													
Caleb Stratton	Chief Resilience Officer/Transportation/OEM	X	X			X							X
Sgt. William Montanez	Police/OEM			X									
Ann Holtzman	Floodplain Administrator/Zoning Officer				X	X		X			X		X
City of Jersey City													
W. Greg Kierce	OEM/Homeland Security		X			X							X
Robert Daly	Deputy Chief JCFD OEMHS Liaison			X		X				X			
Raymond Meyer	Building Official				X	X							X
Brian Messler	MUA					X				X			
Lindsey Sigmund	Environmental Planner					X							X
Kate Lawrence	Sustainability Director					X							X
Town of Kearny													
Sgt. Peter D. Blair	Deputy OEM Coordinator Police Department		X			X					X		X
Chief George King	OEM Coordinator Police Department			X		X							X





Name	Title / Position	Steering Committee Member	Primary POC	Secondary POC	NFIP Floodplain Administrator/ Flood SME (MUJAs only)	Attended Meeting(s)	Attended Steering Committee Meeting #1 (4/18/19)	Attended Planning Partnership Kickoff Meeting #1 (5/29/19)	Attended Steering Committee Meeting #2 (10/4/19)	Attended Risk Assessment Meeting (10/18/19)	Attended Mitigation Strategy Workshop (1/9/20)	Attended Stakeholder Workshop (2/19/20)	Attended Additional Annex Support Meeting(s)
Anthony Chisari	Construction/Zoning				X					X			
David Silva	Engineer					X							X
Donald Gavin	Department of Public Works					X							X
Gregg Paster	General Counsel					X	X			X			X
Town of North Bergen													
Dave Ricigliano	OEM Coordinator		X			X		X		X	X	X	X
Bernie Mirandi	Township Engineer			X	X	X					X		X
Vahane Costanian	North Bergen Engineer / Project Manager					X		X			X		X
Christopher Pianese	Township Administrator												
Frank Pestana	Executive Director MUA					X							X
Town of Secaucus													
Kevin O'Connor	DPW Superintendent		X		X								
Vincent Massaro Jr.	OEM Coordinator			X		X		X		X			X
Jennifer Modi	Engineer					X							X
Gary Jeffas	Town Administrator					X							X
Dennis Miller	Captain Police Department					X							X
Carl Leppin III	Construction Official/ Fire Chief					X							X
Zografo Ballos	Zoning Official					X							X
Kevin Flaherty	Chief Police Department					X							X
City of Union City													
Ralph Tango	Engineer		X										
Mario Bordon	OEM Director			X		X				X	X		X
Susan Colditz	Finance Director					X							X
Marty Martinetti	Building Code Official				X	X							X





Name	Title / Position	Steering Committee Member	Primary POC	Secondary POC	NFIP Floodplain Administrator/ Flood SME (MUAs only)	Attended Meeting(s)	Attended Steering Committee Meeting #1 (4/18/19)	Attended Planning Partnership Kickoff Meeting #1 (5/29/19)	Attended Steering Committee Meeting #2 (10/4/19)	Attended Risk Assessment Meeting (10/18/19)	Attended Mitigation Strategy Workshop (1/9/20)	Attended Stakeholder Workshop (2/19/20)	Attended Additional Annex Support Meeting(s)
Carlos Fuentes	Engineer							X					
Town of Weehawken													
Giovanni D. Ahmad	Manager		X			X		X					X
Jeffrey Fulcher	Deputy Director, Weehawken DPS			X				X			X		
Frank Tattoli	Construction Code Official / NFIP Floodplain Administrator				X								
Town of West New York													
Lewis Cannao	OEM Coordinator		X			X		X					
Robert Antolos	Public Safety Director			X									
Paul Cray	Engineer				X								
Wiliam Bringas	OEM					X					X		
Jersey City MUA													
Brian Messler	Staff Engineer			X		X		X					X
Rich Haytas	Engineer		X			X		X					X
Rob Daly	Deputy Chief					X		X					
W Greg Kierce	OMHS					X				X			
North Bergen MUA													
Frank Pestana	Executive Director		X			X		X					
Dave Ricigliano	OEM Coordinator			X		X		X		X	X	X	X
North Hudson SA													
Steve Hudock	Safety Manager			X		X		X		X	X		
Phillip Reeve	Assistant Project Director		X			X				X	X		X
Secaucus MUA													
Glen Beckmeyer	Authority Engineer			X		X		X		X			X





Name	Title / Position	Steering Committee Member	Primary POC	Secondary POC	NFIP Floodplain Administrator/ Flood SME (MUJAs only)	Attended Meeting(s)	Attended Steering Committee Meeting #1 (4/18/19)	Attended Planning Partnership Kickoff Meeting #1 (5/29/19)	Attended Steering Committee Meeting #2 (10/4/19)	Attended Risk Assessment Meeting (10/18/19)	Attended Mitigation Strategy Workshop (1/9/20)	Attended Stakeholder Workshop (2/19/20)	Attended Additional Annex Support Meeting(s)
Brian Bigler	Executive Director		X										
Kearny MUA													
Tony Chisari	Court Official				X	X		X					
Ceren Aralp	Authority Engineer		X										X
Gregg Paster	Authority Attorney			X		X		X		X			X
Stakeholders													
Jose Salerna	Liberty State Park					X					X		
Rob Rodriguez	Liberty State Park					X							X
Eric Boston	PSE&G					X				X			
Eric Holliday	NJ Transit					X							
Michael Sangiovanni	NJOEM - Mitigation					X					X	X	
Lance Vibone	Sgt NJOEM					X					X		
C Tusley	NJOEM					X					X		
Howard Wolf	NJOEM - Mitigation					X					X		
Chris Testa	NJOEM - Mitigation					X		X			X		
Michael Macari	NJDOT/Emergency Response Coordinator					X						X	
Elizabeth Falcon	NJDOT Office of Emergency Management					X						X	
Cheryl Rezendes	NJ Sports Exposition Authority/Principal Planner					X						X	
Fawzia Shapiro	NJ Sports Exposition Authority/Assistant Chief Engineer					X						X	





B.2 Letters of Intent to Participate

Plan participants were provided a copy of the Planning Partner Expectations and asked to formally notify the County of their intent to participate via a Letter of Intent to Participate and to identify a primary and secondary planning point of contact to serve on a Planning Committee and represent the interests of their respective community. In addition, each municipal Floodplain Administrator (FPA) was identified and requested to actively participate in the planning process. The signed Letters of Intent to Participate are included in this section.





OFFICE OF THE MAYOR
CITY OF BAYONNE

630 AVENUE C • BAYONNE, NEW JERSEY 07002-3898
TEL. (201) 858-6010 • FAX (201) 436-2413



JAMES DAVIS, MAYOR

March 20, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate - **Bayonne**

Dear Mr. Woods:

Per your letter, dated March 20, 2019, the City of Bayonne, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Bayonne:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.

2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:

- Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
- Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
- Support the Steering Committee selected to oversee the development of this plan.
- Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
- Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas

- Identification of natural hazard events and losses that have impacted your community in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.
- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.
- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
 - Completing data and information collection survey forms in a timely manner.
 - Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
 - Involve your local NFIP Floodplain Administrator in the planning process.
 - Review draft Plan sections when requested and provide comment and input as appropriate.
 - Adopt the Plan by resolution of their governing body after FEMA conditional approval.
 - Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

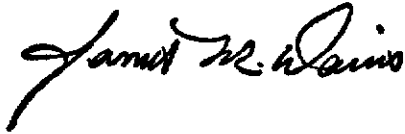
Primary POC: Edoardo Ferrante Jr	Position/Department: OEM Coordinator
Phone Number: 201-522-7463	Email Address: eferrante@bayonnefire.org
Alternate/Secondary POC: Keith Weaver	Position/Department: BFD Chief of Department
Phone Number: 201-858-6008	Email Address: chiefweaver@bayonnefire.org

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA: Rob Russo	Position/Department: City Engineer
Phone Number:	Email Address: russo@cmeusa1.com

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,

A handwritten signature in black ink that reads "James M. Davis". The signature is written in a cursive, flowing style.

James M. Davis
Mayor
City of Bayonne



Borough of East Newark

34 Sherman Avenue
East Newark, New Jersey 07029
Phone: (973) 481-2902
Fax: (973) 481-0627
www.boroughofeastnewark.com

Joseph R. Smith
Mayor

April 12, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate - Borough of East Newark

Dear Mr. Woods:

Per your letter, dated April 10, 2019, the Borough of East Newark is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Borough of East Newark:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.

- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.

- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
- Involve your local NFIP Floodplain Administrator in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

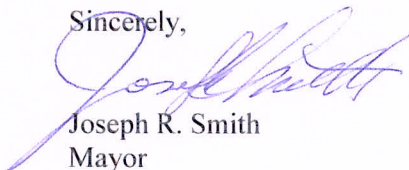
Primary POC: Joseph R. Smith	Position/Department: Mayor
Phone Number: 973-342-5126	Email Address: Jsmith_eastnewark@verizon.net
Alternate/Secondary POC: Anthony Monteiro	Position/Department: Chief of Police
Phone Number: 973-735-8977	Email Address: amonteiroenpd@hotmail.com

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA:	Position/Department:
Phone Number:	Email Address:

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,



Joseph R. Smith
Mayor

OFFICE OF THE TOWN ADMINISTRATOR
TOWN OF GUTTENBERG
"THE HIDDEN GEM OF NORTH HUDSON"

MUNICIPAL BUILDING
6808 PARK AVENUE
GUTTENBERG, N.J. 07093



201-868-2315 x113
FAX: 201-351-6353
CCIRILLO@MYGUTTENBERG.COM

March 29, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – Town of Guttenberg

Dear Mr. Woods:

Per your letter, dated March 20, 2019, the Town of Guttenberg is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Town of Guttenberg:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee ("Steering Committee"), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this "Authorization and Acknowledgement" letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.

COSMO A. CIRILLO
TOWN ADMINISTRATOR

- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.
- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
- Involve your local NFIP Floodplain Administrator in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Richard Delafuente	Position/Department: OEM Coordinator
Phone Number: 516-286-2245	Email Address: rdelafuente@myguttenberg.com
Alternate/Secondary POC: Justin Mack	Position/Department: Deputy OEM Coordinator
Phone Number: 917-750-5194	Email Address: mrjustinmack@gmail.com

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA: Richard Delafuente	Position/Department: OEM Coordinator
Phone Number: 516-286-2245	Email Address: rdelafuente@myguttenberg.com

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,

Cosmo A. Cirillo
Town Administrator

TOWN OF HARRISON
OFFICE OF EMERGENCY MANAGEMENT

600 Essex Street
Harrison, NJ 07029
973-268-1064

Date: April 1, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – Town of Harrison

Dear Mr. Woods:

Per your letter, dated March 20, 2019, the Town of Harrison, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Town of Harrison:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.
 - Support public outreach efforts in your community which may include:

- Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.
- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
 - Completing data and information collection survey forms in a timely manner.
 - Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
 - Involve your local NFIP Floodplain Administrator in the planning process.
 - Review draft Plan sections when requested and provide comment and input as appropriate.
 - Adopt the Plan by resolution of their governing body after FEMA conditional approval.
 - Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Harold Stahl	Position/Department: OEM Coordinator/Fire Director
Phone Number: 973-204-2178	Email Address: hstahl@townofharrison.com
Alternate/Secondary POC: Rocco Russomanno	Position/Department: Town Engineer
Phone Number: 973-482-5105	Email Address: rrussomanno@townofharrison.com

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA: Rocco Russomanno	Position/Department: Town Engineer
Phone Number: 973-482-5101	Email Address: rrussomanno@townofharrison.com

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,

Harold G. Stahl Jr.

Ravinder S. Bhalla, Mayor
City of Hoboken
94 Washington Street
Hoboken, New Jersey 07030



Caleb Stratton, AICP, CFM
Chief Resilience Officer
Ph. 201.744.9602
cstratton@hobokennj.gov

Date: March 26, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – City of Hoboken

Dear Mr. Woods:

Per your letter, dated March 20, 2019 the City of Hoboken is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the City of Hoboken:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years



- Identification of plans, studies, reports and ordinances addressing natural hazard risk
- Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.
- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.
- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
- Involve your local NFIP Floodplain Administrator in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Caleb Stratton	Position/Department: Chief Resilience Officer/Transportation/ OEM
Phone Number: 201-744-9602	Email Address: cstratton@hobokennj.gov
Alternate/Secondary POC: Sgt. William Montanez	Position/Department: Police/OEM
Phone Number: 201-725-9251	Email Address: montanezw@hobokenpd.org

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:



Authorization and Letter of Intent to Participate – City of Hoboken

3/20/2019

Page 3 of 3

Name of NFIP FPA: Ann Holtzman	Position/Department: Floodplain Administrator/Zoning Officer
Phone Number: 201-420-2063	Email Address: aholtzman@hobokennj.gov

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,

Caleb D. Stratton, AICP, CFM
Chief Resilience Officer
City of Hoboken

Electronic CC:

Mayor Ravi Bhalla
Stephen Marks, Business Administrator
Sgt. William Montanez, Office of Emergency Management Coordinator
Ann Holtzman, Floodplain Administrator



CITY OF
JERSEY CITY
OFFICE OF
EMERGENCY MANAGEMENT & HOMELAND SECURITY



715 SUMMIT AVENUE
JERSEY CITY, NJ 07306

W. Greg Kierce
Director

Date March 21, 2019

(201) 547-5681
Fax (201) 547-5999
E-mail: wkierce@njcps.org

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – **JERSEY CITY**

Dear Mr. Woods:

Per your letter, dated March 20, 2019, the City of Jersey City is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the City of Jersey City

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.

2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:

- Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
- Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
- Support the Steering Committee selected to oversee the development of this plan.
- Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
- Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years

- Identification of plans, studies, reports and ordinances addressing natural hazard risk
- Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.
- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.
- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
- Involve your local NFIP Floodplain Administrator in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: W. Greg Kierce	Position/Department: OEM/Homeland Security
Phone Number: 201 547-5681	Email Address: wkierce@njcops.org
Alternate/Secondary POC: Robert Daly	Position/Department: Deputy Chief JCFD OEMHS Liaison
Phone Number: 201 577-2348	Email Address: rdaly@njcops.org

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA: Raymond Meyer	Position/Department: Bldg Official
Phone Number: 201 547-5697	Email Address: raymondm@jcnj.org

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,

A handwritten signature in blue ink, appearing to read 'W. Greg Kierce', with a large circular flourish at the beginning.

W. Greg Kierce, Director
OEM/Homeland Security
City of Jersey City



JERSEY CITY MUNICIPAL UTILITIES AUTHORITY

555 ROUTE #440 · JERSEY CITY, NEW JERSEY 07305 · TEL: (201) 432-1150 · FAX: (201) 432-1576

JOSEPH COVIELLO
EXECUTIVE DIRECTOR

JOHN D. FOLK, C.P.A.
DIRECTOR OF FINANCE

BOARD OF COMMISSIONERS

MAUREEN HULINGS
CHAIRPERSON

JEANNINE ZAMPELLA
VICE-CHAIRPERSON

MAUREEN NALLY
SECRETARY

THOMAS GIBBONS
COMMISSIONER

VINCENT MASTRIA
COMMISSIONER

RAHAT CHATHA
1st ALTERNATE SECRETARY

KATHLEEN HARTYE
2nd ALTERNATE

May 28, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – Jersey City Municipal Utilities Authority

Dear Mr. Woods:

Per your letter, dated March 27, 2019, the Jersey City Municipal Utilities Authority, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Jersey City Municipal Utilities Authority:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify MUA representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their utility authority and assuring that these participation expectations are met by their MUA.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your utility as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your MUA in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity at your MUA in the last five years, including progress on previously identified mitigation actions.

- Support public outreach efforts which may include:
 - Providing notices of the planning project on your website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your MUA area.

- Assist with the identification of stakeholders within your MUA community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your MUA.
- Involve your local NFIP Floodplain Administrator or MUA Flood Subject Matter Expert in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring MUA representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Richard Haytas	Position/Department: Chief Engineer
Phone Number: 201-432-6340	Email Address: r.haytas@jcmua.com
Alternate/Secondary POC: Brian Messler	Position/Department: Engineer
Phone Number: 201-432-1150	Email Address: b.messler@jcmua.com

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Flood SME or NFIP FPA:	Position/Department:
Phone Number:	Email Address:

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our MUA being excluded from the planning process.

Sincerely,

 Joseph Coviello,
 Executive Director

Headquarters
FAX
(201) 991-3429
(201) 998-1410

Department of Police
Kearny, New Jersey 07032

Phone: (201) 998-1313

George King, Chief

Date: March 25, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate - Kearny

Dear Mr. Woods:

Per your letter, dated March 20, 2019 the Town of Kearny is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Town of Kearny:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee ("Steering Committee"), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this "Authorization and Acknowledgement" letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.

www.kearnyusa.com

Kearny is an Equal Opportunity Employer

Headquarters
 FAX
 (201) 991-3429
 (201) 998-1410

Department of Police Kearny, New Jersey 07032

- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.

- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
- Involve your local NFIP Floodplain Administrator in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.


3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Sgt. Peter D. Blair	Position/Department: Deputy O.E.M. Coordinator Police Department
Phone Number: 201-998-8800	Email Address: pblair@kearnynjpd.org
Alternate/Secondary POC: Chief George King	Position/Department: O.E.M Coordinator Police Department
Phone Number: 201-998-1313	Email Address: gking@kearnynjpd.org

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA: Anthony Chisari	Position/Department: Construction/Zoning
Phone Number: 201-955-7880	Email Address: tchisari@kearnynj.org

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,

 Chief of Police

www.kearnyusa.com

Kearny is an Equal Opportunity Employer

973-465-5367 office
973-465-5293 fax
www.kmua.org



Kevin D. O'Sullivan, P.E.
Executive Director
kosullivan@kmua.org

39 CENTRAL AVENUE • KEARNY, NEW JERSEY 07032

Date: May 28, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate - Kearny Municipal Utilities Authority

Dear Mr. Woods:

Per your email, dated May 28, 2019, the Kearny Municipal Utilities Authority, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Kearny Municipal Utilities Authority:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee ("Steering Committee"), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this "Authorization and Acknowledgement" letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify MUA representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their utility authority and assuring that these participation expectations are met by their MUA.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your utility as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas

973-465-5367 office
973-465-5293 fax
www.kmua.org



Kevin D. O'Sullivan, P.E.
Executive Director
kosullivan@kmua.org

39 CENTRAL AVENUE • KEARNY, NEW JERSEY 07032

- Identification of natural hazard events and losses that have impacted your MUA in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity at your MUA in the last five years, including progress on previously identified mitigation actions.
- Support public outreach efforts which may include:
 - Providing notices of the planning project on your website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your MUA area.
 - Assist with the identification of stakeholders within your MUA community that should be informed and potentially involved with the planning process.
 - Completing data and information collection survey forms in a timely manner.
 - Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your MUA.
 - Involve your local NFIP Floodplain Administrator or MUA Flood Subject Matter Expert in the planning process.
 - Review draft Plan sections when requested and provide comment and input as appropriate.
 - Adopt the Plan by resolution of their governing body after FEMA conditional approval.
 - Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.
3. Assigns the following persons to be the Points of Contact for our jurisdiction. At this time, MUA does not have an Executive Director to be the POC so following professionals will be the Primary and Secondary POC's. When a new Executive Director is identified, the contacts will be revised. We understand that these POCs are responsible for assuring MUA representation at municipal Planning Committee meetings and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

973-465-5367 office
973-465-5293 fax
www.kmua.org



Kevin D. O'Sullivan, P.E.
Executive Director
kosullivan@kmua.org

39 CENTRAL AVENUE • KEARNY, NEW JERSEY 07032

Primary POC: Ceren Aralp, PE	Position/Department: Authority Engineer
Phone Number: (973) 912.2636	Email Address: ceren.aralp@mottmac.com
Alternate/Secondary POC: Gregg Paster, esq.	Position/Department: Authority Attorney
Phone Number: (201) 489-0078	Email Address: gpaster@pasteresq.com

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Flood SME or NFIP FPA:	Position/Department:
Phone Number:	Email Address:

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our MUA being excluded from the planning process.

Sincerely,

L. Ceren Aralp, PE, ENV-SP

T +1 (973) 912 2636

F +1 (973) 912 2455



TOWNSHIP OF NORTH BERGEN

DEPARTMENT OF PUBLIC AFFAIRS

4233 KENNEDY BOULEVARD
NORTH BERGEN, NEW JERSEY 07047

TELEPHONE
(201) 392-2027

FAX
(201) 330-7694

CPIANESE@NORTHBERGEN.ORG

CHRISTOPHER PIANESE
TOWNSHIP ADMINISTRATOR

March 27, 2019

Mr. Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: **Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – Township of North Bergen**

Dear Mr. Woods:

Per your letter dated 3/20/19, the Township of North Bergen is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Township:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development

- Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.
- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.
- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
 - Completing data and information collection survey forms in a timely manner.
 - Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
 - Involve your local NFIP Floodplain Administrator in the planning process.
 - Review draft Plan sections when requested and provide comment and input as appropriate.
 - Adopt the Plan by resolution of their governing body after FEMA conditional approval.
 - Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.
3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Dave Ricigliano	Position/Department: OEM Coordinator
Phone Number: (201) 937-7023	Email Address: dricigliano@NorthBergen.org
Alternate/Secondary POC: Bernie Mirandi	Position/Department: Township Engineer
Phone Number: 201-641-0770	Email Address: bmirandi@boswellengineering.com

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA: Bernie Mirandi	Position/Department: Township Engineer
Phone Number: 201-641-0770	Email Address: bmirandi@boswellengineering.com

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,



Christopher Pianese
Township Administrator

CP/lg

cc: Dave Ricigliano, OEM Coordinator
Bernie Mirandi, Township Engineer



Municipal Utilities Authority

NORTH BERGEN

6200 Tonnelle Avenue
North Bergen, N.J. 07047

TEL. (201) 422-0100 • FAX (201) 422-0940

May 28, 2019

Frank Pestana
Executive Director

Salvatore DeSantis
Chairman

Richard Censullo
Vice Chairman

Felix Henriquez

Frank Piazza

Joseph Lombardi

John Napolitano, Esq.
Counsel

Cleary, Giacobbe, Alfieri,
Jacobs, LLC

169 Ramapo Valley Road
Upper Level 105
Oakland, NJ 07436
(973) 845-6700

Maria I. Hernandez
Clerk

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – North Bergen MUA

Dear Mr. Woods:

Per your letter, the North Bergen MUA, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the North Bergen MUA:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.

2. Agrees to meet the minimum requirements of participation (a.k.a. the Planning Partner Expectations), specifically:

- Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
- Identify MUA representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their utility authority and assuring that these participation expectations are met by their MUA.
- Support the Steering Committee selected to oversee the development of this plan.
- Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
- Provide data and information about your utility as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your MUA in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk

- Identify mitigation activity at your MUA in the last five years, including progress on previously identified mitigation actions.
- Support public outreach efforts which may include:
 - Providing notices of the planning project on your website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your MUA area.
- Assist with the identification of stakeholders within your MUA community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your MUA.
- Involve your local NFIP Floodplain Administrator or MUA Flood Subject Matter Expert in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring MUA representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Frank Pestana	Position/Department: Executive Director, North Bergen MUA
Phone Number: 201-422-0100	Email Address: FPNBMUA@aol.com
Alternate/Secondary POC: Dave Ricigliano	Position/Department: OEM Coordinator

Phone Number: 201-937-7023	Email Address: dricigliano@northbergen.org
----------------------------	---

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Flood SME or NFIP FPA: Bernie Mirandi	Position/Department: Boswell Engineering
Phone Number: 201-641-0770	Email Address: bmirandi@boswellengineering.com

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our MUA being excluded from the planning process.

Sincerely,



Frank Pestana
Executive Director, North Bergen MUA



Date: April 15, 2019

1600 Adams St.
Hoboken, NJ 07030
201/963-6043
Fax 201/963-3907
www.nhudsonsa.com

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Commissioners:

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – North Hudson
Sewerage Authority

Brian H. Kappock
Chairman

Dear Mr. Woods:

Edward Friedrich
Kurt Gardiner
Libero D. Marotta
Joseph E. Roque
Myrli T. Sanchez
Anthony J. Soares
Alejandro Velazquez
Erika White

Per your letter, dated April 15, 2019, the North Hudson Sewerage Authority (NHSA), is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the NHSA:

Dr. Richard J. Wolff
Executive Director

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of participation (a.k.a. the Planning Partner Expectations), specifically:

Fredric J. Pocci, P.E.
Authority Engineer

- Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
- Identify MUA representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their utility authority and assuring that these participation expectations are met by their MUA.
- Support the Steering Committee selected to oversee the development of this plan.
- Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
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- Structure and facility inventory data
- Identification of new development and anticipated development
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 - Advertising and supporting public meetings
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your MUA area.
 - Assist with the identification of stakeholders within your MUA community that should be informed and potentially involved with the planning process.
 - Completing data and information collection survey forms in a timely manner.
 - Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your MUA.
 - Involve your local NFIP Floodplain Administrator or MUA Flood Subject Matter Expert in the planning process.
 - Review draft Plan sections when requested and provide comment and input as appropriate.
 - Adopt the Plan by resolution of their governing body after FEMA conditional approval.
 - Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring MUA representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

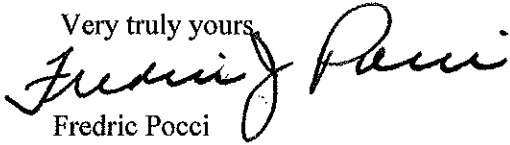
Primary POC: Philip Reeve	Position/Department: Assistant Project Director
Phone Number: 201-206-5061	Email Address: Philip.reeve@jacobs.com
Alternate/Secondary POC: Steven Hudock	Position/Department: Site safety Coordinator
Phone Number: 201-454-7458	Email Address: steven.hudcock@jacobs.com

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Flood SME or NFIP FPA: N/A	Position/Department:
Phone Number:	Email Address:

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our MUA being excluded from the planning process.

Very truly yours,



Fredric Pocci



Town of Secaucus
Office of Inspections

Municipal Government Center
Secaucus, N.J. 07094

201-330-2059

201-330-2031

Fax: 201-617-5937

Date: 4/13/2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate - Secaucus

Dear Mr. Woods:

Per your letter, dated 4/13/2019, the Town of Secaucus, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Town of Secaucus

1. Authorizes the Hudson County Hazard Mitigation Steering Committee ("Steering Committee"), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this "Authorization and Acknowledgement" letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.

- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.

- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
- Involve your local NFIP Floodplain Administrator in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Kevin O'Connor	Position/Department: DPW Super.
Phone Number: 201-330-2080	Email Address:koconnor@secaucus.net
Alternate/Secondary POC: Vincent Massaro Jr.	Position/Department: OEM Coord.
Phone Number: 201-832-5288	Email Address:vmassaro@secaucus.net

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA:Kevin O'Connor	Position/Department: DPW Super.
Phone Number:201-330-2080	Email Address:koconnor@secaucus.net

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,

Vincent Massaro Jr. OEM Coord. Secaucus

Tel: 201-330-2089

Secaucus Municipal Utilities Authority

1100 Koelle Boulevard

Secaucus, New Jersey 07094
Date: 5/28/2019



Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – Secaucus Municipal Utilities Authority

Dear Mr. Woods:

Per your letter, dated March 27, 2019, the Secaucus MUA, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the Secaucus MUA:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.

2. Agrees to meet the minimum requirements of participation (a.k.a. the Planning Partner Expectations), specifically:

- Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
- Identify MUA representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their utility authority and assuring that these participation expectations are met by their MUA.
- Support the Steering Committee selected to oversee the development of this plan.
- Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
- Provide data and information about your utility as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your MUA in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity at your MUA in the last five years, including progress on previously identified mitigation actions.
- Support public outreach efforts which may include:

- Providing notices of the planning project on your website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your MUA area.
- Assist with the identification of stakeholders within your MUA community that should be informed and potentially involved with the planning process.
 - Completing data and information collection survey forms in a timely manner.
 - Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your MUA.
 - Involve your local NFIP Floodplain Administrator or MUA Flood Subject Matter Expert in the planning process.
 - Review draft Plan sections when requested and provide comment and input as appropriate.
 - Adopt the Plan by resolution of their governing body after FEMA conditional approval.
 - Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring MUA representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Brian Bigler	Position/Department: Exec. Director
Phone Number: 201-330-2089 X 4600	Email Address: bbigler@secaucus.net
Alternate/Secondary POC: Glenn Beckmeyer	Position/Department: Authority Engineer
Phone Number: 201-635-9401	Email Address: gbeckmeyer@beckmeyerengineering.com

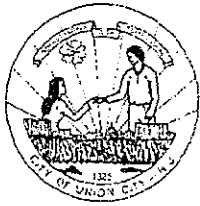
4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Flood SME or NFIP FPA:	Position/Department:
Phone Number:	Email Address:

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our MUA being excluded from the planning process.

Sincerely,





Brian P. Stack
Mayor

City of Union City

Department of Public Safety

3715 Palisade Avenue

Union City, New Jersey 07087

(201) 348-5745/5755

Fax: (201) 348-5728

March 29, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate – City of Union City, NJ

Dear Mr. Woods:

Per your letter, dated March 20, 2019, the City of Union City, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the City of Union City:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
 - Identification of new development and anticipated development
 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk

- Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.
- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.
- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
- Involve your local NFIP Floodplain Administrator in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Ralph Tango	Position/Department: Engineer
Phone Number: 973-216-8668	Email Address: rtango@maserconsulting.com
Alternate/Secondary POC: Mario Boron Susan Colditz	Position/Department: OEM Director Finance Director
Phone Number: 201-240-9521 201-348-5846	Email Address: ucnjoem@ucnj.com scolditz@ucnj.com

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA: Marty Martinetti	Position/Department: Building Code Official
Phone Number: 201-348-5710	Email Address: ldiaz@ucnj.com

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Stack", with a long horizontal flourish extending to the right.

Brian P. Stack
Mayor



TOWNSHIP OF WEEHAWKEN
NEW JERSEY

MUNICIPAL BUILDING
400 PARK AVENUE
WEEHAWKEN, NEW JERSEY 07086
Telephone: 201-319-6005
Facsimile: 201-319-0112

Giovanni D. Ahmad
Township Manager

May 23, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate - Township of Weehawken

Dear Mr. Woods:

Per your letter, dated March 20, 2019, the Township of Weehawken, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, the *Township of Weehawken*:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee ("Steering Committee"), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this "Authorization and Acknowledgement" letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
 - Structure and facility inventory data
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 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years

- Identification of plans, studies, reports and ordinances addressing natural hazard risk
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 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.
- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
- Involve your local NFIP Floodplain Administrator in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

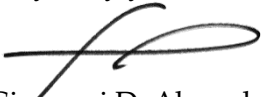
Primary POC: Giovanni Ahmad	Position/Department: Township Manager
Phone Number: 201-319-6005 / 201-377-8314 Cell	Email Address: gahmad@tow-nj.net
Alternate/Secondary POC: Jeff Fulcher	Position/Department: Deputy Director of Public Safety
Phone Number: 201-319-6046	Email Address: jfulcher@police.weehawkennj.gov

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA: Frank Tattoli	Position/Department: Construction Code Official
Phone Number: 201-319-6057	Email Address:

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Very truly yours,



Giovanni D. Ahmad

GDA



Comm. Gabriel Rodriguez
Public Safety

POLICE DEPARTMENT

WEST NEW YORK, N.J. 07093



Robert Antolos
Police Director

Date: March 27, 2019

Jim Woods, County Coordinator
Hudson County Office of Emergency Management
830 Bergen Ave, Bldg. C-2
Jersey City, New Jersey 07306

Subject: Hudson County Hazard Mitigation Plan Update
Authorization and Letter of Intent to Participate - West New York

Dear Mr. Woods:

Per your letter, dated March 20, 2019, West New York, is committed to participating in the Hudson County Hazard Mitigation Plan (HMP) Update project. By way of this letter, West New York:

1. Authorizes the Hudson County Hazard Mitigation Steering Committee (“Steering Committee”), to guide and direct this planning process, perform certain parts of the planning process, and prepare certain parts of the plan documents on our behalf.
2. Agrees to meet the minimum requirements of municipal participation (a.k.a. the Planning Partner Expectations), specifically:
 - Execute and return this “Authorization and Acknowledgement” letter to the Hudson County Office of Emergency Management, attention: Mr. Jim Woods.
 - Identify municipal representatives to serve as the planning point of contacts (POC), below. These people will be responsible for representing their community and assuring that these participation expectations are met by their community.
 - Support the Steering Committee selected to oversee the development of this plan.
 - Provide representation at municipal Planning Committee meetings (~ 4 meetings over 6-9 months, including a Kick-Off Meeting and a Mitigation Strategy Workshop).
 - Provide data and information about your community as requested by the Steering Committee or the contract consultant, including:
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 - Identification of natural hazard risk areas
 - Identification of natural hazard events and losses that have impacted your community in the last five years
 - Identification of plans, studies, reports and ordinances addressing natural hazard risk
 - Identify mitigation activity in your community in the last five years, including progress on previously identified mitigation actions.

- Support public outreach efforts in your community which may include:
 - Providing notices of the planning project on your municipal website with links to a County project website
 - Providing notice of the planning project, the availability of Plan documents, and notice of public meetings via available local media (e.g. newsletters, flyers, email blasts, social media, etc.)
 - Advertising and supporting public meetings in your area
 - Supporting outreach to National Flood Insurance Program (NFIP) Repetitive Loss and Severe Repetitive Loss property owners in your community.
- Assist with the identification of stakeholders within your community that should be informed and potentially involved with the planning process.
- Completing data and information collection survey forms in a timely manner.
- Identify specific mitigation actions to address each of the natural hazards posing significant [or high or medium] risk to your community.
- Involve your local NFIP Floodplain Administrator in the planning process.
- Review draft Plan sections when requested and provide comment and input as appropriate.
- Adopt the Plan by resolution of their governing body after FEMA conditional approval.
- Periodically provide the Steering Committee with reports of municipal staff and volunteer labor spent on the planning process.

3. Assigns the following persons to be the Points of Contact for our jurisdiction. We understand that these POCs are responsible for assuring municipal representation at municipal Planning Committee meetings, and assuring that the other minimum requirements of jurisdictional participation, as detailed in the Planning Partner Expectations above, are met.

Primary POC: Lewis Cannao	Position/Department: OEM Coordinator
Phone Number: 201-993-2795	Email Address: lcannao@westnewyorknj.org
Alternate/Secondary POC: RobertAntolos	Position/Department: Public Safety Director
Phone Number: 201-414-1147	Email Address: Robert.antolos@wnypd.org

4. Our designated local Floodplain Administrator (FPA) under the NFIP is:

Name of NFIP FPA: Paul Cray	Position/Department: Engineer
Phone Number: 609-680-6334	Email Address: Paul.cray@rve.com

5. Recognizes that failure to meet the minimum participation expectations and deadlines, as determined by the Steering Committee will result in our municipality being excluded from the planning process.

Sincerely,

Lewis Cannao, OEM Coordinator
March 27, 2019



B.3 Hazard of Concern Review Exercise

At the May 2019 kickoff meeting, Steering Committee and plan participant representatives (County, municipal and MUA) were asked to contribute to the hazard identification exercise by reviewing the 2015 hazards of concern and indicating whether there has been a change in hazard event frequency, magnitude or severity over the last few years. In addition, the natural hazards that present the most risk were reported, as well as impacts due to small or nuisance events that need to be addressed. The following worksheets were submitted by meeting attendees. If a jurisdiction was not present at the meeting or attended the meeting but did not submit a worksheet, their input was collected at individual local annex preparation meetings and reflected in their jurisdictional annex.





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
Plan Participant Kickoff Meeting - Agenda
May 29, 2019



Jurisdiction: Hudson County OER (Bayonne Resident)

Name: Peter Nevins

1. What are the natural hazards that present the most risk to your municipality or jurisdiction today?

- | | |
|--|--|
| <input checked="" type="checkbox"/> Coastal Erosion and Sea Level Rise | <input type="checkbox"/> Flood (riverine, coastal) |
| <input type="checkbox"/> Dam/Levee Failure | <input type="checkbox"/> Geologic (landslide and subsidence/sinkhole) |
| <input checked="" type="checkbox"/> Coastal Storm (hurricane, tropical storm, nor'easter, storm surge) | <input checked="" type="checkbox"/> Severe Weather (high wind, tornado, thunderstorm, hailstorm) |
| <input type="checkbox"/> Drought | <input type="checkbox"/> Severe Winter Storm (heavy snow, blizzard, ice storm) |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Extreme Temperature (heat and cold) | |
| <input type="checkbox"/> Other: _____ | |

Why do they present the most risk?

City of Bayonne is a Peninsula, so the threat of coastal erosion and sea level rise is a natural concern.

Has this changed since the 2015 HMP?

No

2. Are there impacts occurring in your municipality or jurisdiction that happen often due to small natural hazard events, or considered a nuisance that need addressing?

Type of hazard event:

Sudden & severe weather overwhelms drainage capabilities

Location:

lower areas of city of Bayonne

Impact:

Localized flooding, property damage





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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3. In terms of capabilities, for which natural hazards does your jurisdiction have the strongest/weakest capabilities? Describe.

	<i>Emergency Response</i>	<i>Mitigation</i>
Strongest Capability	Well staffed public safety departments (Police, Fire, E.M.S)	Purchase of ^{additional} specialized equipment to use to deliver public public safety services in affected areas when extreme weather presents.
Weakest Capability	Drainage capabilities during sudden storm onset.	Increase capacity Develop system to limit exposure to lower lying hazard areas

4. What challenges/obstacles does your municipality/jurisdiction face in terms of implementing mitigation projects?

Cost to taxpayers, outside the scope of state and federal aid.





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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Jurisdiction: Kearny MUA

Name: Gregg Paster - General Counsel

1. What are the natural hazards that present the most risk to your municipality or jurisdiction today?

- | | |
|--|---|
| <input checked="" type="checkbox"/> Coastal Erosion and Sea Level Rise | <input checked="" type="checkbox"/> Flood (riverine, coastal) |
| <input type="checkbox"/> Dam/Levee Failure | <input type="checkbox"/> Geologic (landslide and subsidence/sinkhole) |
| <input checked="" type="checkbox"/> Coastal Storm (hurricane, tropical storm, nor'easter, storm surge) | <input type="checkbox"/> Severe Weather (high wind, tornado, thunderstorm, hailstorm) |
| <input type="checkbox"/> Drought | <input type="checkbox"/> Severe Winter Storm (heavy snow, blizzard, ice storm) |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Extreme Temperature (heat and cold) | |
| <input type="checkbox"/> Other: _____ | |

Why do they present the most risk?

As a sanitary sewer authority high water and flash flooding present a major threat to our plant, equipment and ability to maintain service/operations

Has this changed since the 2015 HMP?

Seems to be more frequent and less severe conditions seem to have disproportionate impact

2. Are there impacts occurring in your municipality or jurisdiction that happen often due to small natural hazard events, or considered a nuisance that need addressing?

Type of hazard event: *in #1, above. N/A other than as set forth*

Location:

Impact:





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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3. In terms of capabilities, for which natural hazards does your jurisdiction have the strongest/weakest capabilities? Describe.

	<i>Emergency Response</i>	<i>Mitigation</i>
<i>Strongest Capability</i>	<i>Small agency, local emergency response allows quick, relatively efficient management</i>	<i>Continued facilities improvements and redundancy are helping to avoid future issues</i>
<i>Weakest Capability</i>	<i>In the event of a major, long duration flood event, services remain at risk</i>	<i>As an agency serving a peninsula, we are susceptible to tidal influences with little opportunity for prevention</i>

4. What challenges/obstacles does your municipality/jurisdiction face in terms of implementing mitigation projects?

Funding, regulatory. We have been relatively effective in implementation. FEMA funding has been pursued and received





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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Jurisdiction: TOWN OF HARRISON

Name: ROCCO RUSSOMANNO

1. What are the natural hazards that present the most risk to your municipality or jurisdiction today?

- | | |
|--|---|
| <input type="checkbox"/> Coastal Erosion and Sea Level Rise | <input checked="" type="checkbox"/> Flood (riverine, coastal) |
| <input type="checkbox"/> Dam/Levee Failure | <input type="checkbox"/> Geologic (landslide and subsidence/sinkhole) |
| <input checked="" type="checkbox"/> Coastal Storm (hurricane, tropical storm, nor'easter, storm surge) | <input type="checkbox"/> Severe Weather (high wind, tornado, thunderstorm, hailstorm) |
| <input type="checkbox"/> Drought | <input checked="" type="checkbox"/> Severe Winter Storm (heavy snow, blizzard, ice storm) |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Extreme Temperature (heat and cold) | |
| <input type="checkbox"/> Other: _____ | |

Why do they present the most risk?

HARRISON IS LOCATED ALONG ^{THE} A SECTION OF THE PASSAIC RIVER WHICH IS TIDALLY INFLUENCED THEREFORE SURCHARGING OF SEWER ~~INFRASTRUCTURE~~ INFRASTRUCTURE OCCURS WHEN HIGH TIDE & RAIN EVENT OCCURS AT THE SAME TIME.

Has this changed since the 2015 HMP?

No

2. Are there impacts occurring in your municipality or jurisdiction that happen often due to small natural hazard events, or considered a nuisance that need addressing?

Type of hazard event: LOCALIZED FLOODING

Location: 1ST STREET, RODGENS BLVD. SO.

Impact: EMERGENCY RESPONSE DUE TO FLOODING IN STREETS, TRAFFIC PROPERTY DAMAGE (MOTOR VEHICLES) DAMAGE





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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3. In terms of capabilities, for which natural hazards does your jurisdiction have the strongest/weakest capabilities? Describe.

	Emergency Response	Mitigation
Strongest Capability	SEVERE WINTER STORMS HARRISON DPW WELL EQUIPPED TO HANDLE SNOW REMOVAL	
Weakest Capability	COASTAL OR TIDAL FLOODING TOWN HAS NO CONTROL OF TIDE OR PRECIPITATION.	TIDE GATES AND STORMWATER RETENTION / TEMPORARY STORAGE

LOCALIZED FLOODING OCCURS.

4. What challenges/obstacles does your municipality/jurisdiction face in terms of implementing mitigation projects?

- FINANCIAL CONSTRAINTS.
- LIMITED SPACE AVAILABLE FOR RUNOFF STORAGE OR RETENTION TO REDUCE LOCALIZED FLOODING THROUGHOUT THE TOWN.





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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Jurisdiction: Weehawken

Name: Giovanni Ahmad

1. What are the natural hazards that present the most risk to your municipality or jurisdiction today?

- | | |
|---|--|
| <input type="checkbox"/> Coastal Erosion and Sea Level Rise | <input checked="" type="checkbox"/> Flood (riverine, coastal) |
| <input checked="" type="checkbox"/> Dam/Levee Failure | <input type="checkbox"/> Geologic (landslide and subsidence/sinkhole) |
| <input type="checkbox"/> Coastal Storm (hurricane, tropical storm, nor'easter, storm surge) | <input checked="" type="checkbox"/> Severe Weather (high wind, tornado, thunderstorm, hailstorm) |
| <input type="checkbox"/> Drought | <input checked="" type="checkbox"/> Severe Winter Storm (heavy snow, blizzard, ice storm) |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Extreme Temperature (heat and cold) | |
| <input type="checkbox"/> Other: _____ | |

Why do they present the most risk?

Dam - We have a Reservoir that is considered a Dam
 Flood + Severe Weather + Winter - they seem to be occurring more frequently

Has this changed since the 2015 HMP?

NO - Just seem more frequent

2. Are there impacts occurring in your municipality or jurisdiction that happen often due to small natural hazard events, or considered a nuisance that need addressing?

Type of hazard event: Local URBAN Flooding - we have had local and - ROAD Flooding

Location: small various sites
 usually due to debris in the catch basins/

Impact: small roadway puddling / flooding





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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3. In terms of capabilities, for which natural hazards does your jurisdiction have the strongest/weakest capabilities? Describe.

	<i>Emergency Response</i>	<i>Mitigation</i>
<i>Strongest Capability</i>	- SNOW - HAZARD weather - Downed trees	- Property Equipment - DPW - Fire Dept
<i>Weakest Capability</i>	River Flooding	Rebuild By Design Is working on IT

4. What challenges/obstacles does your municipality/jurisdiction face in terms of implementing mitigation projects?

River Flooding - We are working with Rebuild By Design





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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Jurisdiction: Town of Kinnelon

Name: _____

1. What are the natural hazards that present the most risk to your municipality or jurisdiction today?

- | | |
|---|---|
| <input type="checkbox"/> Coastal Erosion and Sea Level Rise | <input checked="" type="checkbox"/> Flood (riverine, coastal) |
| <input type="checkbox"/> Dam/Levee Failure | <input type="checkbox"/> Geologic (landslide and subsidence/sinkhole) |
| <input type="checkbox"/> Coastal Storm (hurricane, tropical storm, nor'easter, storm surge) | <input type="checkbox"/> Severe Weather (high wind, tornado, thunderstorm, hailstorm) |
| <input type="checkbox"/> Drought | <input type="checkbox"/> Severe Winter Storm (heavy snow, blizzard, ice storm) |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Extreme Temperature (heat and cold) | |
| <input type="checkbox"/> Other: _____ | |

Why do they present the most risk?

MEANS OF EGRESS ROADWAYS

Has this changed since the 2015 HMP?

no

2. Are there impacts occurring in your municipality or jurisdiction that happen often due to small natural hazard events, or considered a nuisance that need addressing?

Type of hazard event: *Roadway Flooding*

Location: *Fish House Road ~~at~~ Belleville Turnpike*
POSSIC ave & AREAS OFF SCHUYLER AVE

Impact: *Significant*





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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3. In terms of capabilities, for which natural hazards does your jurisdiction have the strongest/weakest capabilities? Describe.

	<i>Emergency Response</i>	<i>Mitigation</i>
<i>Strongest Capability</i>		
<i>Weakest Capability</i>		

4. What challenges/obstacles does your municipality/jurisdiction face in terms of implementing mitigation projects?





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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Jurisdiction: Hudson County

Name: _____

1. What are the natural hazards that present the most risk to your municipality or jurisdiction today?

- | | |
|--|---|
| <input checked="" type="checkbox"/> Coastal Erosion and Sea Level Rise | <input checked="" type="checkbox"/> Flood (riverine, coastal) |
| <input type="checkbox"/> Dam/Levee Failure | <input type="checkbox"/> Geologic (landslide and subsidence/sinkhole) |
| <input checked="" type="checkbox"/> Coastal Storm (hurricane, tropical storm, nor'easter, storm surge) | <input type="checkbox"/> Severe Weather (high wind, tornado, thunderstorm, hailstorm) |
| <input type="checkbox"/> Drought | <input checked="" type="checkbox"/> Severe Winter Storm (heavy snow, blizzard, ice storm) |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Wildfire |
| <input checked="" type="checkbox"/> Extreme Temperature (heat and cold) | |
| <input type="checkbox"/> Other: _____ | |

Why do they present the most risk? Storm surge along with significant waterfront development
- Extreme temperatures

Has this changed since the 2015 HMP? waterfront development
- Climate change

2. Are there impacts occurring in your municipality or jurisdiction that happen often due to small natural hazard events, or considered a nuisance that need addressing?

Type of hazard event: Road Flooding

Location: RT. 7, Fishhouse Road, RT 508 Harrison Ave, observer hwy

Impact: Transportation interruption, residence damage by water





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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3. In terms of capabilities, for which natural hazards does your jurisdiction have the strongest/weakest capabilities? Describe.

	<i>Emergency Response</i>	<i>Mitigation</i>
<i>Strongest Capability</i>	<ul style="list-style-type: none"> - Ability to detour flooded roads - fairly large first responder force on duty 24/7 	Modify the Roadways that continue to flood with storms.
<i>Weakest Capability</i>	sheltering large quantities of residents	shelter staffing remains an issue

4. What challenges/obstacles does your municipality/jurisdiction face in terms of implementing mitigation projects?

- Appropriate The Required Match Funding
- State Highways jurisdiction
- Staffing
- Technical/Engineering assistance during Application Process





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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Jurisdiction: NORTH BERGEN

Name: BERNARD MIRANDI

1. What are the natural hazards that present the most risk to your municipality or jurisdiction today?

- | | |
|--|--|
| <input checked="" type="checkbox"/> Coastal Erosion and Sea Level Rise | <input checked="" type="checkbox"/> Flood (riverine, coastal) |
| <input type="checkbox"/> Dam/Levee Failure | <input type="checkbox"/> Geologic (landslide and subsidence/sinkhole) |
| <input checked="" type="checkbox"/> Coastal Storm (hurricane, tropical storm, nor'easter, storm surge) | <input checked="" type="checkbox"/> Severe Weather (high wind, tornado, thunderstorm, hailstorm) |
| <input type="checkbox"/> Drought | <input checked="" type="checkbox"/> Severe Winter Storm (heavy snow, blizzard, ice storm) |
| <input type="checkbox"/> Earthquake | <input type="checkbox"/> Wildfire |
| <input type="checkbox"/> Extreme Temperature (heat and cold) | |
| <input type="checkbox"/> Other: _____ | |

Why do they present the most risk?

AREA along River Rd and Westside Ave are low lying and subject to flooding from storm events

Has this changed since the 2015 HMP?

About the same level of hazard just more frequently from the storm events

2. Are there impacts occurring in your municipality or jurisdiction that happen often due to small natural hazard events, or considered a nuisance that need addressing?

Type of hazard event:

Flooding

Location:

River Road area and Westside Ave, Dell Ave, 91st Street, Bellmans Creek

Impact:

From Rain and Tidal impact area businesses





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
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3. In terms of capabilities, for which natural hazards does your jurisdiction have the strongest/weakest capabilities? Describe.

	<i>Emergency Response</i>	<i>Mitigation</i>
<i>Strongest Capability</i>	Strong OEM, Administration, NHRFR, DPW and PD to coordinate response	
<i>Weakest Capability</i>	Physical barriers of densely populated fully developed urban locale	

4. What challenges/obstacles does your municipality/jurisdiction face in terms of implementing mitigation projects?

We see a major need for flood/tide gates.

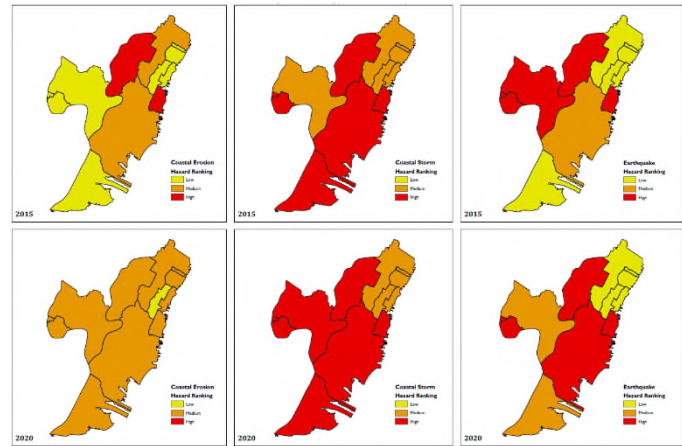




B.4 Hazard Ranking Worksheets

At the October 2019 risk assessment meeting, Steering Committee and plan participant representatives (County, municipal and MUA) were asked to review their draft risk assessment results based on the calculated hazard ranking using an updated hazard ranking formula and provide their input. Posters available at the meeting geographically displayed the 2015 hazard ranking results for each municipality compared to the draft 2020 hazard ranking, calculated solely using the updated risk assessment results (high = red, medium = orange, and yellow = low). The review and updates to the draft jurisdiction-specific hazard ranking results were captured on worksheets which were distributed to the point of contact attending the meeting. In addition, the jurisdiction-specific adaptive capacity to hazard events was discussed as related to the individual jurisdictions and the County as a whole. The jurisdiction-specific adaptive capacity was captured for each hazard of concern on the following worksheets as well. If a jurisdiction was not present at the risk assessment meeting or if the jurisdiction attended the meeting but did not submit a worksheet, their input was collected at individual local annex preparation meetings and reflected in their jurisdictional annex.

Exhibit B-1. Draft Hazard Ranking Poster





NORTH HUDSON SEWERAGE AUTHORITY

DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

Authority Background

- Residential Population Served: Over 190,000 people (2013-2017 American Community Survey)
- Number of Identified Assets: 6 facilities
- Services: The North Hudson Sewerage Authority is responsible for the conveyance, transmission, treatment, and disposal of wastewater generated within the Cities of Hoboken and Union City, Township of Weehawken, and Town of West New York.

Please provide your input on the draft 2020 hazard ranking and your adaptive capacity (capabilities) to withstand impacts to your assets for each hazard in the table below. To assist with this effort, the following table summarizes the draft hazard ranking for the municipalities in which your assets are located. On page 4, the critical facility and lifeline table indicates which of your assets are located in delineated hazard zones.

Hazard of Concern	Coastal Erosion and Sea Level Rise	Coastal Storm	Drought	Earthquake	Extreme Temperature	Flood	Geological Hazards	Severe Weather	Severe Winter Weather	Wildfire	Dam and Levee Failure
2015	No hazard ranking for MUAs in the 2015 HMP										
Draft 2020 based on asset exposure	Low	High	Medium	Medium	High	High	Medium	High	High	Medium	Low
MUA Input on 2020 Hazard Ranking	High	High	Low	Low	High	High	Medium High	High	High	Low	Low
Adaptive Capacity (capabilities)*	Medium	Medium	Low	Low	Low	Med	Low	Med.	Med.	Low	Low





NORTH BERGEN MUNICIPAL UTILITY AUTHORITY DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(Impact\ on\ Population \times 3) + (Impact\ on\ Property \times 2) + (Impact\ on\ Economy \times 1) \times .40] + [Adaptive\ Capacity \times .10] + [Climate\ Change \times .10] + [Probability\ of\ Occurrence \times .40]$$

Background

- Residential Population Served: Over 75,000 people (2013-2017 American Community Survey)
- Number of Identified Assets: 10 facilities
- Services: The North Bergen MUA provides wastewater collection and treatment services, as well as solid waste and recycling services, to the Township of North Bergen, Town of Guttenberg, and a small portion of Union City.

Please provide your input on the draft 2020 hazard ranking and your adaptive capacity (capabilities) to withstand impacts to your assets for each hazard in the table below. To assist with this effort, the following table summarizes the draft hazard ranking for the municipalities in which your assets are located. Note, MUAs did not have their own hazard ranking in the 2015 HMP to compare against. On page 3, the critical facility and lifeline table indicates which of your assets are located in delineated hazard zones.

Hazard	Countywide		Town of Guttenberg		Township of North Bergen		North Bergen MUA		
	2015	2020 Draft	2015	Draft 2020	2015	Draft 2020	Draft 2020	Adaptive Capacity *	MUA 2020 Input
Coastal Erosion & Sea Level Rise	Medium	Medium	Low	Medium	Medium	Medium	Low	M	XX
Coastal Storm	High	High	Medium	Medium	Medium	Medium	High	XX	XX
Drought	Medium	Medium	Medium	Medium	Medium	Medium	Medium	M	XX
Earthquake	Medium	Medium	Low	Low	Low	Low	Medium	M	M
Extreme Temperature	Medium	Medium	Medium	Medium	Medium	Medium	Medium	NA	XX
Flood	Medium	High	Medium	Medium	Medium	Medium	High	H	H
Geological Hazards	Low	Low	Medium	Medium	Low	Medium	Low	L	L
Severe Storm	High	High	High	High	High	High	High	H	H
Winter Storm	High	High	High	High	High	High	High	H	H
Wildfire	Medium	Medium	Medium	Medium	Medium	Medium	Medium	M	XX
Dam Levee Failure	-	Low	-	N/A	-	N/A	N/A	NA	NA

*Note: *Adaptive capacity (capabilities) was assumed Medium for all hazards to calculate the draft hazard ranking. N/A = Not applicable; no dams or levees present in the municipality; downstream impacts from other dams/levees is unknown.*



KEARNY MUNICIPAL UTILITY AUTHORITY

DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

Authority Background

- Population Served: 60 non-residential customers
- Number of Identified Assets: 6 facilities
- Services: The Kearny MUA is responsible for the collection of stormwater and wastewater from portions of the Meadowlands and the South Kearny sections of the Town of Kearny.

Please provide your input on the draft 2020 hazard ranking and your adaptive capacity (capabilities) to withstand impacts to your assets for each hazard in the table below. To assist with this effort, the following table summarizes the draft hazard ranking for the municipalities in which your assets are located. On page 3, the critical facility and lifeline table indicates which of your assets are located in delineated hazard zones.

Hazard	Countywide		Township of Kearny			Kearny MUA	
	2015	2020 Draft Update	2015	Draft 2020 Based on Results	Draft 2020 Based on Results	Adaptive Capacity*	MUA Hazard Ranking
Coastal Erosion and Sea Level Rise	Medium	Medium	Low	Medium	Low	L	L
Coastal Storm	High	High	Medium	High	High	M	H
Drought	Medium	Medium	Medium	Medium	Medium	H	L
Earthquake	Medium	Medium	High	Medium	High	L	M
Extreme Temperature	Medium	Medium	Medium	High	Medium	M	M
Flood	Medium	High	Medium	Medium	High	M	H
Geological Hazards	Low	Low	Low	Low	Low	M	L
Severe Storm	High	High	High	High	High	M	M
Winter Storm	High	High	High	High	High	M	M
Wildfire	Medium	Medium	Medium	Medium	High	L	L
Dam Levee Failure	-	Low	-	N/A	N/A	N/A	N/A

*Note: *Adaptive capacity was assumed Medium for all hazards to calculate the draft hazard ranking
 N/A = Not applicable; no dams or levees present in the municipality; downstream impacts from other dams/levees is unknown.*





CITY OF UNION CITY

DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

Please provide your input on the draft 2020 hazard ranking and your adaptive capacity (capabilities) to withstand impacts for each hazard in the table below.

Hazard	Countywide		Municipality			
	2015	2020 Draft Update	2015	2020		
				Based on Risk Assessment Results	Adaptive Capacity (capabilities)*	Municipal Feedback
Coastal Erosion and Sea Level Rise	Medium	Medium	Low	Low		Low-
Coastal Storm	High	High	Medium	Medium		Medium-
Drought	Medium	Medium	Medium	Medium		Medium-
Earthquake	Medium	Medium	Low	Low		Low-
Extreme Temperature	Medium	Medium	High	High		High-
Flood	Medium	High	Medium	Low		Low Medium
Geological Hazards	Low	Low	Low	Low		Low-
Severe Storm	High	High	High	High		High-
Winter Storm	High	High	High	High		High-
Wildfire	Medium	Medium	Medium	Medium		Medium-
Dam Levee Failure	-	Low	-	N/A		N/A-

*Note: *Adaptive capacity was assumed Medium for all hazards to calculate the draft hazard ranking
N/A = Not available; this is a new hazard for the 2020 HMP.*





HUDSON COUNTY

DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Name: DARYL Krasnuk

County Agency and Title: Planning - GIS Coordinator

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

2015 and Draft 2020 Hazard Rankings

Hazard	Countywide			
	2015	2020		
		2020 Draft Update	Adaptive Capacity (capabilities)	County Feedback on Draft Ranking
Coastal Erosion and Sea Level Rise	Medium	Medium	Low	Medium
Coastal Storm	High	High	Medium	High
Drought	Medium	Medium	Medium	Med
Earthquake	Medium	Medium	Medium	Med
Extreme Temperature	Medium	Medium	Medium	Med
Flood	Medium	High	Low	* Medium
Geological Hazards	Low	Low	Medium	Low
Severe Storm	High	High	High	High
Winter Storm	High	High	High	High
Wildfire	Medium	Medium	Medium	Medium
Dam and Levee Failure	-	Low	Low	Low

*Adaptive capacity assumed 'medium' for all hazards for the draft 2020 hazard ranking.



JERSEY CITY MUNICIPAL UTILITY AUTHORITY DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

Background Information

- Residential Population Served: Over 265,000 people (2013-2017 American Community Survey)
- Number of Identified Assets: 17 facilities
- Services: The Jersey City MUA provides stormwater and wastewater collection services and distributes potable water Boonton Reservoir in Boonton, NJ throughout the City.

Please provide your input on the draft 2020 hazard ranking and your adaptive capacity (capabilities) to withstand impacts to your assets for each hazard in the table below. To assist with this effort, the following table summarizes the draft hazard ranking for the municipality in which your assets are located. Note, MUAs did not have their own hazard ranking in the 2015 HMP to compare against. On page 3, the critical facility and lifeline table indicates which of your assets are located in delineated hazard zones.

Hazard	Countywide		City of Jersey City		Jersey City MUA		
	2015	2020 Draft Update	2015	Draft 2020 Based on RA Results	Draft 2020 Based on RA Results	Adaptive Capacity*	MUA 2020 Ranking
Coastal Erosion and Sea Level Rise	Medium	Medium	Medium	Medium	Low	Low	
Coastal Storm	High	High	High	High	High	High	
Drought	Medium	Medium	Medium	Medium	Medium	Medium	
Earthquake	Medium	Medium	Medium	High	High	High	
Extreme Temperature	Medium	Medium	Medium	High	High	High	
Flood	Medium	High	Medium	High	High	High	
Geological Hazards	Low	Low	Low	Low	Low	Low	
Severe Storm	High	High	High	High	High	High	
Winter Storm	High	High	High	High	High	High	
Wildfire	Medium	Medium	Medium	Medium	Medium	Medium	
Dam Levee Failure	-	Low	-	N/A	N/A		

*Note: *Adaptive capacity (capabilities) was assumed Medium for all hazards to calculate the draft hazard ranking
N/A = Not applicable; no dams or levees present in the municipality; downstream impacts from other dams/levees are unknown.*

RA = Risk Assessment





CITY OF BAYONNE

DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

Please provide your input on the draft 2020 hazard ranking and your adaptive capacity (capabilities) to withstand impacts for each hazard in the table below.

Hazard	Countywide			Municipality		
	2015	2020 Draft Update	2015	2020		
				Based on Risk Assessment Results	Adaptive Capacity (capabilities)*	Municipal Feedback
Coastal Erosion and Sea Level Rise	Medium	Medium	Low	Medium	Yes med	Yes
Coastal Storm	High	High	High	High	Yes High	Yes
Drought	Medium	Medium	Medium	Medium	med	Yes
Earthquake	Medium	Medium	Low	Medium	med	Yes
Extreme Temperature	Medium	Medium	Medium	Medium	med	Yes
Flood	Medium	High	Medium	High	High	Yes
Geological Hazards	Low	Low	Low	Low	Low	Yes
Severe Storm	High	High	High	High	High	Yes
Winter Storm	High	High	High	High	High	Yes
Wildfire	Medium	Medium	Medium	Medium	Low	Yes
Dam Levee Failure	-	Low	-	N/A	N/A	

*Note: *Adaptive capacity was assumed Medium for all hazards to calculate the draft hazard ranking
 N/A = Not applicable; no dams or levees present in the municipality; downstream impacts from other dams/levees are unknown.*





HUDSON COUNTY

DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Name: Peter Nevins

County Agency and Title: Hudson County OEM

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

2015 and Draft 2020 Hazard Rankings *Specific Hudson County Projects/Responsibilities

Hazard	Countywide			
	2015	2020		
		2020 Draft Update	Adaptive Capacity (capabilities)	County Feedback on Draft Ranking
Coastal Erosion and Sea Level Rise	Medium	Medium	Medium	
Coastal Storm	High	High	High	
Drought	Medium	Medium	Medium	
Earthquake	Medium	Medium		
Extreme Temperature	Medium	Medium	↓	
* Flood	Medium	High	Medium	
Geological Hazards	Low	Low	Low	
Severe Storm	High	High	High	
Winter Storm	High	High	High	
Wildfire	Medium	Medium	Medium	
Dam and Levee Failure	-	Low	Low	

*Adaptive capacity assumed 'medium' for all hazards for the draft 2020 hazard ranking.



TOWN OF GUTTENBERG

DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

Please provide your input on the draft 2020 hazard ranking and your adaptive capacity (capabilities) to withstand impacts for each hazard in the table below.

Hazard	Countywide		Municipality			
	2015	2020 Draft Update	2015	2020		
				Based on Risk Assessment Results	Adaptive Capacity (capabilities)*	Municipal Feedback
Coastal Erosion and Sea Level Rise	Medium	Medium	Low	Medium	LOW	
Coastal Storm	High	High	Medium	Medium	Medium	
Drought	Medium	Medium	Medium	Medium	Medium	
Earthquake	Medium	Medium	Low	Low	LOW	
Extreme Temperature	Medium	Medium	Medium	Medium	Medium	
Flood	Medium	High	Medium	Medium	Medium	
Geological Hazards	Low	Low	Medium	Medium	Medium	
Severe Storm	High	High	High	High	HIGH	
Winter Storm	High	High	High	High	HIGH	
Wildfire	Medium	Medium	Medium	Medium	Medium	
Dam Levee Failure	-	Low	-	N/A	N/A	

*Note: *Adaptive capacity was assumed Medium for all hazards to calculate the draft hazard ranking
N/A = Not applicable; no dams or levees present in the municipality; downstream impacts from other dams/levees are unknown.*





TOWNSHIP OF NORTH BERGEN

DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

Please provide your input on the draft 2020 hazard ranking and your adaptive capacity (capabilities) to withstand impacts for each hazard in the table below.

Hazard	Countywide			Municipality		
	2015	2020 Draft Update	2015	2020		
				Based on Risk Assessment Results	Adaptive Capacity (capabilities)*	Municipal Feedback
Coastal Erosion and Sea Level Rise	Medium	Medium	Medium	Medium	M	M
Coastal Storm	High	High	Medium	Medium	M	M
Drought	Medium	Medium	Medium	Medium	M	M
Earthquake	Medium	Medium	Low	Low	L	L
Extreme Temperature	Medium	Medium	Medium	Medium	M	M
Flood	Medium	High	Medium	Medium	M	M
Geological Hazards	Low	Low	Low	Medium	M	M
Severe Storm	High	High	High	High	H	H
Winter Storm	High	High	High	High	H	H
Wildfire	Medium	Medium	Medium	Medium	M	M
Dam Levee Failure	-	Low	-	N/A	N/A	N/A

*Note: *Adaptive capacity was assumed Medium for all hazards to calculate the draft hazard ranking
N/A = Not applicable; no dams or levees present in the municipality; downstream impacts from other dams/levees are unknown.*





TOWN OF SECAUCUS

DRAFT HAZARD RANKING AND RISK ASSESSMENT REVIEW

Hazard Ranking Equation =

$$\text{Hazard Ranking} = [(\text{Impact on Population} \times 3) + (\text{Impact on Property} \times 2) + (\text{Impact on Economy} \times 1) \times .40] + [\text{Adaptive Capacity} \times .10] + [\text{Climate Change} \times .10] + [\text{Probability of Occurrence} \times .40]$$

Please provide your input on the draft 2020 hazard ranking and your adaptive capacity (capabilities) to withstand impacts for each hazard in the table below.

Hazard	Countywide		Municipality			
	2015	2020 Draft Update	2015	2020		
				Based on Risk Assessment Results	Adaptive Capacity (capabilities)*	Municipal Feedback
Coastal Erosion and Sea Level Rise	Medium	Medium	High	Medium	med.	med.
Coastal Storm	High	High	High	High	High	High
Drought	Medium	Medium	Medium	Medium	med.	med.
Earthquake	Medium	Medium	High	High	High	High
Extreme Temperature	Medium	Medium	Medium	High	High	High
Flood	Medium	High	High	High	High	High
Geological Hazards	Low	Low	Low	Low	Low	Low
Severe Storm	High	High	High	High	High	High
Winter Storm	High	High	High	High	High	High
Wildfire	Medium	Medium	Medium	Medium	med.	med.
Dam Levee Failure	-	Low	-	N/A	N/A	N/A

*Note: *Adaptive capacity was assumed Medium for all hazards to calculate the draft hazard ranking
 N/A = Not applicable. There are no dams or levees located in the municipality and the downstream impacts from other dams and levees is unknown.*





B.5 SWOO Exercise Worksheets

At the October 4, 2019 Steering Committee meeting, Steering Committee members participated in a Strengths, Weaknesses, Obstacles and Opportunities (SWOO) exercise focusing on the high-ranked hazards for the County: coastal storm, flood, severe storm and severe winter storm. Members were asked to describe what goes well, and what does not go well during hazard events. In addition, what types of challenges and obstacles do they face to mitigate hazard impacts. Last, opportunities for reduce future impacts were identified.

At the October 18, 2019 risk assessment meeting, Steering Committee and participant representatives (County, municipal and MUA) were asked to review the County SWOO exercise results from October 4 and participate in a SWOO exercise focusing on the high-ranked hazards in their jurisdictions. This was a facilitated exercise where participants engaged and shared their input with the group. Next, meeting participants were asked to record the strengths, weaknesses, obstacles and opportunities for their jurisdiction's high-ranked hazards. The following worksheets were submitted by meeting attendees capturing their jurisdiction SWOO results. If a jurisdiction was not present at the risk assessment meeting or attended the meeting but did not submit a worksheet, their input was collected at individual local annex preparation meetings and reflected in their jurisdictional annex.





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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Gregg F. Paster

Department/Agency: Kearny MVA

Jurisdiction: _____

Email: gpaster@pasteresq.com

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: Severe Storm	
S	Backup power generation in place; recent system improvements have increased capacity
W	Flash flooding Inability to process stormwater
Ob	Size of agency; ability to apply for major grant funding
Opps	Possibly apply for major grant funding w/ other similarly situated agencies

Hazard: Flood	
S	All similar/same as Severe Storm
W	
Ob	
Opps	

Hazard: Coastal Storm	
S	Same as Severe storm
W	Processing plant situated at confluence of Hackensack + Passaic Rivers - high flood risk/low elevation
Ob	No alternative location
Opps	Improve plant/facility infrastructure to reduce vulnerability

Hazard: Winter Storm	
S	Have snow removal equipment on hand Installing satisfied this year
W	US Hwy runs through jurisdiction Isolated from rest of town (high traffic)
Ob	Lack of manpower
Opps	Interlocal cooperation w/ other agencies



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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: Drought	
S	Low impact risk; only reduces flow passed on to PUSC
W	No significant weakness
Ob	None noted
Opps	

Hazard: Earthquake	
S	Not in quake prone zone No residential properties
W	Aging infrastructure is vulnerable to a severe quake.
Ob	Low cost benefit ratio to abate potential downside risk
Opps	Reinforce infrastructure with efficient, low cost projects

Hazard: Wildfire	
S	High % of wetlands/marsh Low vulnerability
W	Isolated from primary fire fighting capability
Ob	Location makes response to major fire difficult
Opps	Cooperation of other agencies

Hazard:	
S	
W	
Ob	
Opps	



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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Peter Nevins

Department/Agency: Hudson County OEM

Jurisdiction: Hudson County

Email: pnevins@HCCNJ.US

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: <u>flooding</u>	
S	<u>ability to re-route closed roads that are flooded</u>
W	<u>poor drainage in rain deluges, overcomes system.</u>
Ob	<u>Improvements to water drainage systems, water treatment plants.</u>
Opps	<u>urban setting, density in buildings & population.</u>

Hazard: <u>Drought</u>	
S	<u>ability to impose water restrictions through govt. order, enforcement of above</u>
W	<u>consumption increasing with additional development.</u>
Ob	<u>other than non-compliance with ^{enforce} restrictions</u>
Opps	<u>public outreach</u>

Hazard: <u>Earthquake</u>	
S	<u>strict building code requirements & inspections</u>
W	<u>older building in some areas</u>
Ob	<u>n/a</u>
Opps	<u>new buildings in many areas with stricter building codes</u>

Hazard: <u>Extreme Temperature</u>	
S	<u>public warming & cooling centers, public outreach</u>
W	<u>n/a</u>
Ob	<u>n/a</u>
Opps	<u>ability to watch over special need populations i.e. senior citizens.</u>



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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard:	Severe storm event
S	advanced forecasting public notice assets to mitigate to a point
W	urban environments assets spread thin
Ob	Limited drainage capabilities fast-changing weather
Opps	Improve water/treatment facilities

Hazard:	Dam & Levee Failure
S	few areas within county
W	n/a
Ob	↓
Opps	↓

Hazard:	wildfire
S	Professional Fire Dept. in most towns within county/water tender full fire
W	remote locations may delay response
Ob	same as above
Opps	Fire prevention efforts in those areas

Hazard:	
S	
W	
Ob	
Opps	



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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Philip Reeve / Steve Hudock
 Department/Agency: North Hudson Sewage Authority
 Jurisdiction: Hoboken / Union City / Weehawken / West New York
 Email: philip.reeve@jacobs.com steven.hudock@jacobs.com

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: <u>Sea level Rise</u>	
S	<u>Rebuild by Design Flood Barriers</u>
W	<u>Low Elevations</u>
Ob	<u>Cost / Lack of open space for Mitigation</u>
Opps	<u>CSO Long term Control plan project Funding</u>

Hazard: <u>Flood</u>	
S	<u>Storm water pumps Rebuild by design</u>
W	<u>Low street elevations</u>
Ob	<u>Cost /</u>
Opps	<u>CSO Long term Control plan projects</u>

Hazard: <u>Coastal Storm</u>	
S	<u>Storm water Pumping Stations</u>
W	<u>Old sewer infrastructure</u>
Ob	<u>Cost</u>
Opps	<u>CSO Long term control plan projects</u>

Hazard: <u>Severe Weather</u>	
S	<u>Storm water Pumps</u>
W	<u>Old sewer infrastructure</u>
Ob	<u>Cost</u>
Opps	<u>CSO Long term control plan projects</u>



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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Vincent MASSANO

Department/Agency: OEW

Jurisdiction: Secaucus

Email: VMASSANO@Secaucus.net

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: Coastal Storm	
S	Alert System Rev. 911 Berms system Pump stations
W	Roadway Flooding Drainage
Ob	Cost
Opps	

Hazard: Flood	
S	Alert System Rev. 911 Pump stations Berms system
W	Roadway Flooding Drainage
Ob	Cost
Opps	

Hazard: Severe Storm	
S	Alerts Rev. 911 Pump stations
W	Drainage basin Drainage ditch
Ob	COST
Opps	

Hazard: Winter Storm	
S	Alert System Rev. 911
W	Traffic
Ob	Cost overtime
Opps	



Hudson County
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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Suzanne Mack
 Department/Agency: City of Bayonne, Planning Department
 Jurisdiction: Bayonne
 Email: bayonneplanner@gmail.com

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: <u>Severe Storm</u>	
S	<u>OEM, getting information out</u>
W	<u>No control over when it will end</u>
Ob	<u>Flooding, water drainage improve CSO</u>
Opps	<u>Can't apply money grants to completion - ^{make this happen}</u>

Hazard: <u>Flood</u>	
S	<u>OEM, Emergency Services get information out</u>
W	<u>Drainage under bridges</u>
Ob	<u>Rapidity of event Rainfall can't drain</u>
Opps	<u>This process allows us to document & plan for event</u>

Hazard: <u>Winter Storm</u>	
S	<u>OEM, getting information out Public Works clear snow quickly</u>
W	<u>Small staff to get along done quickly</u>
Ob	<u>Along area to handle quickly</u>
Opps	<u>Planning exercise good for advance work before storm</u>

Hazard: <u>Coastal Storm</u>	
S	<u>OEM, Emergency Services</u>
W	<u>Permanent solution requires raising sites out of "V" zone</u>
Ob	<u>Funding for raising sites out of FEMA "V" zone</u>
Opps	<u>Work co-operatively to find funding for raising sites</u>



Hudson County
2020 Hazard Mitigation Plan Update



Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: David Ricci Liano
 Department/Agency: No Bergen OER
 Jurisdiction: No Bergen
 Email: D RicciLiano@NorthBergen.ORG

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: <u>Coastal Storms</u>	
S	
W	<u>Low Lying Coastal Areas</u>
Ob	<u>No Place To Drain</u>
Opps	

Hazard: <u>Flood</u>	
S	<u>Known Areas</u>
W	<u>Poor drainage in Urban Areas</u>
Ob	<u>Old Infrastructure</u>
Opps	

Hazard:	
S	
W	
Ob	
Opps	

Hazard:	
S	
W	
Ob	
Opps	



Hudson County
2020 Hazard Mitigation Plan Update



Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: David Ricigliano

Department/Agency: No Bergen MUA

Jurisdiction: NO. Bergen / Guttenberg

Email: ~~FRISTMAN@NORTHBERGEN.NJ.GOV~~

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: <u>Coastal Storms</u>	
S	
W	<u>Low Lying Area</u>
Ob	<u>No Place To drain</u>
Opps	

Hazard: <u>Flood</u>	
S	<u>Known Areas</u>
W	<u>Poor drainage</u>
Ob	<u>Limited access To Treatment Facility</u>
Opps	

Hazard:	
S	
W	
Ob	
Opps	

Hazard:	
S	
W	
Ob	
Opps	



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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: JUSTIN MACK
 Department/Agency: OEM
 Jurisdiction: GUTTENBERG
 Email: ~~MR JUSTIN MACK~~ JMACK@myGUTTENBERG

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: <u>Severe storm</u>	
S	<u>MONITOR STORM</u>
W	<u>More Generators</u>
Ob	<u>need more personal</u>
Opps	<u>Apply For grants</u>

Hazard: <u>Winter storm</u>	
S	<u>MONITOR STORM DPW</u>
W	<u>Densely populated</u>
Ob	<u>Hills / Geograph</u>
Opps	<u>changing street texture</u>

Hazard:	
S	
W	
Ob	
Opps	

Hazard:	
S	
W	
Ob	
Opps	



Hudson County
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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Brian Messler

Department/Agency: Jersey City Municipal Utilities Authority

Jurisdiction: Jersey City

Email: b.messler@JCMUA.com

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: <u>Severe Storm</u>	
S	<u>Flood hardening of Pump Stations</u>
W	<u>Age of Drainage System,</u>
Ob	<u>Tide gates at out falls / Tides</u>
Opps	<u>DEP funding / Approval for Correction Projects</u>

Hazard: <u>Coastal Storm</u>	
S	<u>Tide gate at out falls Pump Station</u>
W	<u>Combined Sewer capacity</u>
Ob	<u>Funding to upgrade Drainage / sewer System</u>
Opps	

Hazard: <u>Flood</u>	
S	<u>Pump Stations</u>
W	<u>Age of Drainage System</u>
Ob	<u>Time to upgrade System</u>
Opps	<u>Design projects for Sewer operation</u>

Hazard:	
S	
W	
Ob	
Opps	



Hudson County
2020 Hazard Mitigation Plan Update



Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Daryl Krasnuk
 Department/Agency: HC Planning
 Jurisdiction: County
 Email: d.krasnuk@hcnj.us

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: Coastal Storm	
S	First responders
W	Inability to evacuate, vulnerable structures
Ob	Infrastructure challenges, cost of land
Opps	Raising new structures large scale projects to prevent flooding

Hazard: Sea level rise	
S	Planning for possible mitigation
W	No real plan, or funding
Ob	Cost
Opps	Protecting meadowlands

Hazard: Severe Storm	
S	First responders and equipment
W	Old/weak structures
Ob	Refractory windows/weak roofs
Opps	Increase building standards

Hazard: Winter Storm	
S	Equipment + people
W	Forecasting
Ob	When storms hit at rush hour
Opps	Implement rules to keep people off road - close bus lanes



Hudson County
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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Mario Borden

Department/Agency: DEPT. OF Public Safety / DEM

Jurisdiction: City of Union City

Email: UCNTOEM@UCNJ.COM

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: <u>Severe Storm</u>	
S	<u>Severe storm</u> winter weather Post-storm
W	Cost <u>Cost - clean-up</u>
Ob	Cost <u>Cost - clean-up</u>
Opps	

Hazard: <u>Winter Storm</u>	
S	
W	<u>Cost - clean-up</u>
Ob	<u>Cost - clean-up</u>
Opps	

Hazard:	
S	
W	
Ob	
Opps	

Hazard:	
S	
W	
Ob	
Opps	



Hudson County
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Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Gregg F. Paster

Department/Agency: Kearny MVA

Jurisdiction: _____

Email: gpaster@pasteresq.com

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: Severe Storm	
S	Backup power generation in place; recent system improvements have increased capacity
W	Flash flooding Inability to process stormwater
Ob	Size of agency; ability to apply for major grant funding
Opps	Possibly apply for major grant funding w/ other similarly situated agencies

Hazard: Flood	
S	All similar/same as Severe Storm
W	
Ob	
Opps	

Hazard: Coastal Storm	
S	Same as Severe storm
W	Processing plant situated at confluence of Hackensack + Passaic Rivers - high flood risk/low elevation
Ob	No alternative location
Opps	Improve plant/facility infrastructure to reduce vulnerability

Hazard: Winter Storm	
S	Have snow removal equipment on hand Installing satisfied this year
W	US Hwy runs through jurisdiction Isolated from rest of town (high traffic)
Ob	Lack of manpower
Opps	Interlocal cooperation w/ other agencies



**Hudson County
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Strengths, Weaknesses, Obstacles and Opportunities Worksheet *Kearney MUA - Page 2*

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: Drought	
S	Low impact risk; only reduces flow passed on to PUSC
W	No significant weakness
Ob	None noted
Opps	

Hazard: Earthquake	
S	Not in quake prone zone No residential properties
W	Aging infrastructure is vulnerable to a severe quake.
Ob	Low cost benefit ratio to abate potential downside risk
Opps	Reinforce infrastructure with efficient, low cost projects

Hazard: Wildfire	
S	High % of wetlands/marsh Low vulnerability
W	Isolated from primary fire fighting capability
Ob	Location makes response to major fire difficult
Opps	Cooperation of other agencies

Hazard:	
S	
W	
Ob	
Opps	



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2020 Hazard Mitigation Plan Update



Strengths, Weaknesses, Obstacles and Opportunities Worksheet

Name: Peter Nevins

Department/Agency: Hudson County OEM

Jurisdiction: Hudson County

Email: pnevins@HCCNJ.US

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard: <u>flooding</u>	
S	<u>ability to re-route closed roads that are flooded</u>
W	<u>poor drainage in rain deluges, overcomes system.</u>
Ob	<u>Improvements to water drainage systems, water treatment plants.</u>
Opps	<u>urban setting, density in buildings & populations.</u>

Hazard: <u>Drought</u>	
S	<u>ability to impose water restrictions through govt. order, enforcement of above</u>
W	<u>consumption increasing with additional development.</u>
Ob	<u>other than non-compliance with ^{enforce} restrictions</u>
Opps	<u>public outreach</u>

Hazard: <u>Earthquake</u>	
S	<u>strict building code requirements & inspections</u>
W	<u>older building in some areas</u>
Ob	<u>n/a</u>
Opps	<u>new buildings in many areas with stricter building codes</u>

Hazard: <u>Extreme Temperature</u>	
S	<u>public warming & cooling centers, public outreach</u>
W	<u>n/a</u>
Ob	<u>n/a</u>
Opps	<u>ability to watch over special need populations i.e. senior citizens.</u>



Hudson County
2020 Hazard Mitigation Plan Update



Strengths, Weaknesses, Obstacles and Opportunities Worksheet - Hudson County p2

Please identify the hazard of concern and list any Strengths, Weaknesses, Obstacles, or Opportunities regarding County and/or municipal capabilities to mitigating hazard impacts.

Hazard:	Severe storm event
S	advanced forecasting public notice assets to mitigate to a point
W	urban environments assets spread thin
Ob	Limited drainage capabilities fast-changing weather
Opps	Improve water/treatment facilities

Hazard:	Dam & Levee Failure
S	few areas within county
W	n/a
Ob	↓
Opps	↓

Hazard:	wildfire
S	Professional Fire Dept. in most towns within county/water tender tank fire
W	remote locations may delay response
Ob	same as above
Opps	Fire prevention efforts in those areas

Hazard:	
S	
W	
Ob	
Opps	



APPENDIX C. MEETING DOCUMENTATION

Appendix C includes meeting agendas, sign-in sheets and meeting notes (where applicable and available) for meetings convened during the development of the Hudson County HMP update.





HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
Pre-Project Meeting with County – Agenda
March 19, 2019



- Introductions
 - Brief review of our approved proposal - CRS
- Current Grant Period of Performance - March 15, 2016 through August 30, 2019
 - Extension Request – one year until August 30, 2020 (sent to NJOEM?)
 - Current Plan expiration – May 19, 2020
- Project Schedule
- Municipal Participation – Letters of Intent to Participate
 - Email to all municipal coordinators (Cover Letter and LOIP template)
 - Informational meeting on March 22 for all Municipal Coordinators
- Steering Committee Makeup
 - See 2015 Steering Committee
 - Names, Titles, Email Addresses, Phone Numbers
- Information and Data Collection
 - GIS Point of Contact for Critical Facilities
 - Point of Contact for reviewing Public Information (brochure/surveys/announcements)
- Meeting Logistics
 - Municipal Kick-Off, Open to Public – (mid-April)
 - Date and Location – large venue as public is invited
 - Diversity Marketing & Communications
 - Municipal Annex Workshops – (two days with AM/PM sessions in early/mid-June)
 - FEMA/NJOEM Mitigation Strategy Workshop (early July)
- Public and Stakeholder Outreach – Diversity Marketing & Communications
 - Most frequently spoken languages: English, Spanish, Chinese, Hindi
- In-Kind Tracking
 - County can begin tracking all time with the development of RFP, reviews, meetings, this call etc.





Hudson County
2020 Hazard Mitigation Plan Update
Meeting Notes



Purpose of Meeting:	Pre-Project Kickoff Meeting
Location of Meeting:	Conference Call
Date of Meeting:	March 20, 2019

Attendees:
 Hudson County (HC): Jim Woods, Peter Nevins, Daryl Krasnuk
 Tetra Tech (Tt): Paul Miller, Alison Miskiman

Agenda Summary:

Item No.	Description	Action item(s):
1	Introductions <ul style="list-style-type: none"> George Johns (Hudson County) will be a representative for the County Project Management Team 	
2	CRS – Given the timeframe, the County does not think this is a feasible approach	
3	Current Grant Period of Performance - March 15, 2016 through August 30, 2019 <ul style="list-style-type: none"> Extension Request – one year until August 30, 2020 (sent to NJOEM?) <ul style="list-style-type: none"> Extension will be submitted May; 60 days prior to POP ending Awarded the grant 18-20 months into the POP Extension letter template to HC, send to NJOEM to end of April; extend POP to August 2020 	
4	Current Plan expiration – May 19, 2020 <ul style="list-style-type: none"> NJOEM to send extension request 90 days prior 	
5	Project Schedule – Schedule was reviewed. New items since the last plan to be aware of: <ul style="list-style-type: none"> Rebuild by design – Hoboken Waterfront development increased since last plan Stevens Institute – sit on the Committee 	
6	Municipal Participation – Letters of Intent to Participate (LOIP) <ul style="list-style-type: none"> Email to all municipal coordinators (Cover Letter and LOIP template) Informational meeting on March 22 for all Municipal Coordinators To be sent out to municipalities and MUAs 	HC: <ul style="list-style-type: none"> Send out LOIP letters via email and cc' Tt to all municipalities and MUAs
7	Steering Committee (SC) Makeup <ul style="list-style-type: none"> See 2015 Steering Committee Names, Titles, Email Addresses, Phone Numbers Other Stakeholders? <ul style="list-style-type: none"> Jim to ask County Administrator for input on SC Tt to send invitation letter to SC and requirements NJSEA – stakeholder to be involved 	Tt: Send county a steering committee invitation letter to distribute HC: <ul style="list-style-type: none"> Speak to the County Administrator on steering committee composition.



Hudson County
2020 Hazard Mitigation Plan Update
Meeting Notes



	<ul style="list-style-type: none"> ○ Hoboken municipal representative on SC (Steve Marks – in Planning Division) 	<ul style="list-style-type: none"> ● Send Tt contact information for SC
8	<p>Information and Data Collection</p> <ul style="list-style-type: none"> ● GIS Point of Contact for Critical Facilities – <ul style="list-style-type: none"> ○ Daryl is POC for GIS; ○ FEMA and USACE – no final tiered evacuation zone maps not finished; ○ Daryl to send email to NJDOT/FEMA to get approval on letterhead; ● Point of Contact for reviewing Public Information (brochure/surveys/announcements) <ul style="list-style-type: none"> ○ OEM has Twitter and FB; ○ County PIO required to go through for public outreach ○ Tt needs to work through PIO for public outreach – to be facilitated by the County 	<p>HC: To contact FEMA/USACE regarding tiered evacuation study and use for the HMP</p> <p>Tt: Send Daryl the GIS data list we have and follow-up on more current spatial data</p>
9	<p>Meeting Logistics</p> <ul style="list-style-type: none"> ● First Steering Committee Meeting – mid-April (needs to be before Municipal KO) <ul style="list-style-type: none"> ○ EOC or Jersey City office ● Municipal Kick-Off, Open to Public – (mid/late-April) <ul style="list-style-type: none"> ○ Date and Location – large venue as public is invited <ul style="list-style-type: none"> ▪ EOC can hold 100 people – has parking; room next store (30 people) and project presentation if needed ▪ Community College is an option – 2 blocks in square but no parking ▪ Daytime meeting ● Municipal Annex Workshops – (two days with AM/PM sessions in early/mid-June) <ul style="list-style-type: none"> ○ To be held at EOC ● FEMA/NJOEM Mitigation Strategy Workshop (early July) – To be held EOC 	<p>HC: To send potential dates to Tt regarding April SC and municipal kickoff meetings</p>
10	<p>Public and Stakeholder Outreach – Diversity Marketing & Communications</p> <ul style="list-style-type: none"> ● Most frequently spoken languages: English, Spanish, Chinese, Hindi – this is based on ACS 2017 statistics; County approves to use this data; Arabic is growing in Hudson County 	
11	<p>In-Kind Tracking</p> <ul style="list-style-type: none"> ● County can begin tracking all time with the development of RFP, reviews, meetings, this call etc. ● \$24.69/hour volunteer rate ● Yes can include fringe, document ● Track through the entire process and project completion 	<p>HC: To send to contact to utilize</p> <p>Tt: To help populate with meeting attendance</p>

The Quarterly Municipal OEM Coordinators Meeting is scheduled for Tomorrow, **March 22, 2019 10:00am.**

Date: March 22, 2019

Time: 10:00am

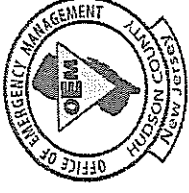
Location: Hudson County EOC @ U.S.S. Juneau Memorial Building (110 South Hackensack Ave. Kearny, NJ)

IMPORTANT! Briefing from contractor Tetra-Tech on the Multi-jurisdictional all hazards mitigation plan update. It is extremely important that each municipality participate in this plan update to be eligible for pre-disaster and post-disaster grant funding/reimbursement.

Stay Safe,

*Jim Woods, Coordinator
Hudson County
Office of Emergency Management
830 Bergen Ave. Bldg C-2
Jersey City, N.J. 07306
201-369-5200
201-832-5615 (Mobile)
201-369-5203 (Fax)*

“A good plan executed right now is far better than a perfect plan executed next week”... George S. Patton



Hudson County OEM

Meeting Title: Quarterly OEM Coordinator's/LEPC

DATE: 3/22/19

NAME	AGENCY	EMAIL	PHONE #
PICHL DEAFUJUE	GUTTENBERG OEM	RIDEAUFUJUE@MYGUTTENBERG.NJ.GOV	516-286-2244
DARCI KRASNUK	Hudson County Planning	dkrasnuk@hcnj.nj.us	908-892-9177
Lance Visone	NJOEM	Lpp6766@GW.NJSP.ORG	609-218-0865
Chris Ceszalek	NJOEM	Lpp6988@GW.NJSP.ORG	609-60-9132
Lewis Cannao	WNY OEM	Lcannao@westport.ny.gov	201-993-2795
DAUC MILLER	TETRA TECH.	PAC.MILLER@TETRA TECH.COM	973-630-8347
JUNIOR FERRANTE	BAYONNE OEM	eferrante@bayonnetech.org	201-522-7463
Alejandra Palanco	NJOEM	Lpp7524@GW.NJSP.ORG	609-610-9373
George Johns	HC OEM	gjohns@hcnj.us	201-369-5200
MINH NAO	NJOEM	LPP6921@GW.NJSP.ORG	609-610-9317
Gene RUBINO	Hudson Co. Paramedics	GRUBINO@HCPD.ORG	201-988-5022
Christina Butreb-Bianco	Hudson Regional Health	cbutreb@hudsonregionalhealth.org	201-2231137
Tom RICHARDS	ARCHC	jrichards@hudsonregionalhealth.org	(201) 223-1137
Mario Gorden	Union City OEM	MGorden@Emic.com	201-240-9824
Alyssa Gordonik	HLHC	aberdnik@hudsonregionalhealth.org	201-223-1133
Sim Woods	HC OEM	jwoods@hcnj.us	201-369-5200
PETE BURN	HEANM OEM	pburn@heanmnyd.org	908-508-8800
Dave Licigliano	Ab Bergen OEM	Dave.Licigliano@Abt Bergen.org	201-937-7025
JUSTIN MAEK	GUTTENBERG OEM	MRJUSTINMAEK@GMAIL	917-750-5794
ROB DALY	JENSEY CITY OEM	RDALY@NJITTCPS.ORG	201-577-2348



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
Steering Committee Kickoff Meeting – Agenda
April 18, 2019



- Introductions
- Project Schedule
- Steering Committee Role and Responsibilities
- Progress to Date
 - Critical Facilities and Lifelines
 - *Critical facilities and infrastructure provide services and functions essential to a community, especially during and after a disaster.*
 - *A lifeline, a type of critical facility, enables the continuous operation of government functions and critical business and is essential to human health and safety or economic security.*
 - Exchange of GIS data initiated with County
 - Email to all municipalities and municipal utility authorities requesting return of Letter of Intent to Participate – see status update
 - Informational meeting was held on March 22 for all Municipal Coordinators
- Review Natural Hazards of Concern
- Review Mission Statement, Goals and Objectives
- Public and Stakeholder Outreach – Diversity Marketing & Communications
 - Most frequently spoken languages: English, Spanish, Chinese, Hindi
 - County website
 - Newsletter
 - Press release
 - Social media content
 - Citizen survey – for Steering Committee review
- In-Kind Tracking
- Next Steps
 - Attend Municipal Kick-Off, Open to Public - information to follow





Hudson County
2020 Hazard Mitigation Plan Update
Meeting Notes



Purpose of Meeting:	Steering Committee Kickoff Meeting
Location of Meeting:	Hudson County OEM
Date of Meeting:	April 19, 2019

Attendees:

Hudson County (HC) OEM: Jim Woods, Peter Nevins, George Johns	City of Hoboken: Caleb Stratton
HC Regional Health: Angela DeQuina	Tetra Tech (Tt): Paul Miller, Alison Miskiman
HC Planning Department: Kevin Force	

Agenda Summary:

Item No.	Description	Action item(s):
1	Introductions	
2	<p>Project Schedule</p> <p>Current Grant Period of Performance - March 15, 2016 through August 30, 2019</p> <ul style="list-style-type: none"> • Extension Request – one year until August 30, 2020 <ul style="list-style-type: none"> ○ Extension will be submitted May; 60 days prior to POP ending ○ Awarded the grant 18-20 months into the POP ○ Extension letter template to HC, send to NJOEM to end of April; extend POP to August 2020 ○ Current HMP expiration May 19, 2020 	<p>Tt:</p> <ul style="list-style-type: none"> • Provide HC OEM a template letter for grant extension request <p><i>Completed</i></p>
3	<p>Progress to Date</p> <ul style="list-style-type: none"> • Critical Facilities and Lifelines <ul style="list-style-type: none"> ○ Definition agreed to: <i>Critical facilities and infrastructure provide services and functions essential to a community, especially during and after a disaster.</i> ○ Definition agreed to: <i>A lifeline, a type of critical facility, enables the continuous operation of government functions and critical business and is essential to human health and safety or economic security.</i> ○ Exchange of GIS data initiated with County • Email to all municipalities and municipal utility authorities requesting return of Letter of Intent to Participate <ul style="list-style-type: none"> ○ Only waiting for Weehawken in terms of municipalities ○ Need LOIPs from MUAs • Informational meeting was held on March 22 for all Municipal Coordinators 	<p>HC OEM:</p> <ul style="list-style-type: none"> • Determine if there is a current dataset of ‘lifelines’ in the County to use <p>Hoboken:</p> <ul style="list-style-type: none"> • To provide Tt methodology for tiered-system used to identify critical facilities/lifelines (Tier 1: emergency services; Tier 2: shelter/support; Tier 3: senior high-rise housing; Tier 4: public housing. <p>Planning:</p> <ul style="list-style-type: none"> • To send over any additional new development. • Facilitate obtaining new development from the municipalities
4	<p>Review of Natural Hazards of Concern – refer to updated worksheet</p> <ul style="list-style-type: none"> • Include Sea Level Rise in Coastal Erosion hazard name; now 	<p>HC OEM:</p> <ul style="list-style-type: none"> • Provide Tt information the dam



Hudson County
2020 Hazard Mitigation Plan Update
Meeting Notes



	<p>Coastal Erosion and Sea Level Rise to align with the draft State HMP</p> <ul style="list-style-type: none"> • Add Dam and Levee Failure as separate hazard to align with the State. Hoboken is currently building a levee; there is one dam that is holding back a reservoir in Weehawken that Jim Woods has knowledge of and information from the State • Caleb indicated that PSE&G has conducted substation flood upgrades and there are those that still need this. Information is public. • Infrastructure failure – it was discussed that infrastructure failure has occurred in the county as a result of hazard events (e.g., retaining wall failure; weakened piers). This will be acknowledged in the plan. 	<p>discussed</p> <ul style="list-style-type: none"> • Provide Tt information regarding FEMA funding for natural gas shelter generator(s) <p>Hoboken:</p> <ul style="list-style-type: none"> • Caleb to provide information regarding levee under development • Caleb to provide identified urban flooding areas available in Hoboken and downtown Jersey City <p>Tt:</p> <ul style="list-style-type: none"> • Obtain PSE&G substation flood upgrades accomplished and those still needed
5	<p>Review Mission Statement, Goals and Objectives – refer to worksheet for changes discussed</p>	<p>Tt: To send Steering Committee revisions made, suggestions for a few new objectives. Objectives to be finalized over email in the next two weeks. <i>Completed</i></p>
6	<p>Public and Stakeholder Outreach – Diversity Marketing & Communications</p> <ul style="list-style-type: none"> • Most frequently spoken languages: English, Spanish, Chinese, Hindi • County website • Newsletter • Press release • Social media content • Citizen survey – for Steering Committee review 	<p>Tt:</p> <ul style="list-style-type: none"> • Send Jim Woods materials for PIO review. This to include website language that needs updating to include the survey link. <p><i>Completed</i></p>
7	<p>In-Kind Tracking discussed in terms of tracking time on this project.</p>	<p>Tt: To populate in-kind tracker with meeting attendance.</p>
8	<p>Next Steps – schedule the plan participant kickoff meeting; will be open to the public; Steering Committee should attend</p>	



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET
TOPIC: Steering Committee Meeting Kickoff
MEETING DATE: April 18, 2019**



Name	Title	Agency/Municipality	Phone Number	Email
Jim Woods	OEM coord.	Hudson OEM	201-369-5200	jwoods@hcnj.us
Peter Newins	OEM Planner	Hudson OEM	201-369-5200	pnewins@hcnj.us
George Johns	Deputy Coordinator Chief Resilience Officer	Hudson OEM	201-369-5200	gjohns@hcnj.us
Carey Smarton		Horseneck	201-744-1602	csmarton@hobokennj.gov
Angela DeQuina	Deputy Director	Hudson Regional Health	201-223-1133	adequina@hudson regionalhealth.org
Kevin Force	Principal Planner	Hudson County Planning	201-247-5137 ext. 4450	kforce@hcnj.us



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET**
TOPIC: Town of Harrison Jurisdictional Annex Meeting
MEETING DATE: June 25, 2019



Name	Title	Agency/Municipality	Phone Number	E-mail
HAROLD STAHL	FIRE DIRECTOR/OEM	HARRISON	973-204-2178	HSTAHL@TownofHarrison.com
Rocco Russumanno	Const off/Town Eng	HARRISON	973-268-2446	rrussumanno@townofharrison.com
Gabriela Das Santos	CEO / TOH	HARRISON	973-268-2433	gsimoes@townofharrison.com
Robert Van Riper	DPW / TOH	HARRISON	973-647-0993	RVanRiper@TownofHarrison.com
Jean Woods	ADMINISTRATOR'S OFFICE SHELTER OEM	HARRISON	973-268-2444	jwoods@townofharrison.com
Elena Gable	Planner	Hylr Gruel + Associates	732-741-2900	egable@hgrpa.com



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
Plan Participant Kickoff Meeting – Agenda
May 29, 2019



-
- Introductions
 - Updating the Mitigation Plan – Why?
 - Planning Process
 - Participation
 - Schedule
 - Action Items



Hudson County
2020 Hazard Mitigation Plan Update
Meeting Notes



Purpose of Meeting:	Municipal and Municipal Utility Authority Kickoff Meeting (Hudson Co. HMP)
Location of Meeting:	U.S.S. Juneau Memorial Center, Hudson Co OEM, 110 South Hackensack Ave, Kearny NJ, 07032
Date of Meeting:	May 29 th , 2019, 10:30 AM.

Attendees:
See sign-in sheet

Agenda Summary:

Item No.	Description	Action item(s):
1	State Highway that runs through Jersey City routinely floods in storms and routine rain events.	Talk offline to Jersey City/Jersey City MUA to discuss path forward regarding State Highway flooding and identify this as an action in their Annex.
2	State Highway in North Bergen routinely floods in storms and routine rain events.	Follow up with North Bergen/North Bergen MUA to ensure they have contact with NJDOT and identify this as an action in their Annex.
3	North Bergen is considering the construction and installation Tide Gates/Flood Gates around Bellman’s Creek.	Follow up with North Bergen/North Bergen MUA to ensure they identify this as an action in their Annex.
4		
5		
6		
7		
8		



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET
TOPIC: Plan Participant Kickoff
MEETING DATE: May 29, 2019



Name	Title	Agency/Municipality Representing	Phone Number	Email
JUSTIN MAEK	OEM Deputy Chief	GUTTAUBERG	917-750-5194	MR.JUSTIN.MAEK@GMAEK.COM
Jim Woods	Hudson OEM	Coordinator	201-369-5200	jwoods@hcnj.us
Alec Nevins	Hudson OEM	Partner	201-726-9139	anevins@hcnj.us
Lewis Cannao	WNY OEM	COORDINATOR	201-993-2795	lcannao@westnewjersey.org
Sean O'Connors	Hudson MTS	County	201-795-6066	Sconnor@hcnj.us
STEVE HUDOCK	Safety Mgr	NHTSA	201-795-1411	STEVE.HUDOCK@JACOBS.COM
FRANK PESTANA	EXECUTIVE DIRECTOR	NORTH BERGEN M.A	201-922-0100	FRANK.PESTANA@NBCA.NJ.GOV
BERNARD MIRANDI	North Bergen Eng.	North Bergen	201-641-0770	bmirandi@boswell-engineering.com
Vahane Costanian	North Bergen Est. Mgr	North Bergen	.	Vcostanian@boswell-engineering.com
MICHAEL GUERRA	HCSA	HC	201-324-6222	michaelg@hera.org
Amina Ghannad	Hudson County Imp. Plan	Hudson County	201-324-6222	aminag@hcnj.org
Dave Kicicliano	No. Bergen OFEM	No. Bergen Twp.	201-937-7023	Dkicliano@NJB.org
Giovanni Ahmadi	Ward Manager	Wreckhulm	201-377-8334	gahmad@TOWN-OF-WRECKHULM.NJ.GOV



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
 SIGN-IN SHEET
 TOPIC: Plan Participant Kickoff
 MEETING DATE: May 29, 2019



Name	Title	Agency/Municipality	Phone Number	E-mail
Brian Messler	Staff Engineer	JEMUA	201-832-1150	b.messler@JEMUA.nj.gov
Rich Wytka	Engineer	Jenun	(201) 432-1150	R.Wytka@Jenun.nj.gov
Tony Chiriac	Const. Official	Town of King	(201) 955-7882	TCHIRIAC@king.nj.gov
Carlos Fuentes	Engineer	Union City	(973) 348-3110	cfuentes@maser.com
ANN HOLTZMAN	ZONING/FPM	HOBOKEN	201-424-6667	AHOLTZMAN@HOBOKEN.NJ.GOV.
Angela DeQuina	Deputy Director	HRHC	201 220 1133	adquina@hudsonregionhealth.org
Vincent Massano	Coord. of Em	Secaucus	201 830-5288	VMASSANO@Secaucus.nj.gov
RALPH SAX	DEP. DIRECTOR	Hudson	349-2777	rsax@hcnj.us
Alyssa Bernick	Planner	HEHC	201-223-1133	abernick@hudsonregionhealth.org
JEFFREY FULCHIA	DET. DIRECTOR	WENONKAH PLS	701-273-4556	JFULCHIA@POLICE.WENONKAH.NJ.GOV
Daryl Krasnik	GIS Coordinator	Hudson County	201-217-5139	dkrasnik@hcnj.us
FRANCISCA BARRALONA	Division Chief	Hudson C. Planning	EX 4443	fgioverdatand@hcnj.us
Glen Baumeyer	ENGINEER	SARUA	201-635-9401	Gbaumeyer@BREMONTENGINEERING.COM



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET
TOPIC: Plan Participant Kickoff
MEETING DATE: May 29, 2019**



Name	Title	Agency/Municipality	Phone Number	E-mail
Rocco Russo	ENGINEER	HARRISON	973-268-2148	rrusso@townofharrison.com
Gregg Pester	General Counsel	Kearny MUA	201-489-0078	gpester@pastersj.com
Rob Daly	DEPUTY CHIEF	JERSEY CITY FIRE/COM	201-577-2348	RDALY@NJCS.PS.ORG
Tom McEvans	ENGINEER	HUDSON COUNTY	201-369-4740	THOMAS@HCO.NJ.GOV
Suzanne Mack	Planner	Bayonne	201-858-6138	boym.planned@gmail.com
David Drucker	Dep County Admin	Hudson County	201-795-5100	ddrucker@hco.nj.us



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET
TOPIC: Weehawken Jurisdictional Annex Meeting
MEETING DATE: June 27, 2019**



Name	Title	Agency/Municipality	Phone Number	Email
Chris Huch	Planner	Tetra Tech	973-630-8357	Chris.huch@tetratech.com
Giovanni D. Ahmad	Manager	Town of Weehawken	201-377-8314	gahmad@tow-nj.net



**HUDSON COUNTY HAZARD MITIGATION PLAN – 2020 UPDATE
SIGN-IN SHEET
TOPIC: City of Bayonne Jurisdictional Annex Meeting
MEETING DATE: June 20, 2019**



Name	Title	Agency/Municipality	Phone Number	Email
Chris Huch	Planner	Tetra Tech	973-630-8357	Chris.huch@tetratech.com
Robert Russo	Engineering	Bayonne	732-727-8000	rrusso@cmeusa1.com
Junior Ferrante	OEM Coordinator	Bayonne Office of Emergency Management	201-522-7463	eferrante@bayonnefire.org
Suzanne Mackl	Planner	Planning	201-858-6138	bayonneplanner@gmail.com
Marcella Traina	Intern	Planning	201-344-2024	Trainamarcella1@gmail.com
Gary chmielewski	Mgmt. spec	bayonne	201-858-6115	publicworks@baynj.org
Keith Weaver	Fire Chief	Bayonne FD	201-858-6008	chiefweaver@bayonnefire.org
Thomas Cotter	DPW Director	Bayonne	1.201.858.6070	tcotter@baynj.org



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
 SIGN-IN SHEET
 TOPIC: Jurisdictional Annex Meeting - City of Hoboken
 MEETING DATE: June 26, 2019 at 3:00pm**



Name	Title	Agency/Municipality	Phone Number	Email
Charles Stratton	Chief Resilience Officer	Hoboken	201-744-9602	cstratton@hobokennj.gov



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET
TOPIC: Jurisdictional Annex Meeting - Town of Secaucus
MEETING DATE: June 26, 2019 at 1:00pm**



Name	Title	Agency/Municipality	Phone Number	Email
Jennifer Modi	TOWN ENG	Secaucus	201-617-5913	Jmodi@secaucus.net
Gary Jeffers	Town Admin	Secaucus	201-330-2008	gjeffers@secaucus.net
Dennis Miller	Captain	Secaucus PD	201-330-2045	dmiller@secaucus.net
KEVIN O'CONNOR	SUPERINTENDENT	SECAUCUS DPW	201-330-2080	KOCONNOR@SECAUCUS.NET
Carl Leppin III	Fire Chief and Construction Official	Secaucus	201-330-2027	cleppin@secaucus.net
Zografos Ballos	Zoning Official / CHAIR	Secaucus	201-330-2027	fballos@secaucus.net
KEVIN FLAHERTY	SPD	SECAUCUS	201-330-2003	KFlaherty@SECAUCUS.NET
VINCENT MASSARO	Sec. of Em. Coord.	Secaucus	201-832-5288	VMASSARO@SECAUCUS.NET



**HUDSON COUNTY HAZARD MITIGATION PLAN – 2020 UPDATE
SIGN-IN SHEET
TOPIC: Union City Jurisdictional Annex Meeting
MEETING DATE: June 27, 2019**



Name	Title	Agency/Municipality	Phone Number	Email
Chris Huch	Planner	Tetra Tech	973-630-8357	Chris.huch@tetrattech.com
Mario Bordon	OEM Director	Union City OEM	2012409521	ucnjoem@ucnj.com
Susan Colditz	Finance/OEM	Union City OEM	201-348-5846	scolditz@ucnj.com
Martin T. Martinetti	Construction Code Official	UC Build. Dept.	201-348-5712	ldiaz@ucnj.com

2020 Hazard Mitigation Plan Update

Heather Apgar - Tetra Tech KPD HEADQUARTERS

June 27, 2019 @ 1400

NO.	NAME	DEPARTMENT	EMAIL	PHONE
01	PETE BURN	KPD	pburn@karyjtd.org	Jul. 988-8800
02	George King	KPD N.E.A.	gking@karyjtd.org	201-998-1313
03	David Silva	ENG.	dsilva@negiaengineering.com	201-939-8805
05	Donald Gavin	DPUS	DGAVID@KARROY NJ.ORG	201-726-2767
06	Gregg Paster	KEARNY MUA	gpaster@pastereng.com	201 489 0078
07				
08				
09				
10				
11				
12				
13				
14				



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET
TOPIC: Jurisdictional Annex Meeting - Township of North Bergen
MEETING DATE: June 27, 2019 at 11:30am



Name	Title	Agency/Municipality	Phone Number	Email
BERNARD MIRANDA	Town Engineer	North Bergen	201- 345 ⁵⁴¹ -0770	bmirandi@beswell-engineering.com
Dave RicciLiano	OFM Coordinator	No. Bergen	201 937-7023	PRICILIANO@NORTHBERGEN.ORG
FRANK PESTANA	EXECUTIVE DIRECTOR	NB MUA	201-422-0100	FP@NB.MUA.ORG



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET
TOPIC: City of Jersey City - Jurisdictional Annex Meeting
MEETING DATE: July 10, 2019 @ 11am**



Name	Title	Agency/Municipality	Phone Number	Email
Ray Meyers	CO	SCBID	351256 2530	Rayme@scbtd.com
W'Gregory Kierce	DIR ODEM HS	JCOEMHS	201547-5684	WKIERCE@NJDEP.SOE

Sign-In Sheet

FEMA Region II - Risk MAP Project
 Coastal Restudy Meeting - Essex & Hudson Counties
 September 23, 2019



FEMA

Name	Affiliation: Community or Organization	Phone	Email
Dorian Herrell	Newark OEM	201-259-6831	herrelldec@Newark.nj.us
Kevin O'Sullivan	N. Caldwell	201-306-3551	kosullivan@northcaldwell.org
Caroly Lombardi	Essex County DHEG	973 655 0200	clombardi@essexhcd.com
Alison Miskuman	TetraTech	973-630-8045	alison.miskuman@tetratech.com
Giovanni Ahmadi	Wachauver - Hudson	201-317-6005	gahmadi@TOWNS.NET
ANN HOLTZMAN	HOBOKEN	201-420-2500 x 3100	AHOLTZMAN@HOBOKENJ.GOV
Bob Smith	Kearny	856-889-2624	
BOB McLaughlin	WEST CALDWELL	973 226-2302	BMclaughlin@WestCaldwell.com
Jim Woods	DC OEM	201.869.5200	jwoods@henry.v.s

Sign-In Sheet

FEMA Region II - Risk MAP Project
 Coastal Restudy Meeting - Essex & Hudson Counties
 September 23, 2019



FEMA

Name	Affiliation: Community or Organization	Phone	Email
Peter Nevins	N.C.O.E.M.	201-369-5200	pnevins@hcnj.us
George Johns	HCOEM	201-369-5200	gjohns@hcnj.us
THOMAS SONG	FEMA	917-374-5475	THOMAS.SONG@FEMADHS.gov
JOSEPH RUGGERI	NJDEP	609 292 2296	Joseph.ruggeri@dep.nj.gov
BRIAN CAFFIELD	COMPASS	617-999-9068	caffieldb@compassnib.com
TREVOR CONE	RSC		TREVOR.CONE@STANTEC.COM
ROSEMARY BOLICH	STARP-II	646-490-3848	ROSEMARY.BOLICH@STANTEC.COM
SALVATORE FERRARO	Nutley	973-284-4958	sferraro@nutleynj.org
Jennifer Modi	Siccaucus	201-615-0532	Jmodi@siccaucusnj.org
T. HERITS	RENEWALB	732-261-7934	therits@renewalconsulting.com
RAYMEYER	RENSY CITY	851-256-2520	RAYMEYER@RENSY.CITY.NJ.GOV

Sign-In Sheet

FEMA Region II - Risk MAP Project
 Coastal Restudy Meeting - Essex & Hudson Counties
 September 23, 2019



FEMA

Name	Affiliation: Community or Organization	Phone	Email
Zografopoulos	Town of Secaucus	201-330-2027	fballas@secaucus.net
Carl Leppin	Town of Secaucus	201-330-2027	clleppin@secaucus.net
Francesca Giacalone	HC Planning	201-217-5137	fgiacalone@hcnj.us
Joseph Severini	Jersey City Bldg Dept	201-547-5020	josephs@jcnj.org
HAROLD STAHL	HARRISON	973-204-2178	HSTAHL@TownofHarrison.com
Valerie Costanzo	Hudson County - NB-Boswell Engin	937 416 4368	vcostania@boswellengineering.com
Mario Bordon	Union City	201-240-9524	MCNTOEM@UCNT-Com
W KIERSE	Jersey City OEHHS	201 517 51081	WKIERSE@NJDEPS.ORS
Suzanne Mack	Bayonne	201 858. 6138	bayonneplanner@baminc.com
Ash Tuman	Newark	973 733 8521	atuman@ci.newark.nj.us
Rocco Russo	HARRISON	973 268 2446	rrusso@mannoc.com townofharrison.com



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET
TOPIC: County Department Meeting
MEETING DATE: September 23, 2019**



Name	Title	Agency/Municipality	Phone Number	Email
George Johns	Deputy Coordinator	HC OEM	201-369-5200	gjohns@hcnj.us
Peter Newins	Deputy Coordinator	W.C. O.E.M.	201-726-9139	pnewins@hcnj.us
Francesca Giarelatano	Division Chief	HC Planning	201-217-5137	fgiarelatano@hcnj.us



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
Steering Committee Meeting – Agenda
October 4, 2019



Introductions

Project Status Update

Hazard Ranking Methodology

County Hazard Ranking

Strengths, Weaknesses, Obstacles and Opportunities Exercise

Public Outreach – Any County/Municipal events we can attend?

In-Kind Tracking

Next Steps

- October 18 – Risk Assessment Meeting (open to the public)
*Time: 10am; Location: U.S.S. Juneau Memorial Center, Hudson County OEM
Emergency Operations Center, 110 South Hackensack Avenue Kearny, NJ 07032*
 - Individual County Department meetings – To be scheduled
-

Name	Jurisdiction	Title	Attended Meeting
James Woods	Hudson County	County OEM Coordinator	X
George Johns	Hudson County	County Deputy OEM Coordinator	X
Peter Nevins	Hudson County	Emergency Management Planner	X
Nick Kormash	Hudson County	Critical Infrastructure H.C.P.O.	
Chin Micko	Hudson County	JTTF H.C.P.O.	
Kevin O'Reilly (Alt.)	Hudson County	Critical Infrastructure H.C.P.O.	
David Drumeler	Hudson County	County Deputy Administrator	
Sean O'Connor	Hudson County	County Communications	
Francesca Giarratana	Hudson County	County Planning Department	X
Daryl Krasnuk	Hudson County	GIS Specialist Div. of Planning	X
Thomas Malavasi	Hudson County	County Engineering	
Ralph Sax	Hudson County	Deputy Director Roads & P.P. Prop.	
Carrie Nawrocki (Alt)	Hudson County	Hudson Regional Health Commission	-
Angela DeQuina	Hudson County	Hudson Regional Health Commission	X
Alyssa Berdnik	Hudson County	Hudson Regional Health Commission	X
Norman Guerra	Hudson County	H.C. Improvement Authority	
Caleb Stratton	City of Hoboken	Resilience Officer	



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
Risk Assessment Meeting – Agenda
October 18, 2019



Welcome and Opening Remarks

Project Status – *Where we are in the process; Public outreach*

Risk Assessment Overview

Hazard Ranking

SWOO (Strengths, Weaknesses, Obstacles and Opportunities) *related to impact of Highly-Ranked Hazards of Concern*

Development of Problem Statements

In-Kind Tracking

Next Steps

- *2nd Annex Meetings to start updated mitigation strategy*
- *NJOEM Mitigation Strategy Workshop – To be scheduled in December*

General Discussion/Q & A

Wrap-up

Project Contact Information:

Alison Miskiman (Tetra Tech), 973-630-8045; alison.miskiman@tetrattech.com



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET**

TOPIC: Risk Assessment Meeting

DATE: October 18, 2019

** Hudson County may take pictures during the meeting and include in the public plan.*



Name	Municipality	Photo Release (Y/N)
Jim Woods	HC OEM	Y
George Johns	HC OEM	
W Corey Kiera	JC ODM HS	N
Eric Dostan	PSE+G	Y
JUSTIN MACK	Guttenberg OEM	N
Edwin Morales	Hudson County MIS	
Angela DeQuina	HRETC	Y
Peter Nevins	Hudson County OEM	Y
Brian Messler	Jersey city MUA	
Mario Bordon	Union City OEM	
Rob Daly	Jersey City	
Nassiel Fernandez	Guttenberg/WNY	N

Name	Municipality	Photo Release (Y/N)
Tony Chisari	Kearny	✓
Gregg Paster	Kearny MUA	Y
Vince Massano	Secaucus	
DAVE Kicigliano	No Bergen	Y
Philip Reeve	NHSA	Y
Steve Hydock	NHSA	Y
Dave Kicigliano	NB MUA	Y
Alyssa Berdnik	HREC	Y
Suzanne Mack	City of Bayonne	yes
Glenr Berman	JMUA	Y



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET**

TOPIC: Risk Assessment Meeting

DATE: October 18, 2019

** Hudson County may take pictures during the meeting and include in the public plan.*



Name	Municipality	Photo Release (Y/N)	Name	Municipality	Photo Release (Y/N)
Daryl Krosnyk	HC Planning	Y			



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
Mitigation Strategy Workshop – Agenda
January 9, 2020



Welcome and Opening Remarks

Project Status

Overview – Developing Mitigation Strategies

Breakout Working Groups to Develop Mitigation Strategies

- Review, Refine, Revise Problem Statements
- Consider Options
- Select Best Choice – write down the specific action selected
- Review Action Worksheet – complete as much as practical today
- Discuss Opportunities for Integrating mitigation into daily operations

Next Steps

- *Finalize Annexes – opportunity to stay after meeting to complete*
- *Final draft annexes due January 30 – send email confirmation ready to post*
- *Annex sign-off sheets due February 28*

Project Contact Information:

Alison Miskiman (Tetra Tech), 973-630-8045; alison.miskiman@tetrattech.com



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE

SIGN-IN SHEET

TOPIC: Mitigation Strategy Workshop

MEETING DATE: January 9, 2020 10am - 12pm

* Hudson County may take pictures during the meeting and include in the public plan.



Name	Title	Agency/ Municipality	Phone Number	Email	Photo Release (Y/N)*
HOWARD WOLF	Planner	NJOEM	609-575-0200	Howard.Wolf@nj.gov	Y
JUSTIN MAEK	Deputy Coordinator	Cuttlerburg OEM	917-750-5194	MJJustinMaek@6mail.com	N
Sim Woods	Coordinator	HC OEM	201-369-5200	jwoods@HCNJ.US	Y
George Johns	Deputy Coordinator	HC OEM	201-369-5200	gjohns@HCNJ.US	Y
Peter Nevins	" "	NCOEM	201-369-5200	P.Nevins@hcnj.us	Y
ERIC HOLLIDAY	OEM	NJ TOWN	609-321-4214	E.Holliday@NJTown.com	Y
Michael Sangiovanni	NJOEM HM	NJOEM	609-462-1547	lpsangm@gov.njsp.org	Y
Lance Vize	NJOEM Sgt	NJOEM	609-218-0865	Lpvize@nj.gov	Y
RICH DELAPUENTE	OEM COOR	GUTTENBERG	516-286-2245	RDELAPUENTE@GUTTENBERG.NJ.GOV	Y
Mario Gordon	OEM COOR	Union City	201-240-9524	MARIOG@UC.NJ.GOV	N
PETE BLAN	OEM COOR	HEARNY	201-726-2737	phlaire.fury@nj.gov	Y
CHUCK	NJOEM	NJOEM	609-508-6557	chuck@nj.gov	Y
JOSE SEILERD9	NJOEM Sergeant	NJSOP ↓ Liberty State Park	609-462-5389	Jose.Seiler@NJSP.com	Y



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET**



TOPIC: Mitigation Strategy Workshop

MEETING DATE: January 9, 2020 10am - 12pm

*** Hudson County may take pictures during the meeting and include in the public plan.**

Name	Title	Agency/ Municipality	Phone Number	Email	Photo Release (Y/N)*
Francesca Giaretana	Division Chief	ITC	201-275-137	f.giareta@hcnj.us	Y
Dave Ricisvich	GIS Coordinator	AC	"	dricisvich@hcnj.us	Y
Dave Ricigliano	OEM Coordinator	No. Bergen	201-937-7023	drigliano@hcnj.us	N
Bernard Mirandi	Town Engineer	No. Bergen	201-641-0770	bmirandi@hcnj.us	N
Rocco Russonaro	"	Harrison	973-268-2446	rrussonaro@hcnj.us	Y
William Bridges	WNY OEM	West New York	201-705-4972	wbridges@westny.org	Y
Anthony M. Pateo	OEM	EAST NEWARK	201-226-9260	apateo@eastnewark.org	Y
Philip Reeve	Asst Proj Director	NHSA	201-206-5061	philip.reeve@jacobs.com	Y
Steve Hudock	CGM	NHSA	201-454-7458	steve.hudock@jacobs.com	Y



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET**

TOPIC: Mitigation Strategy Workshop

MEETING DATE: January 9, 2020 10am-12pm

* Hudson County may take pictures during the meeting and include in the public plan.



Name	Title	Agency/ Municipality	Phone Number	Email	Photo Release (Y/N)*
Valerie Costanzo	Subject Matter	Beswell Eng'g, NJ	973 464 363	keostanzo@beswellengineering.com	Y
Harold Stahl	OEM Coordinator	HARRISON	973-204-2178	HStahl@TowacoNJ.com	Y
Suzann Macle	City Plan	Bayle	201 858 6138	bayleplan@ground.com	Yes
Angela DeQuina	Deputy Director	HRTC	201-223-1133	adquina@hudsonregionalhealth.org	Y
JETTYE TUCKER	Deputy Director	WEEHAWKEN	201-273-4556	JTUCKER@PILIC-WEHAWKEN.NJ.GOV	Y
Mysse Seonik	Planner	HRTC	201-223-1133	abl@dnj@hudsonregionalhealth.org	Y
ANN HOLTZMAN	FPA/ZONING	HOBOKEN	201-420-2500	AHOLTZMAN@HOBOKEN.NJ.GOV	
TOM KENNEDY	County Engineer	Hudson	201-369-9300	TKENNEDY@HONJ.GOV	
DINA GRILLO	MAYOR	EAST NEWARK	973 481-2902	dgrillo@boroughofeastnewark.com	Y
RALPH SAX	DEP DIRECTOR	HUDSON COUNTY	914-414-2020	rsax@hcnj.us	



**HUDSON COUNTY HAZARD MITIGATION PLAN – 2020 UPDATE
SIGN-IN SHEET
TOPIC: County Capabilities and Mitigation Strategy Meeting
MEETING DATE: January 21, 2020**



Name	Title	Agency/ Municipality	Phone Number	Email
Randi Moore	Division Chief	Hudson County Division of Housing and Community Development		
Francesca Giarrantana	Division Director	Hudson County Division of Planning		
James Woods	OEM Coordinator	Hudson County Office of Emergency Management		
Peter Nevins	OEM Planner	Hudson County Office of Emergency Management		
Alison Miskiman	Project Manager	Tetra Tech		



**HUDSON COUNTY HAZARD MITIGATION PLAN – 2020 UPDATE
SIGN-IN SHEET**

**TOPIC: Liberty State Park - Vulnerabilities, Capabilities and Mitigation Strategy Meeting
MEETING DATE: February 11, 2020**



Name	Title	Agency/ Municipality	Phone Number	Email
Robert W. Rodriguez	Superintendent	Liberty State Park		
Alison Miskiman	Project Manager	Tetra Tech		



HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
Hudson County Stakeholder Mitigation Workshop
February 19, 2020 at 10:00 am



Welcome and Introductions

Overview and Intent

Hazard Mitigation Plan Update

Areas of Concern Identified to Date

First Easel Session

- *Identify current capabilities*
- *Identify vulnerabilities*
- *Discussion*

Second Easel Session

- *Identify integration opportunities*
- *Identify potential mitigation actions*
- *Discussion*

Conclusion

Contact Information:

Alison Miskiman (Tetra Tech), 973-630-8045; alison.miskiman@tetrattech.com

Chris Huch (Tetra Tech), 973-630-8357; chris.huch@tetrattech.com



**Hudson County Hazard Mitigation Plan Update
Regional Stakeholder Workshop
February 19, 2020 10:00-11:30am**



Name	Title/Entity
George Johns	Deputy Coordinator, Hudson County Office of Emergency Management
Pete Nevins	Emergency Planner, Hudson County Office of Emergency Management
Jeff Brzozowski	Deputy Coordinator, Hudson County Office of Emergency Management
Francesca Giarratana	Division Chief, Hudson County Division of Planning
Daryl Krasnuk	GIS Coordinator, Hudson County Division of Planning
Tom Malavasi	Engineer, Hudson County
Michael Sangiovanni	Hazard Mitigation Grants Manager, New Jersey Office of Emergency Management
Elizabeth Falcon	New Jersey Department of Transportation Office of Emergency Management
Michael Macari	New Jersey Department of Transportation Office of Emergency Management
Cheryl Rezendes	Principal Planner, New Jersey Sports Exposition Authority
Fawzia Shapiro	Assistant Chief Engineer, New Jersey Sports Exposition Authority
Anthony Monteiro	Chief of Police, Borough of East Newark
Dave Ricigliano	Emergency Management Coordinator, Township of North Bergen
Chris Huch	Planner, Tetra Tech
Alison Miskiman	Planner, Tetra Tech

Welcome and Introductions

Chris Huch (Tetra Tech) and Alison Miskiman (Tetra Tech) welcomed the participants and thanked them for attending the workshop.

Overview and Intent

Mr. Huch explained the intent of the workshop is to collect valuable stakeholder input to integrate into the 2020 Hudson County Hazard Mitigation Plan update. The goal of the workshop is to identify the following:

- Capabilities that stakeholders and Hudson County have that contribute to the reduction of risk such as plans, ordinances, administrations, and projects;
- Problem areas that represent vulnerabilities/gaps/challenges within the County; and
- Potential actions or projects that could be undertaken to increase the County’s resilience and decrease the County’s risk to future hazard events.

Hazard Mitigation Plan Update

Mr. Huch explained the purpose of the hazard mitigation plan is to profile the various hazards of concern for Hudson County and design strategies and projects to mitigate the County and each jurisdiction’s risk to the identified hazards of concern. Hudson County’s Hazard Mitigation Plan is currently undergoing its 5-year update. Tetra Tech has been hired to facilitate the planning process and draft the plan for the County. A draft of the plan is scheduled to be posted for public review in February



**Hudson County Hazard Mitigation Plan Update
Regional Stakeholder Workshop
February 19, 2020 10:00-11:30am**



2020. The goal is to have the plan approved by FEMA and adopted by all participating jurisdictions in spring 2020.

Poster Sessions

Mr. Huch directed attendees to posters depicting Hudson County and hazard areas and assets identified. Attendees were asked to use the maps to identify and discuss the County's capabilities, problem areas, and potential mitigation actions. Tetra Tech staff took notes during the session and captured the information identified on maps by attendees. The information collected is summarized below.

Capabilities:

- NJSEA
 - Maintain their own zoning
 - Currently updating their Stormwater Management Plan and Floodplain Management Plan
 - Master Plan has been updated; engaged municipalities and public via meetings and plan review; two Hudson County municipalities have opted out. The Master Plan was just approved last week.
 - Maintain robust GIS data
 - Meadowlands Adaptive Signal System for Traffic Reduction (MASSTR) monitors traffic and adapts traffic signals in Secaucus, Jersey City, North Bergen and Kearny
 - Regularly coordinate with the Secaucus Police Department leveraging the MASSTR and associated camera footage
 - Drone capacity
 - Monitor tide gates and distribute alerts regarding levels
- NYC Planning is developing a comprehensive waterfront plan (development, transportation, resilience) and engaged Hudson County to get feedback on the plan in early March 2020
- Hudson County is working on a Waterfront Alliance plan (Division of Planning) – more information to be provided
- NJDOT –
 - Mitigates traffic on State roads; alerts public on overhead/electronic signs; sends out alerts internally; traffic monitored 24-7
 - Measures the traffic flow on State roads in the affected areas/flood zones;
 - Coordinates with the County and local municipalities regarding diversion routes in an event but may deter from the flood evacuation routes
 - Work with municipalities regarding traffic and events/venues in the area, and coordinate with State Police, PANYNJ, Sheriff, TRANSCOM
 - Has a unit dedicated to working with local municipalities and counties
 - Conducts planning for evacuation routes and construction
- Hudson County Open Space Trust funding is used - one project mentioned is to address recent sinkhole impacts in a park



**Hudson County Hazard Mitigation Plan Update
Regional Stakeholder Workshop
February 19, 2020 10:00-11:30am**



Problem Statements:

- Additional urban flooding locations were identified throughout the County during map exercise including locations at the bottom of hills where runoff flows downhill rapidly
- Slope failure – Manhattan Ave wall in Union City
- Two sinkholes in North Bergen Park and looking to utilize Open Space Trust fund and capital funding to address
- Climate change, specifically sea level rise
- Natural gas pipeline (TRANSCO) that goes through the County, both above and underground (Guttenberg and North Bergen discussed) and is addressed in Emergency Operations Plans
 - Pipeline supplies gas to NYC and is large (roughly 36"). Exposed above ground locations are at risk for natural hazard related accidents.
- A natural disaster can trigger a man-made/technological hazard limiting emergency services (e.g., chemical fire)

Potential Mitigation Actions:

- NJSEA's updated Master Plan has a climate resilience section; a new section with a list of identified potential strategies
- NJSEA is looking at zoning and using a sea level rise overlay zone
- Meadowlands Conservation Trust is an available funding source where wetlands may be purchased in sensitive areas for mitigation
- Green infrastructure
- Living shoreline/wetlands restoration
- FEMA mitigation projects can incorporate climate change



**HUDSON COUNTY HAZARD MITIGATION PLAN - 2020 UPDATE
SIGN-IN SHEET
TOPIC: Stakeholder Mitigation Workshop
MEETING DATE: February 19, 2020**



* Hudson County may take pictures during the meeting and include in the public plan.

Name	Title	Agency	Phone Number	Email	Photo Release (Y/N)*
Jeff Butzicki	Dep. Coord	HC OEM	201 369-5500	Jrbazowski@hcnj.us	
Peter Newins	OEM Planner CHIEF OF POLICE	N.J. OEM	201-369-5500	pnewins@hcnj.us	
Anthony Montano		EAST NEWARK	201 726 9260	AMONTANO@EASTNEWARK.COM	
MICHAEL MACARI	Emergency Resp Coord.	NJDOT	609 331 1679	MICHAEL.MACARI@DOT.NJ.GOV	YES
FRANCISCA GIARDINO	Division Chief	HC Planning	201 217-5137	fgiardino@hcnj.us	
George Johns	Deputy Coordinator	HC OEM	201 369-5200	gjohns@hcnj.us	Y
Daryl Krasnik	GISD Coordinator	HC Planning	201-217-5137	dkrasnik@hcnj.us	Y
Cheryl Rezendes	Prm. Planner	NJSEA	201-460-8866	crezendes@njsea.com	Y
Fawzia Shapiro	Asst. Chief Engineer	NJSEA	201-460-4673	fshapiro@njsea.com	Y
Dave Riccioliavo	Coordinating NJDOT OEM	NJDOT OEM	201-937 7023	DRICCI@NJDOT.NJ.GOV	Y
Elizabeth Falcon	NJDOT OEM		609-352-8866	elizabeth.falcon@dot.nj.gov	
Michael Sangiovanni	NJDEM HM Grant	NJDEM	609-462-1544	lpsangm@gw.njsep.org	Y
Tara Mancusi	Munsul Co	EMS		TAMANCUSI@HNCNJ.US	Y



APPENDIX D. PUBLIC AND STAKEHOLDER OUTREACH

This appendix provides documentation of public and stakeholder outreach. Stakeholder involvement in this planning process was broad and productive as discussed and further documented in Section 2 (Planning Process). Public and stakeholder input has been incorporated throughout this HMP as appropriate, as identified in Section 2 and the References section, as well as within specific mitigation initiatives identified within the jurisdictional annexes (Section 9).

D.1 Citizen Survey



This section contains information and results gathered from the Hudson County Citizen Survey. The main objective of this survey was to gather information from citizens regarding their level of knowledge regarding hazard vulnerability and knowledge of hazard mitigation information for their local communities. The survey was available on the Hudson County OEM’s website beginning in the summer of 2019. County departments, Hudson County Regional Health and several municipalities also posted the survey on their websites and social media as shown in the figures below.

A total of 50 respondents completed this survey over 1 year during the planning process. Respondents primarily consisted of individuals who have lived in Hudson County for 20 years or more and own their residence. Survey respondents indicated that coastal storm and flooding (stormwater/basement) were the hazards of greatest concern, followed by climate change/sea level rise then severe weather and severe winter storms. Survey respondents were asked to identify mitigation projects to reduce the effects of hazards. A majority (87%) of respondents selected ‘retrofit infrastructure, such as elevating roadways and improving drainage systems followed by (70%) ‘working on improving the damage resistance to utilities (electricity, communications, water/wastewater facilities, etc.). The Citizen Survey results are included at the end of this appendix.

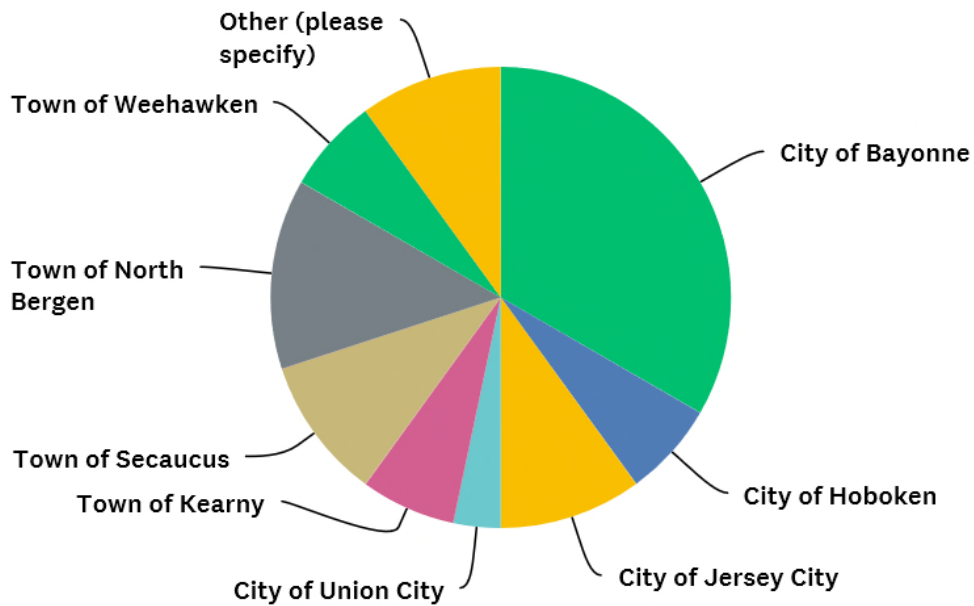


Figure D-1. Citizen Survey Graphic Used on Social Media





Figure D-2. Survey Responses in Hudson County



D.2 Public Meetings

All Planning Partnership meetings were open to the public. Meetings were advertised on the dedicated Hudson County Hazard Mitigation Planning website, with announcements continuously updated throughout the planning process. The website has the option to select multiple languages to review the information. In addition, the County and plan participants advertised via social media posts in English, Spanish, Chinese and Hindi; screenshots of the posts are presented throughout this appendix. No residents attended the public meetings.





Figure D-3. Hudson County Website Announcements that Advertise Planning Partnership Public Meetings

The screenshot shows the Hudson County Hazard Mitigation Planning (HMP) website. The page title is "Hudson County Hazard Mitigation Planning (HMP) Page". It includes a navigation menu on the left with items like "ArcGIS Online Interactive Mapping Initiative", "Hudson County Hazard Mitigation Planning (HMP) Page", "Hudson County Hazard Mitigation Planning 2020 Draft Plan", "Hurricane Survival Guide", "Welcome", "Mission Statement and What We Do", "Stay Informed and Preparedness", "Resources", "Volunteer", "Keep Pets Safe", "All Hazard Mitigation Plan", and "Links". The main content area contains a welcome message, a goal statement for the HMP update, information about the 2020 HMP update kick-off, and a list of announcements including public meetings and newsletters.

Hudson County Hazard Mitigation Planning (HMP) Page

Welcome to the Hudson County Hazard Mitigation Planning (HMP) page. This webpage provides project updates, resources, and links to hazard mitigation in support of the HMP project.

The goal of the HMP update is to save lives and property through the reduction of hazard vulnerability for the community. During the course of this planning project, county and local leaders and the participating communities will work in tandem to identify risks, assess capabilities, and formulate a strategy to reduce disaster vulnerability.

Hudson County is pleased to kick-off the 2020 HMP update. Please check back to this site regularly for updates on the planning process. -

The 2015 All Hazard Mitigation Plan can be viewed at: <http://www.hudsoncountynj.org/all-hazard-mitigation-plan/>

Hudson County is pleased to post the draft of the 2020 Hazard Mitigation Plan update for public review and comment. Public review is open through April 11, 2020. We welcome your input on this important planning process.

The draft plan may be accessed here: <http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-2020-draft-plan/> Please submit your plan comments to the County using this online form: <https://www.surveymonkey.com/r/Hudson2020Review>

If you would like more information regarding how to get involved in the project, please contact the Hudson County Office of Emergency Management at: 201-369-5200

Announcements

- Third Public Meeting: Mitigation Strategy Workshop, January 9, 2020 at 10am. USS Juneau Memorial Building, 110 South Hackensack Ave, Kearny
- 2nd public meeting: October 18, 2019 at 10:00am: USS Juneau Memorial Building, 110 South Hackensack Ave, Kearny.
- First public meeting: May 29, 2019 at 10:30am: USS Juneau Memorial Building, 110 South Hackensack Ave, Kearny
- HMP Press Release: <http://www.hudsoncountynj.org/Hazard-Mitigation-Plan-Update>
- Hudson HMP Newsletter: Hudson County HMP Newsletter,
- Hudson HMP Newsletter (Spanish): Hudson County HMP Span. Newsletter
- Hudson HMP Newsletter (Hindi): Hudson County HMP Newsletter Hindi
- Hudson HMP Newsletter (Chinese): Hudson County HMP Newsletter Chinese
- Citizens Preparedness Questionnaire: <https://www.surveymonkey.com/r/hudsonhmp2020>

Figure D-4. Social Media Posts Advertising the May 29, 2019 Kickoff Public Meeting

Hudson County is Updating the Hazard Mitigation Plan

This plan enables participating jurisdictions to be eligible for federal funding to rebuild stronger after disasters have struck. Please consider attending the Plan Participant Kickoff Meeting.

Wednesday, May 29, 2019 at 10:30am

**U.S.S. Juneau Memorial Center
Hudson County OEM Emergency Operations Center
110 South Hackensack Avenue, Kearny, NJ 07032**

哈德逊县正在更新减灾计划

本计划使参与的管辖区有资格获得联邦资金, 以便灾难发生后, 能够重建一个更为强大的家园。 请考虑参加“计划参与者启动会议”(Plan Participant Kickoff Meeting)。

2019年5月29日, 星期三, 上午10点30分

**朱诺号 纪念中心 (U.S.S. Juneau Memorial Center)
哈德逊县OEM 应急行动中心 (Emergency Operations Center)
110 South Hackensack Avenue, Kearny, NJ 07032**

हडसन काउंटी आपदा योजना को अद्यतन कर रहा है

यह योजना भाग लेने वाले क्षेत्राधिकारों को संघीय कोष के लिए सक्षम बनाती है ताकि आपदाओं के बाद मजबूत पुनर्निर्माण हो सके। कृपया योजना के सहभागी किकऑफ बैठक में भाग लेने पर विचार करें।

बुधवार, 29 मई, 2019 को सुबह 10:30 बजे

**U.S.S. जूनो मेमोरियल सेंटर
हडसन काउंटी OEM आपातकालीन संचालन केंद्र
110 साउथ हैकेंसैक एवेन्यू, केर्नी, न्यूजर्सी 07032**

El condado de Hudson está actualizando el Plan de Mitigación de Peligros

Este plan permite que las jurisdicciones participantes sean elegibles para recibir fondos federales para una reconstrucción más firme después de sufrir desastres. Considere asistir a la Reunión Inicial para Participantes del Plan.

Miércoles, 29 de mayo de 2019, a las 10:30am

**U.S.S. Juneau Memorial Center
Hudson County OEM Emergency Operations Center
110 South Hackensack Avenue, Kearny, NJ 07032**





D.3 Multi-Lingual Outreach

A multi-lingual hazard mitigation planning brochure was developed to inform the public of the planning process, provide local contact information, and encourage the public to review the plan and provide input. This brochure was provided to all plan participants to distribute in their communities. It was also available for download on the hazard mitigation plan website and made available in four languages: English, Spanish, Chinese and Hindi. The brochures are available later in this appendix.

All plan participants were provided electronic and hard copies of the brochure and encouraged to distribute and make available at local offices that the public visit and post the links to the project webpage and citizen survey. In addition, all participants were requested to advertise the availability of the project website via local homepage links, and other available public announcement methods (e.g., Facebook, Twitter, email blasts). Efforts made by plan participants to engage the public are featured later in this appendix.

D.4 Stakeholder Workshop

Hudson County hosted a regional and local stakeholder workshop in February 2020. The invited stakeholders included all Steering Committee members, municipal and MUA representatives and stakeholders from State and regional sectors including transportation, utility, planning, academia, emergency services, hospitals, and neighboring counties and cities. All invited stakeholders were sent an email and were called directly notify each regarding the workshop. Table D-1 summarizes the organizations invited to the workshops. In addition to being asked to the workshops, invited stakeholders were asked to participate in an online survey to provide input on vulnerable assets, capabilities, and current/potential future mitigation projects; and invited to provide input on the draft HMP.

Table D-1. Organizations Invited to the Stakeholder Workshop

Organizations Invited to the Stakeholder Workshop			
Stevens Institute of Technology	Rutgers University - State Climatologist - Edward J. Bloustein School - Transportation - Climate Institute	St. Peters College	New Jersey City University
Hudson County Community College	Sustainable Jersey	Together North Jersey	Liberty State Park
New Jersey Sports Exposition Authority	Passaic Valley Sewerage Commission	NJ Transit	Hudson County Hospitals
Verizon	Suez	Port Authority NJ/NJ	Hackensack Riverkeeper
PSE&G	NY/NJ Baykeeper	North Jersey Transportation Planning Authority	New Jersey Office of Emergency Management – Mitigation Unit
JCP&L	NJ Future	Transportation Operations Coordinating Committee (TRANSCOM)	New Jersey Department of Environmental Protection
New Jersey American Water	Rutgers Cooperative Extension Water Resources Program	New Jersey Department of Transportation	USACE – New York District





Organizations Invited to the Stakeholder Workshop			
Bergen County	Union County	Essex County	New York City - Preparedness - Mitigation

*Steering Committee and Planning Committee members (municipalities and MUAs) were also invited to the stakeholder workshop; however, they are not listed in this table. Refer to Table 2-2 in Section 2 (Planning Process).

The goal of each workshop was to identify the following for each sector:

- Capabilities that contributes to the reduction of risk such as plans, ordinances, administrations, and projects;
- Problem areas that represent vulnerabilities/gaps/challenges within the County; and
- Potential actions or projects that could be undertaken to increase the County’s resilience and decrease the County’s risk to future hazard events.

Large-scale poster maps of the County and delineated hazard areas were made available around the room. Participants were asked to visit the poster stations and utilize colored dots to identify vulnerable assets and post-it notes to draft mitigation strategies. After feedback was obtained, the consultant facilitated a dialogue regarding the information collected. Refer to Appendix C (Meeting Documentation) for a summary of the meeting.



Figure D-5. Stakeholder Workshop Poster Exercise

D.5 Neighboring Counties and Communities

As discussed in Section 2 (Planning Process), Hudson County has kept surrounding and nearby counties and municipalities apprised of the project and invited them to participate in the planning process. Refer to Table D-1 which summarizes the neighboring jurisdictions invited to the Stakeholder Workshop in February 2020. In addition, neighboring jurisdictions were contacted in March 2020 via formal letter and email from the Hudson County Office of Emergency Management to inform them about the draft plan documents and to invite them to provide input. These letters are included later in this appendix.

- Bergen County, New Jersey
- Essex County, New Jersey
- Union County, New Jersey
- City of Newark
- New Jersey Sports Exposition Authority
- New York City - Department of Planning and Office of Emergency Management





D.6 Websites, Social Media and News Articles

The following provides screenshots of websites, social media posts, news release and other forms of public outreach.

Figure D-6. Hudson County OEM Citizen Survey Twitter Post – May 7, 2019

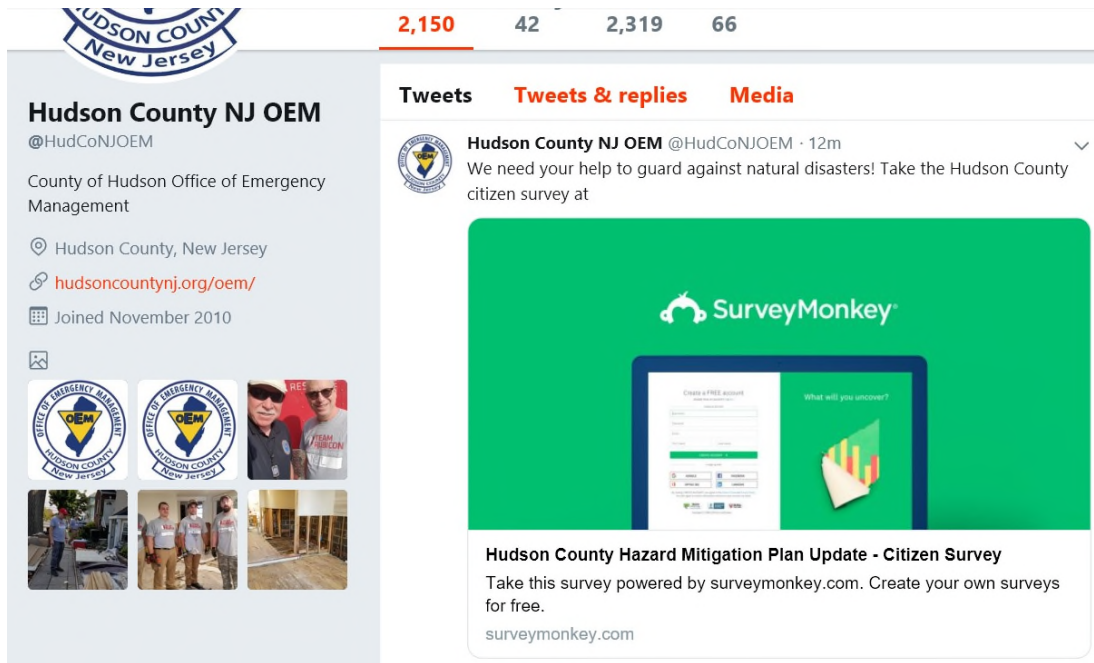


Figure D-7. Hudson County OEM HMP Brochure and Survey Twitter Post – May 8, 2019

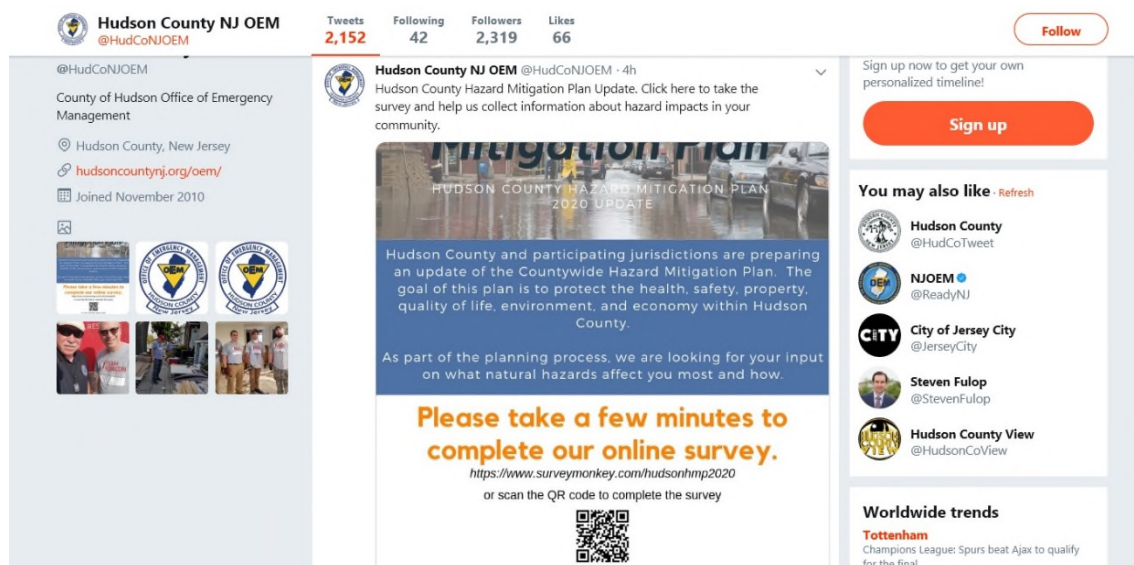




Figure D-8. Hudson County Press Release Twitter Post – May 9, 2019

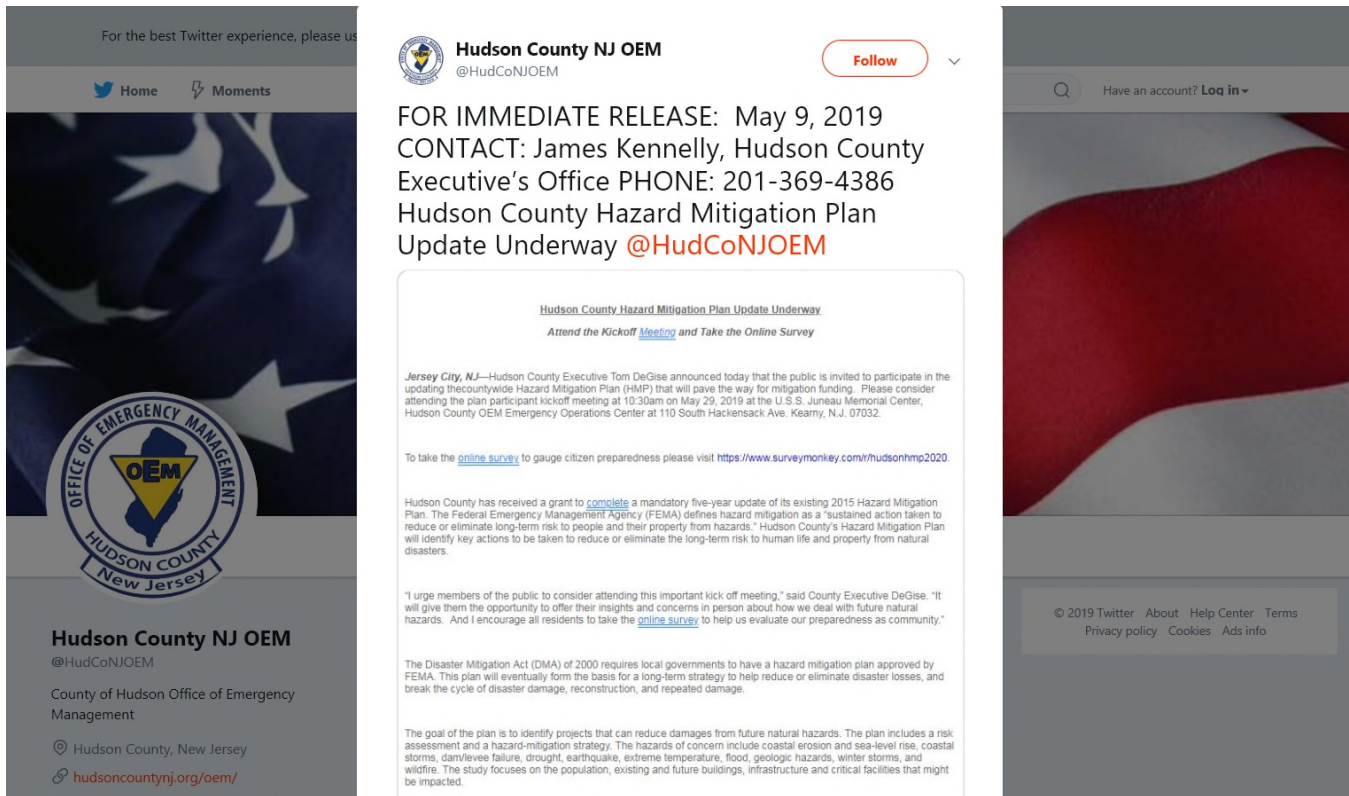


Figure D-9. Hudson County OEM Kick-off Meeting Post – May 10, 2019





Figure D-10. Hudson County OEM Kick-off Meeting Post with News Release – May 13, 2019

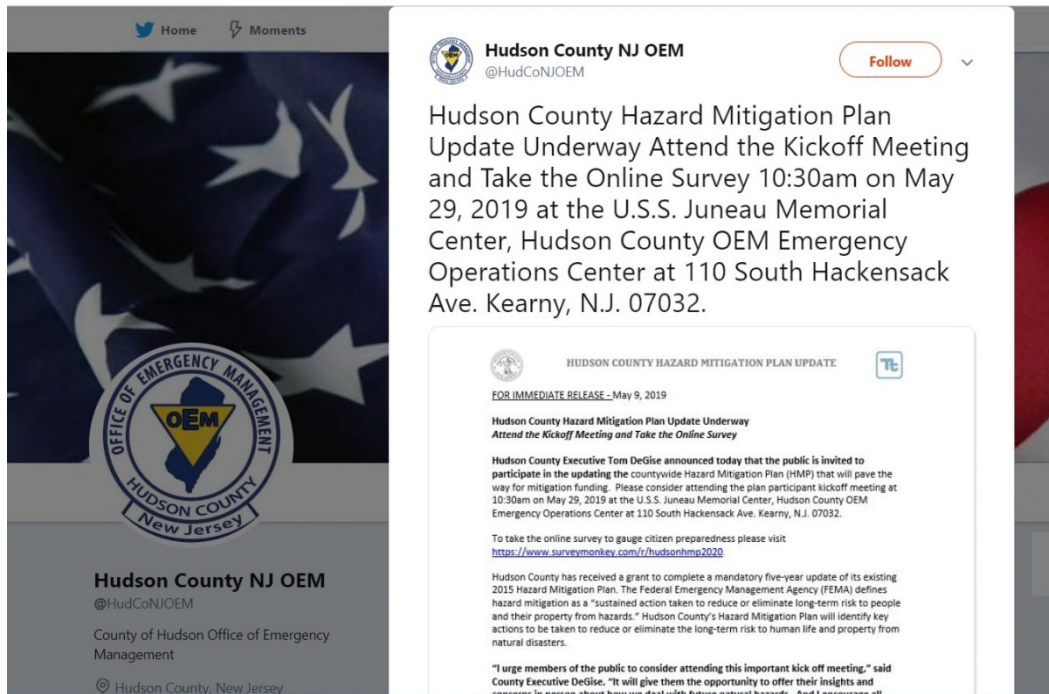


Figure D-11. Hudson County OEM Citizen Survey Post – May 13, 2019

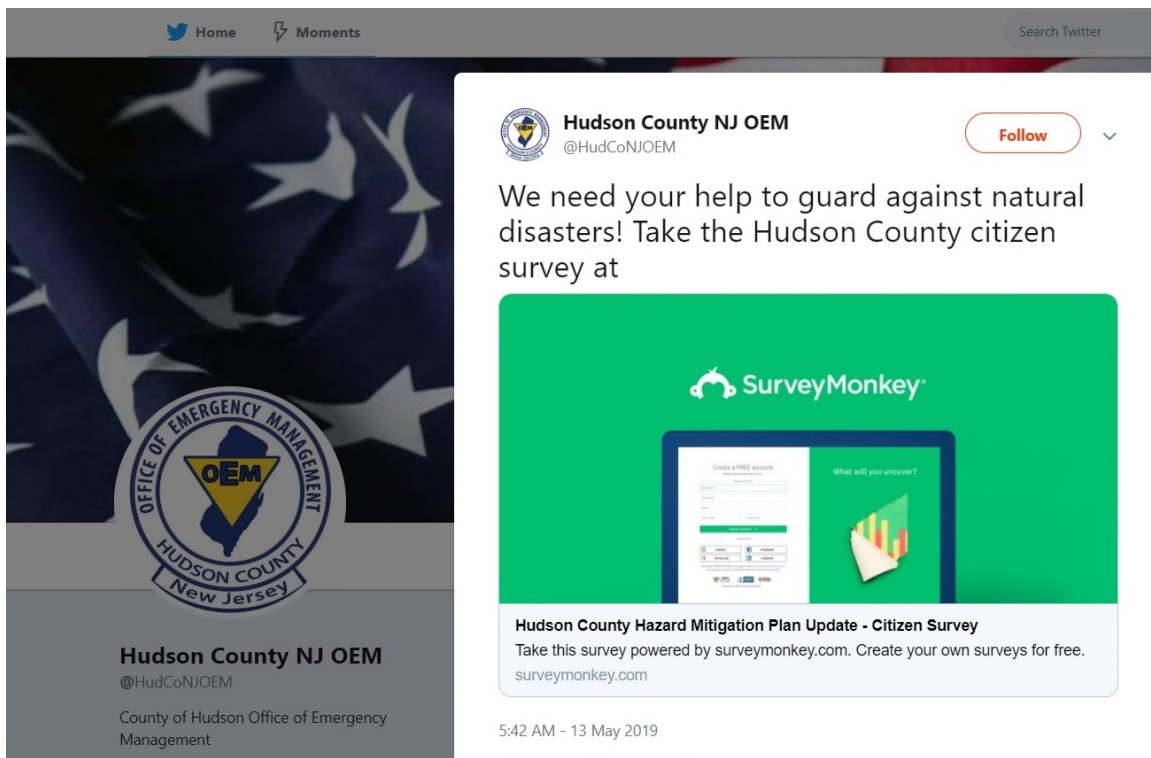




Figure D-12. Hudson County Public Kick-off Meeting Posts in Chinese – May 16 and May 23, 2019



Figure D-13. Hudson County Public Kick-off Meeting Posts in Hindi – May 16 and May 23, 2019





Figure D-14. Hudson County Public Kick-off Meeting Post in Spanish – May 23, 2019

Hudson County NJ OEM @HudCoNJOEM
 Tweets **2,186** Following **42** Followers **2,335** Likes **66**

Hudson County NJ OEM @HudCoNJOEM · May 23
 Únase al condado de Hudson en la planificación de mitigación de peligros.
bit.ly/2LP1r8h
 ¡Participe en la encuesta! bit.ly/2LYxNL4

El condado de Hudson está actualizando el Plan de Mitigación de Peligros

Este plan permite que las jurisdicciones participantes sean elegibles para recibir fondos federales para una reconstrucción más firme después de sufrir desastres. Considere asistir a la Reunión Inicial para Participantes del Plan.

Visite la página web para obtener información sobre el proceso de planificación y para llenar la encuesta sobre la preparación de los ciudadanos del condado de Hudson.

Figure D-15. Hudson County Public Kick-off Meeting Post in English – May 23, 2019

Hudson County NJ OEM @HudCoNJOEM
 Tweets **2,186** Following **42** Followers **2,335** Likes **66**

Hudson County NJ OEM @HudCoNJOEM · May 23
 Join Hudson County in hazard mitigation planning. bit.ly/2LP1r8h
 Take the survey! bit.ly/2LYxNL4

Hudson County is Updating the Hazard Mitigation Plan

This plan enables participating jurisdictions to be eligible for federal funding to rebuild stronger after disasters have struck.

Visit the website for information on the planning process and take the Hudson County citizen preparedness survey.





Figure D-16. Hudson County Citizen Survey Twitter Post – May 23, 2019

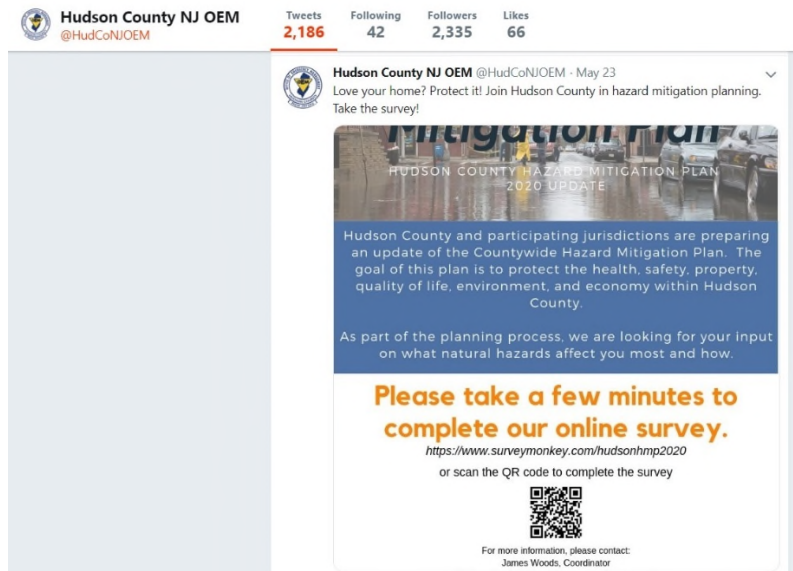


Figure D-17. Town of Kearny Website with the HMP Brochure – July 30, 2019





Figure D-18. Hudson County Public Risk Assessment Meeting Twitter Posts – October 10, 2019

Hudson County NJ OEM
@HudCoNJOEM
County of Hudson Office of Emergency Management
Hudson County, New Jersey
hudsoncountynj.org/oem/
Joined November 2010

Tweets: 2,288 | Following: 42 | Followers: 2,395 | Likes: 66

Tweets | Tweets & replies | Media

Hudson County NJ OEM @HudCoNJOEM · Oct 10
Asista a la reunión de actualización del Plan de Mitigación de Riesgos del Condado de Hudson el viernes 18 de octubre. Para confirmar su asistencia, use el código QR o visite [surveymonkey.com/r/Hudson2020RA](https://www.surveymonkey.com/r/Hudson2020RA).

El condado de Hudson está actualizando el Plan de Mitigación de Peligros

Asista al taller de evaluación de riesgos y de fortalezas, debilidades, oportunidades y obstáculos. Es una reunión abierta al público.

18 de octubre de 2019 a las 10:00 a.m.

U.S.S Juneau Memorial Center
Hudson County OEM Emergency Operations Center
110 South Hackensack Avenue
Kearny, NJ 07032

Hudson County NJ OEM @HudCoNJOEM · Oct 10
शुक्रवार 18 अक्टूबर, को हडसन काउंटी आपदा शमन योजना की अद्यतन बैठक में भाग लें। RSVP के लिए QR कोड का इस्तेमाल करें या [surveymonkey.com/r/Hudson2020RA](https://www.surveymonkey.com/r/Hudson2020RA).

हडसन काउंटी आपदा योजना को अद्यतन कर रहा है

कृपया जोखिम आकलन और सामर्थ्य, कमजोरियों, अवसरों और बाधाओं की कार्यशाला में भाग लें। यह मीटिंग आम जनता के लिए है।

18 अक्टूबर, 2019 को सुबह 10 बजे

U.S.S जूनो मेमोरियल सेंटर





Figure D-19. City of Jersey City Twitter Post for the Citizen Survey – October 17, 2019



Figure D-20. City of Jersey City Facebook Post for the Citizen Survey – October 17, 2019

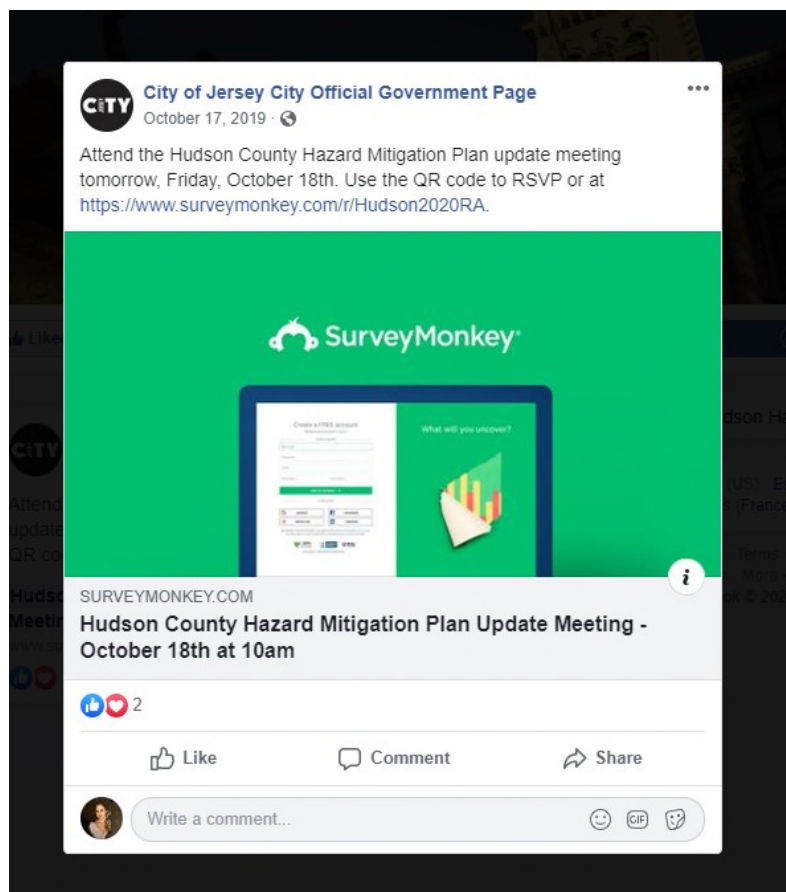




Figure D-21. City of Bayonne Website with the HMP Survey – January 14, 2020

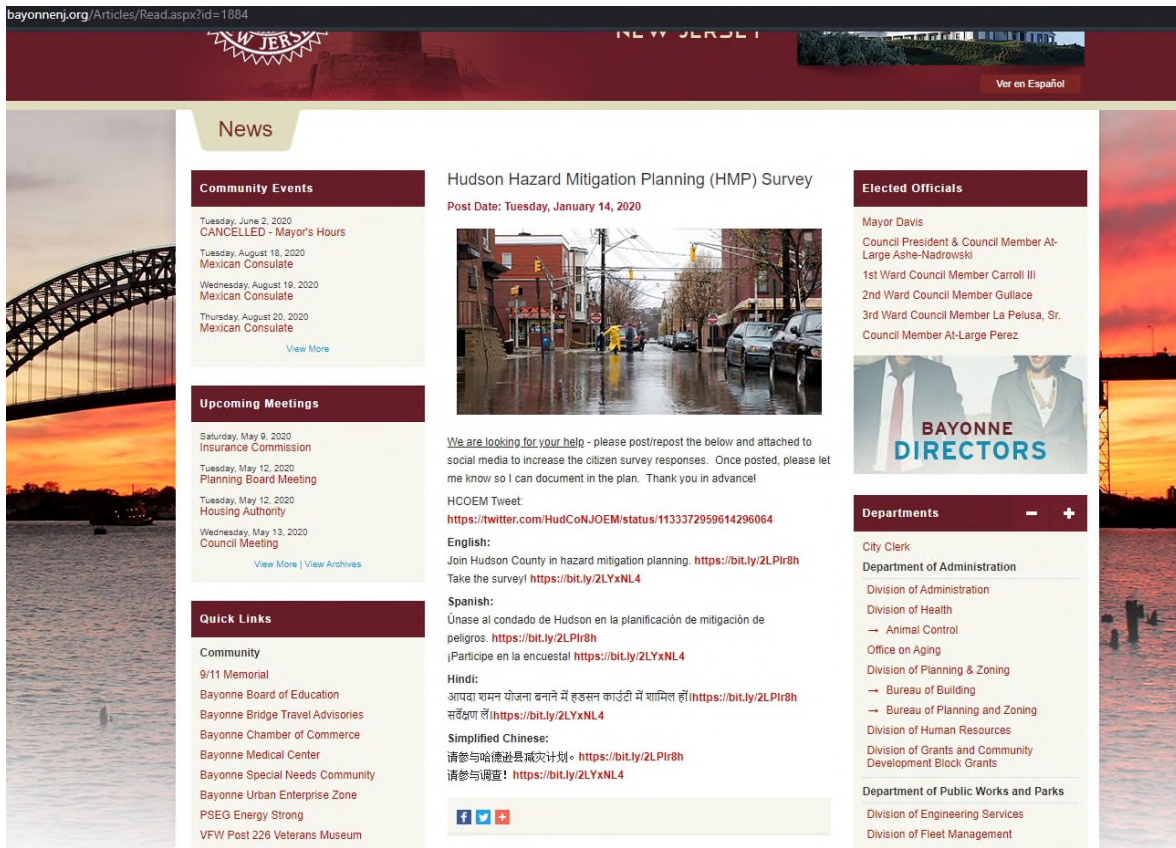


Figure D-22. Township of North Bergen HMP Website

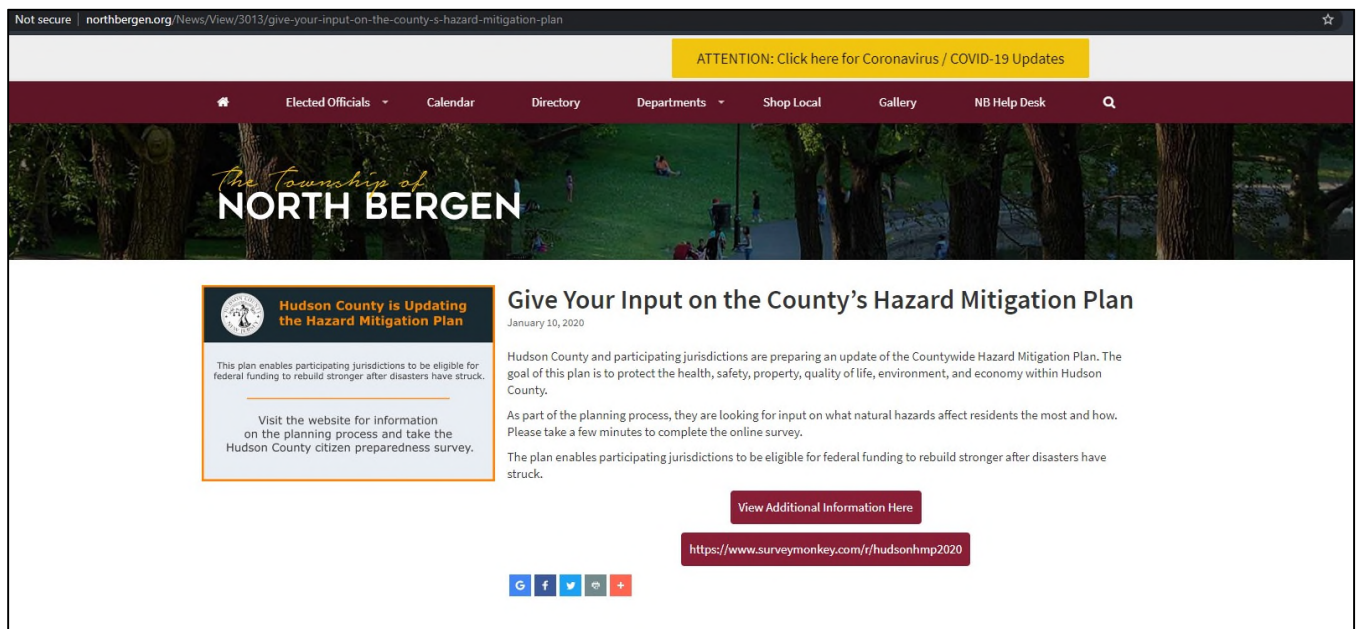




Figure D-23. Township of North Bergen HMP Facebook Post for the Citizen Survey – January 10, 2020

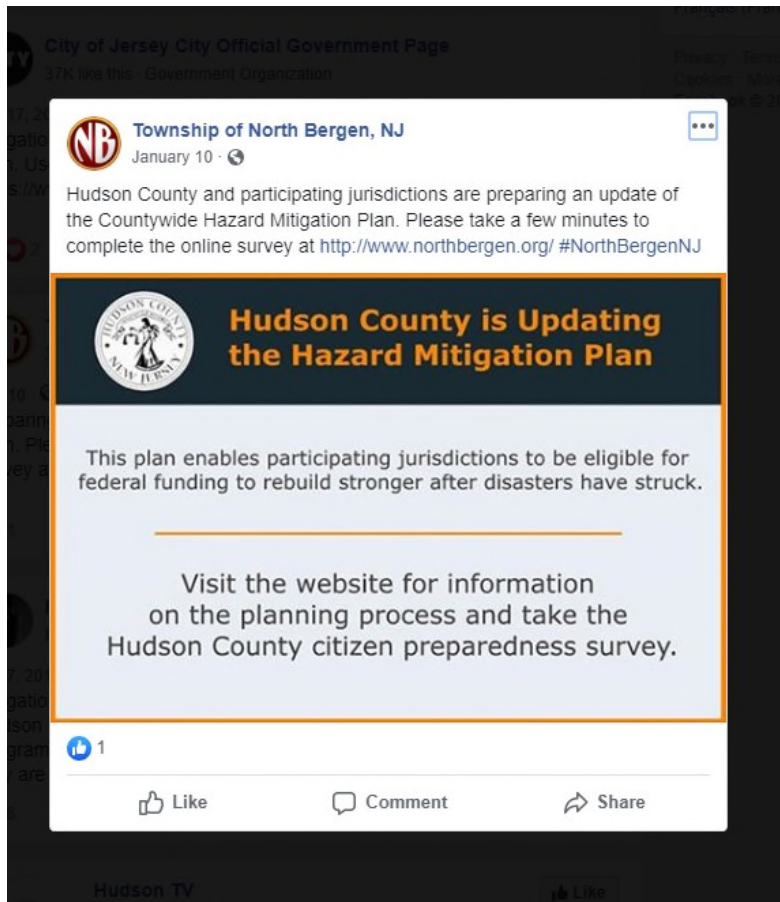


Figure D-24. Township of North Bergen HMP Twitter Post for the Citizen Survey – January 10, 2020





Figure D-25. Hudson County OEM Draft Plan Review Twitter Post in English – March 12, 2020



Figure D-26. Hudson County OEM Draft Plan Review Twitter Post in Spanish – March 12, 2020





Figure D-27. Hudson County OEM Draft Plan Review Twitter Post in Hindi – March 12, 2020



Figure D-28. Hudson County OEM Draft Plan Review Twitter Post in Chinese – March 12, 2020



HUDSON COUNTY HAZARD MITIGATION PLAN

2020 UPDATE

PROTECTING THE HEALTH, SAFETY, PROPERTY, QUALITY OF LIFE, ENVIRONMENT, AND ECONOMY WITHIN HUDSON COUNTY

WHAT A HAZARD MITIGATION PLAN?



A hazard mitigation plan (HMP) is “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” (44 CFR 201.6). HMPs establish and maintain eligibility for grant funds. The planning process is as important as the plan itself because it creates a framework for governments to reduce the negative impacts from future disasters on lives, property, and the economy. Hazard mitigation planning can significantly reduce the physical, financial, and emotional losses caused by disasters. Disaster Mitigation Act of 2000 is federal legislation that establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP). It encourages and rewards state and local pre-disaster planning and promotes sustainability. Completion of an HMP will result in more effective risk reduction projects and in a faster and more efficient allocation of funding.

PURPOSE

The Hudson County Office of Emergency Management is leading the update of the countywide HMP. This plan is an opportunity to detail a variety of potential hazards that could affect some or all of our residents and will also allow the county and participating jurisdictions to be eligible for future mitigation funding from the Federal Emergency Management Agency (FEMA).

The goal of the plan is to identify projects that can reduce damages from future natural hazards.

The plan will include a risk assessment and a hazard mitigation strategy. The primary hazards of concern in Hudson County include: Coastal Erosion and Sea Level Rise, Coastal Storm, Dam/Levee Failure, Drought, Earthquake, Extreme Temperatures, Flood, Geologic Hazards, Severe Weather, Severe Winter Storm and Wildfire.

The study will focus on existing buildings and potential future development, infrastructure, and critical facilities that might be impacted. Critical facilities include but are not limited to municipal buildings and infrastructure such as power-generation facilities, water utilities, roadways, railroads and communication systems.

WHAT ARE THE BENEFITS OF PARTICIPATING IN THE HAZARD MITIGATION PLAN?

There are numerous benefits to participating in the HMP including:

- Awareness of risk and vulnerabilities
- Identification of implementable strategies and funding sources
- Reduction of hazard impact (save lives, property, and the local economy)
- Creation of partnerships and develop comprehensive approaches that enhance project grant funding opportunities.
- Pooling of resources and reduced level of effort while avoiding duplication of effort.
- Creation of more resilient communities; bounce-back from disasters faster!

WHAT IS REQUIRED IN A HAZARD MITIGATION PLAN?

FEMA regulations require that the public must be engaged in all phases of the plan's development. The HMP should review and incorporate existing plans and programs that can support or enhance hazard mitigation. The plan must assess the risk to natural hazards that may impact the planning area and identify and prioritize mitigation actions that can be taken. The HMP must also include a strategy for maintaining the plan, which must be updated every 5 years.

SCHEDULE



FAQS

What is mitigation? Any sustained action taken to reduce/eliminate long-term risk to life and property from a hazard event.

How can you reduce/eliminate risk? Identify mitigation actions/projects/activities or processes that can include 1) Local plans and regulations; 2) Structure and infrastructure projects; 3) Natural systems protection; 4) Education and awareness programs.

What grant funding is available? FEMA Hazard Mitigation Assistance grant funding is available with a FEMA-approved Hazard Mitigation Plan (annual and post-disaster opportunities).

How can I support the plan? Take the citizen survey! This will help us obtain input and get a better understanding of citizen preparedness for hazard events.

Where can I see the plan? Sections of the draft plan will be available for download, review and comment on the Hudson County Office of Emergency Management website at: <http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-hmp-page/>

For more information, visit our website:

<http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-hmp-page/>

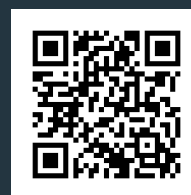
FOR MORE INFORMATION ABOUT THIS PROCESS, PLEASE CONTACT:

James Woods, Coordinator
Hudson County Office of Emergency Management
jwoods@hcnj.us

Hudson County resident? Take our survey!
<https://www.surveymonkey.com/r/hudsonhmp2020>

-or-

scan the QR code to complete the survey



Hudson County Executive Tom DeGise
& The Board of Chosen Freeholders



हडसन काउंटी आपदा शमन योजना – 2020 (HUDSON COUNTY HAZARD MITIGATION PLAN – 2020) अद्यतन

आपदा शमन योजना क्या है?



आपदा शमन योजना (HMP) "प्राकृतिक आपदाओं के जोखिम को कम करने के लिए अधिकार क्षेत्र की प्रतिबद्धता का प्रतिनिधित्व है, जो नीति निर्माताओं के लिए एक मार्गदर्शक के रूप में काम करती है क्योंकि वे प्राकृतिक संकटों के प्रभाव को कम करने के लिए संसाधन जुटाते हैं।" (44 CFR 201.6) HMPs स्थापित करते हैं और अनुदान राशि के लिए पात्रता बनाए रखते हैं। नियोजन प्रक्रिया स्वयं योजना जितनी ही महत्वपूर्ण है क्योंकि यह सरकारों के लिए जीवन, संपत्ति और अर्थव्यवस्था पर भविष्य की आपदाओं से होने वाले नकारात्मक प्रभावों को कम करने के लिए एक रूपरेखा तैयार करती है। आपदा शमन योजना आपदाओं के कारण होने वाले भौतिक, वित्तीय और भावनात्मक नुकसान को काफी कम कर सकती है। आपदा शमन अधिनियम 2000 एक संघीय कानून है जो एक पूर्व-आपदा खतरा शमन कार्यक्रम और राष्ट्रीय आपदा-पश्चात् खतरा शमन कार्यक्रम (HMGP) के लिए नई आवश्यकताओं को व्यवस्थित करता है। यह राज्य और स्थानीय पूर्व-आपदा योजना को प्रोत्साहित और पुरस्कृत करता है एवं स्थिरता को बढ़ावा देता है। HMP को पूरा करने में जोखिम में कमी लाने वाली परियोजनाएं और कोष/धन के तेजी से एवं अधिक कुशल आवंटन से परिणाम अधिक प्रभावी होगा।

उद्देश्य

हडसन काउंटी आपातकालीन प्रबंधन कार्यालय काउंटी के अनुसार HMP के अपडेट को अग्रसर कर रहा है। यह योजना विभिन्न संभावित खतरों का विवेचन करने का एक अवसर है जो हमारे इलाके के कुछ निवासियों या सभी को प्रभावित कर सकता है और काउंटी एवं भाग लेने वाले नगरपालिकाओं को संघीय आपातकालीन प्रबंधन एजेंसी (FEMA) से भविष्य के शमन निधि के लिए पात्र होने की भी अनुमति देगा।

योजना का लक्ष्य उन परियोजनाओं की पहचान करना है जो भविष्य के प्राकृतिक आपदा से नुकसान को कम कर सकते हैं। इस योजना में एक जोखिम मूल्यांकन और एक जोखिम न्यूनीकरण रणनीति शामिल करनी होगी। हडसन काउंटी में प्राथमिक खतरों के ये चिंता के विषय शामिल हैं: तटीय क्षरण और समुद्र के जलस्तर में वृद्धि, तटीय तूफान, डैम/लेवी टूटना, सूखा, भूकंप, चरम तापमान, बाढ़, भूगर्भिक खतरें, खतरनाक मौसम, खतरनाक शीतकालीन तूफान और जंगल की आग।

अध्ययन मौजूदा इमारतों और संभावित भविष्य के विकास, बुनियादी ढांचे, और महत्वपूर्ण सुविधाएं जो प्रभावित हो सकती हैं, उनपर पर फोकस करेगा। ये महत्वपूर्ण सुविधाओं में शामिल हैं, लेकिन नगरपालिका भवनों और बुनियादी ढांचे जैसे कि बिजली-उत्पादन सुविधाएं, पानी उपयोगिताओं, रोडवेज, रेलमार्ग और संचार प्रणाली तक सीमित नहीं हैं।

आपदा शमन योजना में भाग लेने के क्या लाभ हैं?

HMP में भाग लेने के कई लाभ हैं:

जोखिम और कमजोरियों के बारे में जागरूकता कार्यान्वयन योग्य रणनीतियों और वित्तपोषण स्रोतों की पहचान खतरे के प्रभाव में कमी (जीवन, संपत्ति और स्थानीय अर्थव्यवस्था को बचाना) साझेदारी का निर्माण और व्यापक दृष्टिकोण विकसित करना जो परियोजना अनुदान कोष के अवसरों को बढ़ाता है। संसाधनों की पूलिंग और प्रयास के दोहराव से बचने के दौरान उनके स्तर को कम करना।

अधिक नम्य समुदायों का निर्माण; आपदाओं से निपट कर पूर्व स्थिति में वापस लाने में तीव्र उछाल देता है।

आपदा शमन योजना के लिए क्या-क्या आवश्यक हैं?

फेमा(FEMA) के विनियमों के अनुसार आवश्यकता है कि आम जनता को योजना के विकास के सभी चरणों से जुड़े रहना चाहिए। HMP को मौजूदा निगमित योजनाओं और कार्यक्रमों की समीक्षा करनी चाहिए और खतरे को कम करने को समर्थन या बढ़ा सकते हैं। योजना में प्राकृतिक आपदा से होने वाले जोखिम का आकलन करना चाहिए जो नियोजन क्षेत्र को प्रभावित कर सकते हैं और की जाने वाली शमन की कार्रवाई की पहचान और प्राथमिकता दी जा सकती है। योजना को बनाए रखने के लिए HMP में एक रणनीति भी सुनिश्चित की करनी चाहिए, जिसे हर 5 साल में अपडेट किया जाना चाहिए।

शेड्यूल



अधिक जानकारी के लिए हमारी इन वेबसाइट पर जाएं:

<http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-hmp-page/>

इस प्रक्रिया के बारे में अधिक जानकारी के लिए कृपया संपर्क करें:

जेम्स वुड्स, हडसन काउंटी आपातकालीन प्रबंधन कार्यालय,
jwoods@hcnj.us

FAQS

शमन क्या है? किसी खतरनाक घटना से जीवन और संपत्ति के लिए दीर्घकालिक जोखिम को कम करने / समाप्त करने के लिए लिये जाने वाले कोई भी निरंतर कार्रवाई।

आप जोखिम को कैसे कम/समाप्त कर सकते हैं? शमन के कार्यों/परियोजनाओं/गतिविधियों या प्रक्रियाओं को पहचानें जिनमें 1) स्थानीय योजनाएं और विनियम; 2) संरचना और संरचनात्मक ढांचा की परियोजनाएं; 3) प्राकृतिक प्रणालियों की सुरक्षा; 4) शिक्षा और जागरूकता कार्यक्रम शामिल हो सकते हैं।

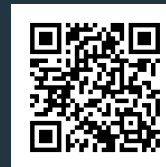
कौन-कौन अनुदान कोष उपलब्ध है? FEMA-स्वीकृत आपदा शमन योजना (वार्षिक और आपदा-पश्चात के अवसर) के साथ FEMA आपदा शमन सहायक अनुदान कोष उपलब्ध है।

मैं योजना में कैसे सहयोग कर सकता हूँ? नागरिक का सर्वेक्षण लें! इससे हमें इनपुट प्राप्त करने और खतरनाक घटनाओं के लिए नागरिक तैयारियों की बेहतर समझ प्राप्त करने में मदद मिलेगी।

मैं योजना कहां देख सकता हूँ? प्रारूप योजना के अनुभाग हडसन काउंटी आपातकालीन प्रबंधन कार्यालय के वेबसाइट : <http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-hmp-page/> पर डाउनलोड, समीक्षा और टिप्पणी के लिए उपलब्ध होंगे:

हडसन काउंटी निवासी? हमारा सर्वे ले सकते हैं?

<https://www.surveymonkey.com/r/hudsonhmp2020>



Hudson County Executive Tom DeGise
& The Board of Chosen Freeholders



PLAN DE MITIGACIÓN DE PELIGROS DEL CONDADO DE HUDSON

ACTUALIZACIÓN DE 2020

¿QUÉ ES EL PLAN DE MITIGACIÓN DE PELIGROS?



Un Plan de Mitigación de Peligros (Hazard Mitigation Plan, HMP) es “la representación del compromiso de la jurisdicción en reducir riesgos de peligros naturales sirviendo como guía para los que toman las decisiones mientras dedican recursos para reducir los efectos de peligros naturales” (Título 44 del Código de Regulaciones Federales [Code of Federal Regulations, CFR], Sección 201.6). Los HMP establecen y mantienen la elegibilidad para fondos de la subvención. El proceso de planificación es tan importante como el plan en sí mismo, ya que crea un marco para que los gobiernos reduzcan los impactos negativos de desastres futuros en vidas, propiedades y en la economía. La planificación de la mitigación de peligros puede reducir significativamente las pérdidas físicas, financieras y emocionales causadas por desastres. La Ley de Mitigación de Desastres del año 2000 es una legislación federal que establece un programa de mitigación de peligros previo al desastre y nuevos requisitos para el Programa de Subvenciones de Mitigación de Peligros (Hazard Mitigation Grant Program, HMGP) nacional posterior al desastre. Alienta y da reconocimiento a la planificación estatal y local previa al desastre y promueve la sostenibilidad. La realización de un HMP traerá como consecuencia proyectos de reducción de riesgo más efectivos y una asignación de fondos más rápida y eficiente.

PROPÓSITO

La Oficina de Administración de Emergencias del condado de Hudson lidera la actualización del HMP en todo el condado. Este plan es una oportunidad para detallar una variedad de peligros potenciales que pudieran afectar a algunos de nuestros residentes o a todos, y también permite que el condado y las municipalidades participantes sean elegibles para recibir fondos de mitigación en el futuro por parte de la Agencia Federal de Administración de Emergencias (FEMA).

La meta del plan es identificar proyectos que puedan reducir daños de futuros peligros naturales. El plan incluirá una evaluación de riesgos y una estrategia de mitigación de peligros. Los principales peligros de preocupación en el condado de Hudson son erosión costera y aumento del nivel del mar, tormentas costeras, falla de presas/diques, sequías, terremotos, temperaturas extremas, inundaciones, peligros geológicos, clima inclemente, tormentas de invierno inclementes e incendios forestales.

El estudio se centrará en edificios existentes y desarrollos potenciales futuros, infraestructura e instalaciones vitales que pudieran verse afectadas. Las instalaciones vitales incluyen, entre otras, edificios e infraestructuras municipales, tales como instalaciones de generación de energía, servicio público de agua, carreteras, ferrocarriles y sistemas de comunicación.

¿CUÁLES SON LOS BENEFICIOS DE PARTICIPAR EN EL PLAN DE MITIGACIÓN DE PELIGROS?

Existen numerosos beneficios al participar en el HMP, entre los que se encuentran:

- Conciencia de riesgos y vulnerabilidades.
- Identificación de estrategias realizables y fuentes de financiamiento.
- Reducción del impacto del peligro (salvar vidas, propiedades y la economía local).
- Creación de asociaciones y desarrollo de enfoques integrales que mejoren las oportunidades de financiamiento de subvenciones para proyectos.
- Reunión de recursos y reducción del nivel de esfuerzo evitando duplicación de esfuerzos.
- Desarrollo de comunidades más resilientes; ¡se recuperan más rápido de los desastres!

¿QUÉ SE REQUIERE EN UN PLAN DE MITIGACIÓN DE PELIGROS?

Las regulaciones de la Agencia Federal de Administración de Emergencias (Federal Emergency Management Agency, FEMA) requieren que el público se involucre en todas las fases del desarrollo del plan. El HMP debe revisar e incorporar los planes y programas existentes que puedan apoyar o mejorar la mitigación de peligros. El plan debe evaluar el riesgo de peligros naturales que puedan afectar el área de la planificación e identificar y priorizar las medidas de mitigación que se puedan tomar. El HMP también debe incluir una estrategia para mantener el plan, la cual debe actualizarse cada 5 años.

PREGUNTAS FRECUENTES

¿Qué es mitigación? Es cualquier acción sostenida que se toma para reducir o eliminar riesgos a largo plazo para la vida y la propiedad a partir de un evento peligroso.

¿Cómo se pueden reducir o eliminar riesgos?

Identify mitigation actions/projects/activities or processes that can include 1) Local plans and regulations; 2) Structure and infrastructure projects; 3) Natural systems protection; 4) Education and awareness programs.

¿Qué subvenciones están disponibles?

El financiamiento de la subvención de Asistencia para la Mitigación de Peligros de la FEMA está disponible con un Plan de Mitigación de Peligros aprobado por la FEMA (oportunidades anuales y posteriores al desastre).

¿Cómo puedo apoyar el plan?

¡Participe en la encuesta ciudadana! Esto nos ayudará a obtener información y a comprender mejor la preparación de los ciudadanos para eventos peligrosos.

¿Dónde puedo ver el plan?

Las secciones del borrador del plan estarán disponibles para descargar, revisar y comentar en el sitio web de la Oficina de Administración de Emergencias del condado de Hudson en:

<http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-hmp-page/>

CRONOGRAMA



Para obtener más información, visite nuestro sitio web:

<http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-hmp-page/>

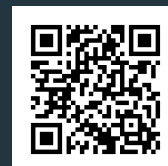
PARA OBTENER MÁS INFORMACIÓN SOBRE ESTE PROCESO, PÓNGASE EN CONTACTO CON:

James Woods
Oficina de Manejo de Emergencias del condado de Hudson
jwoods@hcnj.us

¿Es residente del condado de Hudson?
Desea participar en la encuesta.

<https://www.surveymonkey.com/r/hudsonhmp2020>

-or-



Hudson County Executive Tom DeGise
& The Board of Chosen Freeholders



哈德逊县减灾计划 (HAZARD MITIGATION PLAN) 2020 年更新版

什么是减灾计划？



减灾计划 (HMP) “代表着管辖区致力于减少自然灾害风险，其可为决策者提供一个指南，在其投入资源以减少自然灾害的影响时提供引导。” (44 CFR 201.6)

HMP可设立并维持获得资助的资格。计划过程和计划本身同等重要，因为其为政府创造了一个框架，以减少未来灾害给生命、财产和经济方面带来的负面影响。减灾计划可以显著减少由灾害造成的物力、财力和精神损失。2000年颁布的《防灾减灾法》(Disaster Mitigation Act) 是一部联邦法律，它设立了灾前减灾计划，也为国家灾后减灾拨款计划 (HMGP) 设立了新的要求。其鼓励并奖励州和地方政府制定灾前计划，以促进可持续发展。减灾计划的完成将更有效地促成缓解风险项目，且更快、更有效地促进资金的分配。

目的

哈德逊县应急管理办公室 (Office of Emergency Management) 正在领导全县范围减灾计划的更新。通过此次计划更新，可详细说明可能影响部分或全部居民的各种潜在危险，并允许本县和参与的城市有资格从联邦紧急事务管理局 (FEMA) 处获得未来减灾资金。

本计划的目标是确定能够减少未来自然灾害造成的损害的项目。该计划将包括风险评估和减灾战略。哈德逊县主要关注的灾害包括：海岸侵蚀和海平面上升、海岸风暴、溃坝/溃堤、干旱、地震、极端温度、洪水、地质灾害、恶劣天气、严冬风暴和野火。

该研究将侧重于现有建筑和潜在的未来开发、基础设施和可能受到影响的关键设施。关键设施包括但不限于市政建筑和基础设施，如发电设施、水利设施、公路、铁路和通信系统。

参与减灾计划有什么益处？

参与减灾计划有很多益处，包括：
认清风险和危险
确定可实施的战略和资金来源
减少危害影响（挽救生命、财产，保护当地经济）
建立合作伙伴关系，制定综合方案，以增加获得项目补助资金的机会。
集中资源并减少其投入水平，同时避免重复工作。
创建具有更强恢复力的社区；更快地从灾难中恢复过来！

减灾计划有什么要求？

联邦紧急事务管理局（FEMA）的规定要求公众必须参与计划制定的所有阶段。应审查减灾计划并将其纳入现有的计划和程序，以支持或加强减灾工作。该计划必须评估可能影响规划区的自然灾害风险，确定并优先考虑可以采取的减灾措施。减灾计划还必须包括维护计划的策略，该计划必须每5年更新一次。

计划表



欲知详情，请访问网站：

<http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-hmp-page/>

有关此过程的更多信息，请联系：

James Woods
哈德逊县应急管理办公室
jwoods@hcnj.us

常见问题解答

什么是减灾？ 为减少/消除危险事件对生命和财产的长期风险而采取的所有持续性行动。

如何降低/消除风险？ 确定减灾措施/项目/活动或过程包括：1) 当地计划和规定；2) 架构及基础设施项目；3) 自然系统保护；4) 教育及宣传计划。

可申请哪些援助基金？ 可申请由联邦紧急事务管理局批准的减灾计划中的减灾援助基金（可每年申请一次或灾后申请）。

怎样才能支持这个计划？ 参与公民调查！这将帮助我们听取意见，并更好地了解公民对灾害事件的准备情况。

从哪里可以了解本计划？ 计划草案的各部分内容可在哈德逊县应急管理办公室网站进行下载、查阅和评论，网址为：
<http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-hmp-page/>

您是哈德逊县居民吗？您想要参与调查吗？请登录

<https://www.surveymonkey.com/r/hudsonhmp2020>



Hudson County Executive Tom DeGise
& The Board of Chosen Freeholders





Thomas DeGise
County Executive

Hudson County Office of Emergency Management

830 Bergen Avenue, Bldg. C-2 Jersey City, New Jersey 07306
Tel: (201) 369-5200 Fax: (201) 369-5204



James Woods
County Coordinator

March 19, 2020

Sgt. Matthew J. Tiedemann
285 Campgaw Road
Mahwah, NJ 07430

Re: Hudson County Hazard Mitigation Plan – 2020 Update

Hudson County is updating our Hazard Mitigation Plan to meet the requirements of the Disaster Mitigation Act of 2000 (DMA 2000). The purpose of this plan is to identify vulnerabilities to a variety of natural disasters, and to develop plans to help minimize losses if disasters should occur. The intent of the plan is to provide a comprehensive document that considers the wide diversity of communities, businesses, and services that are an integral part of Hudson County and the region as a whole. In addition to its value as a hazard mitigation plan, the development of this document is also required under the DMA 2000 to ensure eligibility for Federal Mitigation funding.

Due to your proximity to Hudson County, the effects of many of these disasters would be similar in your jurisdiction and your involvement in this process could reap mutual benefits. By participating in the review of this plan, you will be engaging in the regional coordination of disaster mitigation planning, which is one of the intents of the Mitigation Planning Regulations (44 CFR 201).

Presently, our draft plan is now in a public review period prior to submission to FEMA for approval. By means of this letter, Hudson County is seeking your participation in this important planning effort. Specifically, we encourage interested neighboring community representatives to become familiar with this process by reviewing and providing input on the draft and final plan documents by visiting <http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-2020-draft-plan/>.

Any questions regarding the plan can be made directly to our Office of Emergency Management or through the survey link on the draft plan page:
<https://www.surveymonkey.com/r/Hudson2020Review>

We thank you in advance for your assistance and for being a part of this important planning effort.

James T. Woods, Coordinator

Cc: G. Johns, Deputy Coordinator
P. Nevins, Emergency Management Planner
F. Giarratana, Planning Director
A. Miskiman, Tetra Tech, Inc.



Thomas DeGise
County Executive

Hudson County Office of Emergency Management

830 Bergen Avenue, Bldg. C-2 Jersey City, New Jersey 07306
Tel: (201) 369-5200 Fax: (201) 369-5204



James Woods
County Coordinator

March 19, 2020

Dorian Herrell
OEM Coordinator – City of Newark
480 Clinton Avenue
City of Newark, NJ 07108

Re: Hudson County Hazard Mitigation Plan – 2020 Update

Hudson County is updating our Hazard Mitigation Plan to meet the requirements of the Disaster Mitigation Act of 2000 (DMA 2000). The purpose of this plan is to identify vulnerabilities to a variety of natural disasters, and to develop plans to help minimize losses if disasters should occur. The intent of the plan is to provide a comprehensive document that considers the wide diversity of communities, businesses, and services that are an integral part of Hudson County and the region as a whole. In addition to its value as a hazard mitigation plan, the development of this document is also required under the DMA 2000 to ensure eligibility for Federal Mitigation funding.

Due to your proximity to Hudson County, the effects of many of these disasters would be similar in your jurisdiction and your involvement in this process could reap mutual benefits. By participating in the review of this plan, you will be engaging in the regional coordination of disaster mitigation planning, which is one of the intents of the Mitigation Planning Regulations (44 CFR 201).

Presently, our draft plan is now in a public review period prior to submission to FEMA for approval. By means of this letter, Hudson County is seeking your participation in this important planning effort. Specifically, we encourage interested neighboring community representatives to become familiar with this process by reviewing and providing input on the draft and final plan documents by visiting <http://www.hudsoncountynj.org/hudson-county-hazard-mitigation-planning-2020-draft-plan/>.

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We thank you in advance for your assistance and for being a part of this important planning effort.

James T. Woods, Coordinator

Cc: G. Johns, Deputy Coordinator
P. Nevins, Emergency Management Planner
F. Giarratana, Planning Director
A. Miskiman, Tetra Tech, Inc.



Thomas DeGise
County Executive

Hudson County Office of Emergency Management

830 Bergen Avenue, Bldg. C-2 Jersey City, New Jersey 07306
Tel: (201) 369-5200 Fax: (201) 369-5204



James Woods
County Coordinator

March 19, 2020

Captain Edward Esposito
Essex County Sheriff's Office
OEM - K-9 Unit - Bomb Squad
560 Northfield Avenue
West Orange, NJ 07052

Re: Hudson County Hazard Mitigation Plan – 2020 Update

Captain Esposito:

Hudson County is updating our Hazard Mitigation Plan to meet the requirements of the Disaster Mitigation Act of 2000 (DMA 2000). The purpose of this plan is to identify vulnerabilities to a variety of natural disasters, and to develop plans to help minimize losses if disasters should occur. The intent of the plan is to provide a comprehensive document that considers the wide diversity of communities, businesses, and services that are an integral part of Hudson County and the region as a whole. In addition to its value as a hazard mitigation plan, the development of this document is also required under the DMA 2000 to ensure eligibility for Federal Mitigation funding.

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James Woods
County Coordinator

March 19, 2020

New Jersey Sports and Exposition Authority
One DeKorte Park Plaza
P.O. Box 640
Lyndhurst, NJ 07071

Re: Hudson County Hazard Mitigation Plan – 2020 Update

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James Woods
County Coordinator

March 19, 2020

New York City Office of Emergency Management
165 Cadman Plaza East
Brooklyn, NY 11201

Re: Hudson County Hazard Mitigation Plan – 2020 Update

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Thomas DeGise
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James Woods
County Coordinator

March 19, 2020

Mr. Christopher J. Scaturro
Union County Coordinator
300 North Ave E
Westfield, NJ 07090

Re: Hudson County Hazard Mitigation Plan – 2020 Update

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Thomas DeGise
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James Woods
County Coordinator

March 19, 2020

Carolyn Grossman Meagher
Director of Regional Planning
NYC Department of City Planning
120 Broadway, 31st Floor • New York, NY 10271

Re: Hudson County Hazard Mitigation Plan – 2020 Update

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APPENDIX E. RISK ASSESSMENT SUPPLEMENT

In order to create a more streamlined plan, the 2020 HMP was reorganized and condensed into a practical and more readable document for the public with the goal of providing a plan easier to implement for the County and all jurisdictions to support future risk reduction. The information in this appendix supplements the information provided in Section 4.3 of this plan.

E.1 Critical Facilities and Lifelines

The identification of community lifelines across Hudson County provides an enhancement to the 2020 HMP. FEMA defines a lifeline as: *“providing indispensable service that enables the continuous operation of critical business and government functions, and is critical to human health and safety, or economic security.”* Identifying community lifelines will help government officials and stakeholders to prioritize, sequence, and focus response efforts towards maintaining or restoring the most critical services and infrastructure within their respective jurisdiction(s). Identifying potential impacts to lifelines can help to inform the planning process and determining priorities in the event an emergency occur. The following page is FEMA’s factsheet that describes lifelines further.

E.2 Critical Facility Storm Surge Exposure Results

An exposure analysis was conducted to determine the critical facilities located in each of the storm surge category inundation areas (1 through 4). The total number per municipality is summarized in Table E-1.





National Response Framework Update (Fourth Edition)

A lifeline provides indispensable service that enables the continuous operation of critical business and government functions, and is critical to human health and safety, or economic security.

Why a lifelines construct?

Decision-makers must rapidly determine the scope, complexity, and interdependent impacts of a disaster. Applying the lifelines construct allows decision-makers to:

- Prioritize, sequence, and focus response efforts towards maintaining or restoring the most critical services and infrastructure
- Utilize a common lexicon to facilitate unity of purpose across all stakeholders
- Promote a response that facilitates unity of purpose and better communication amongst the whole community (Federal, state, tribal, territorial, and local governments, and private sector and non-governmental entities)
- Clarify which components of the disaster are complex (multifaceted) and/or complicated (difficult), requiring cross-sector coordination

How will lifelines be used?

- Enhance the ability to gain, maintain, and communicate situational awareness for the whole community in responding to disasters
- Analyze impacts to the various lifelines and develop priority focus areas for each operational period during response
- Identify and communicate complex interdependencies to identify major limiting factors hindering stabilization
- Update the National Response Framework to reflect use of lifelines in response planning

What are the opportunities of lifelines?

- Enable a true unity of effort between government, non-governmental organizations, and the private sector, including infrastructure owners and operators
- Integrate preparedness efforts, existing plans, and identify unmet needs to better anticipate response requirements
- Refine reporting sources and products to enhance situational awareness, best determine capability gaps, and demonstrate progress towards stabilization

Lifelines



Safety and Security



Communications



Food, Water, Sheltering



Transportation



Health and Medical



Hazardous Material



Energy (Power & Fuel)

Visit us at <http://www.fema.gov/national-planning-frameworks>



Table E-1. Number of Critical Facilities Located in the SLOSH Inundation Zones

Municipality	Facility Types																																			
	Affordable Housing	Backup Data Centers	Bus	Child Care	Communication	DPW	Electric Power	Electric Substation	EMS	EOC	Ferry	Fire	Gas Station	Groceries	Hazmat	Helicopter	Library	Marina	Medical	Military	Municipal Hall	Oil Facility	Parking Garage	Pharmacy	Police	Post Office	Rail	School	Senior	Shelter	Subway	Wastewater Pump	Wastewater Treatment			
Category 1																																				
Bayonne City	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1		
East Newark Borough	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Guttenberg Town	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Harrison Town	0	0	0	1	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Hoboken City	1	0	1	1	1	1	0	1	1	0	0	1	1	1	1	0	1	1	0	0	0	0	0	1	0	0	1	1	1	1	1	1	1	0	1	
Jersey City	0	0	1	1	1	1	1	1	0	0	1	1	0	0	1	1	1	1	1	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	
Kearny Town	0	0	0	0	0	1	1	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
North Bergen Township	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
Secaucus Town	0	0	1	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
Union City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Weehawken Township	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	
West New York Town	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hudson County	1	0	3	7	2	5	3	7	1	1	1	5	1	1	6	3	3	2	2	0	1	1	0	1	0	1	1	4	3	3	3	1	6	6		
Category 2																																				
Bayonne City	0	0	0	1	0	0	1	1	0	0	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	1	1	0	0	0	0	1		
East Newark Borough	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Guttenberg Town	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Harrison Town	0	0	0	1	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
Hoboken City	1	0	1	1	1	1	0	1	1	0	0	1	1	1	1	0	1	1	0	0	0	1	0	1	1	0	1	1	1	1	1	1	1	0	1	
Jersey City	0	0	1	1	1	1	1	1	0	0	1	1	0	0	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	
Kearny Town	0	0	0	0	0	1	1	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
North Bergen Township	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	





Municipality	Facility Types																																	
	Affordable Housing	Backup Data Centers	Bus	Child Care	Communication	DPW	Electric Power	Electric Substation	EMS	EOC	Ferry	Fire	Gas Station	Groceries	Hazmat	Helipport	Library	Marina	Medical	Military	Municipal Hall	Oil Facility	Parking Garage	Pharmacy	Police	Post Office	Rail	School	Senior	Shelter	Subway	Wastewater Pump	Wastewater Treatment	
Secaucus Town	0	0	1	1	0	1	0	1	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	
Union City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Weehawken Township	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	
West New York Town	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hudson County	1	1	3	8	2	5	3	7	1	1	2	7	1	1	6	3	4	3	2	0	1	2	1	1	1	1	3	6	4	4	4	1	6	
Category 3																																		
Bayonne City	0	0	1	1	0	0	1	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	1	1	0	1	0	1	
East Newark Borough	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	
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Harrison Town	0	0	0	1	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	
Hoboken City	1	0	1	1	1	1	0	1	1	0	0	1	1	1	1	0	1	1	0	0	0	1	0	1	1	1	1	1	1	1	1	1	0	1
Jersey City	0	0	1	1	1	1	1	1	0	0	1	1	0	0	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1
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North Bergen Township	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
Secaucus Town	0	0	1	1	0	1	0	1	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0
Union City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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Hudson County	1	1	5	8	2	5	3	7	1	1	1	8	1	1	7	3	4	3	2	1	1	2	1	1	1	2	4	6	5	5	6	1	6	
Category 4																																		
Bayonne City	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	1	1	0	1	0	1	
East Newark Borough	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	
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Harrison Town	0	0	0	1	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	





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Jersey City	0	0	1	1	1	1	1	1	0	0	0	1	0	0	1	1	1	1	1	0	1	1	0	0	0	1	1	1	1	1	1	1	1	1
Kearny Town	0	0	0	0	0	1	1	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
North Bergen Township	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1
Secaucus Town	0	0	1	1	0	1	0	1	0	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0
Union City	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weehawken Township	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	
West New York Town	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hudson County	1	1	5	8	2	5	3	7	1	1	1	9	1	1	7	3	4	3	2	1	1	2	1	1	1	2	5	7	6	5	7	1	6	

Source: Hudson County, 2019; NOAA, 2016

Notes: *Only municipalities within the SLOSH inundation zones are tabulated





E.3 Previous Events from the 2015 HMP

To supplement the information provided in this plan, events documented in the 2015 HMP are included below by hazard of concern. The previous events and losses listed were directly carried over from the 2015 HMP and reflects events identified from 2007 to 2014. With many sources reviewed for the purpose of this HMP, loss and impact information for events could vary depending on the source. Therefore, the accuracy of monetary figures discussed is based only on the available information identified during research for the 2015 HMP.

E.3.1 COASTAL EROSION

Table E-2. Coastal Erosion Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
November 12-14, 2009	Nor'Easter	N/A	N/A	A powerful Nor'Easter produced wind gusts to nearly 60 mph, widespread moderate tidal flooding, heavy rain and severe beach erosion along the New Jersey coast from November 12th through the 14th. Initial damage estimates were placed at \$180 million. By several measures this was one of the worst Nor'Easters to affect New Jersey since 1990. In Hudson County, Route 7 was closed along the Hackensack River due to moderate tidal flooding. Peak wind gusts ranged from 36 mph in the Town of Harrison to 56 mph at Robins Reef (City of Bayonne).
August 27 – September 5, 2011	Hurricane Irene	DR-4021	Yes	Irene brought tropical storm force winds, destructive storm surge, and record breaking freshwater inland flooding across northeast New Jersey. The storm resulted in three deaths, thousands of mandatory and voluntary evacuations along the coast and rivers from surge and freshwater flooding, and widespread power outages that lasted for up to two weeks in areas. Rainfall totals in Hudson County ranged from 4.10 inches in the Town of Kearny to 9.14 inches in the Town of Harrison. A wind gust of 70 mph was recorded at the Robins Reef Lighthouse in the County. In the Town of Kearny, Passaic Avenue near East Newark town line was closed due to flooding. Other road closures due to flooding were reported throughout the Town. A tree was down on Chestnut Street near Bellville Turnpike. One death occurred in Kearny when a car was stranded in flood waters on Harrison Avenue. In Jersey City, Route 400 and at the Duncan intersection was closed due to fresh water flooding. In North Bergen, Secaucus Road was flooded and all lanes were closed and detoured. In the Township of Weehawken, wires were down and injured two people.
October 26 – November 8, 2012	Hurricane Sandy	DR-4048	Yes	Hurricane Sandy was the costliest natural disaster by far in the State of New Jersey. Record-breaking high tides and wave action combined with sustained winds as high as 60 to 70 mph with wind gusts as high as 80 to 90 mph to batter the State. Statewide, Sandy caused an estimated \$29.4 billion in damage, destroyed or significantly damaged 30,000 homes





Table E-2. Coastal Erosion Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				<p>and businesses, affected 42,000 additional structures, and was responsible directly or indirectly for 38 deaths. A new temporary inlet formed in Mantaloking (Ocean County) where some homes were swept away. About 2.4 million households in the State lost power. It would take two weeks for power to be fully restored to homes and businesses that were inhabitable. Also devastated by the storm was New Jersey's shellfish hatcheries including approximately \$1 million of losses to buildings and equipment, and product losses in excess of \$10,000 at one location alone.</p> <p>As storm surge from Sandy was pushed into the New York and Raritan Bays, sea water piled up within the Hudson River and coastal waterways and wetlands of northeastern New Jersey, including Newark Bay, Passaic and Hackensack Rivers, Kill van Kull, and Arthur Kill. Mandatory evacuations of people living along the coasts and rivers in Union, Essex, and Hudson Counties. Record breaking high tides and wave action was combined with sustained winds of 40 to 60 mph with gusts of 70 to 80 mph. Mandatory evacuations of people living along the coasts and rivers of Union, Essex, and Hudson Counties were conducted. Widespread power outages to more than one million people lasted up to two weeks. Overall, Sandy caused approximately \$30 billion in damages in New Jersey and caused 12 deaths in the State.</p> <p>Hudson County sustained significant damage from the storm. Sandy impacted infrastructure, transportation and electrical facilities, as well as county, municipal and private properties. A wind gust of up to 77 mph was reported near the City of Bayonne. A wind gust of up to 68 mph was reported in the Town of Harrison. One fatality in Hudson County was reported. Several municipalities, including Jersey City, Hoboken, and Weehawken, experienced major flooding due to their low-lying locations and the unprecedented storm surge. The six hardest hit municipalities were Bayonne, Harrison, Hoboken, Jersey City, Kearny, and Weehawken. Flooding was concentrated in Jersey City, Bayonne, and Hoboken. There were major power outages throughout Hudson County, with some lasting up to 10 days. The Hudson County jail in the Town of Kearny suffered flooding as deep as two feet and corrections officers had to move some of the inmates into upper floors of the facility. The Palisades Medical Center in North Bergen required evacuations due to major flooding, as well as a loss of power and the failure of two generators. Twenty-two traffic signal controllers throughout Hudson County were damaged and repairs were required. Sandy had a major negative impact on businesses and industry in Hudson County. Many structures and facilities were damaged by storm surge or wind damage, along with equipment and stock within. According to NJDCA data, 2% of the households in the County had homes that sustained</p>





Table E-2. Coastal Erosion Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				<p>“severe” or “major” damage, totaling 4,407 units. Damages to the homes included damaged roofs and flying debris due to heavy winds. Flooding from storm surge and leaky roofs caused water damage. A total of 10,864 households applied for FEMA Individual Assistance with total estimated loss of houses exceeding \$25 million. Total debris in the County exceeded 150,000 cubic yards which required significant amount of resources for removal and disposal.</p> <p>Other effects of Superstorm Sandy included losses incurred by businesses unable to operate due to damage, lack of electricity, or the inability of employees to reach their workplace; as well as the loss of spending from commuters and tourists. The PATH system sustained approximately \$800 million in damages, which especially affected their low-lying stations. About \$120 million of NJ Transit’s total \$4 billion in Sandy losses occurred in Kearny and Hoboken. Several rail stations were flooded including the Hoboken Terminal. The Hudson-Bergen Light Rail experienced track washouts at the Port Imperial and West Side Avenue stations as well as flooding in Hoboken. Overall, the County had approximately \$20.95 million in property damage, with \$5 million of the damage to public infrastructure in the County.</p>

Source: Hudson County Strategic Recovery Report 2014; FEMA 2014; NOAA-NCDC 2014; NWS 2014; Input from Planning Committee

DR Major Disaster Declaration

EM Emergency Declaration

FEMA Federal Emergency Management Agency

MLLW Mean Lower Low Water

Mph miles per hour

N/A Not Applicable

NJDCA New Jersey Department of Community Affairs

NJDEP New Jersey Department of Environmental Protection

E.3.2 COASTAL STORM

Table E-3. Coastal Storm Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
September 6, 2008	Heavy Rain and Flash Flooding (Tropical Storm Hanna)	N/A	N/A	Tropical Storm Hanna impacted northeast New Jersey, bringing heavy rain and causing flooding in the area. Rainfall totals ranged from 2.52 inches to 5.5 inches. Periods of torrential rainfall from heavy showers and thunderstorms caused flash flooding in many urban areas, small streams and rivers. Highest sustained wind speed of 39 mph with a peak gust of 45 mph was recorded at Newark Airport. Near the coast, as well as inland, only scattered





Table E-3. Coastal Storm Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				<p>trees were reported due to the wind. Overall, Hanna caused approximately \$20,000 in property damage.</p> <p>In Hudson County, numerous roads were closed due to flooding in Jersey City. The Newark Turnpike in the Borough of East Newark was closed from the NJ Turnpike to Route 7 in Kearny due to flooding. Frank E. Rodgers Boulevard near Middlesex Street and Cape May Street in the Town of Harrison was closed due to flooding. In Jersey City, three feet of water inundated Route 440 at Danforth Avenue, forcing it to close.</p>
November 12-13, 2009	Nor'Easter	N/A	N/A	<p>A powerful Nor'Easter produced wind gusts to nearly 60 mph, widespread moderate tidal flooding, heavy rain and severe beach erosion along the New Jersey coast from November 12th through the 14th. Initial damage estimates were placed at \$180 million. By several measures this was one of the worst Nor'Easters to affect New Jersey since 1990. In Hudson County, Route 7 was closed along the Hackensack River due to moderate tidal flooding. Peak wind gusts ranged from 36 mph in the Town of Harrison to 56 mph at Robins Reef (City of Bayonne).</p>
October 1, 2010	Heavy Rain and Flooding (Tropical Storm Nicole)	N/A	N/A	<p>Remnants of Tropical Storm Nicole moved up the Atlantic Coast which resulted in heavy and flooding across portions of Bergen, Hudson, and Passaic Counties. In Hudson County, several cars were trapped in flood waters under the railroad overpass on Passaic Avenue in the Town of Kearny. Local officials had to perform water rescues of stranded motorists on 61st Street and Tonnele Avenue in the Town of Secaucus. In the City of Hoboken, Park Avenue was closed from Observer Highway to 1st Street due to flooding. Major flooding occurred at the intersection of Willow Avenue and Newark Street. In the Town of Harrison, 3.74 inches of rainfall was measured.</p>
August 28, 2011	Heavy Rain and Flooding (Hurricane Irene)	DR-4021	Yes	<p>Irene brought tropical storm force winds, destructive storm surge, and record breaking freshwater inland flooding across northeast New Jersey. The storm resulted in three deaths, thousands of mandatory and voluntary evacuations along the coast and rivers from surge and freshwater flooding, and widespread power outages that lasted for up to two weeks in areas. Rainfall totals in Hudson County ranged from 4.10 inches in the Town of Kearny to 9.14 inches in the Town of Harrison. A wind gust of 70 mph was recorded at the Robins Reef Lighthouse in the County.</p> <p>In the Town of Kearny, Passaic Avenue near East Newark town line was closed due to flooding. Other road closures due to flooding were reported throughout the Town. A tree was down on Chestnut Street near Bellville Turnpike. One death occurred in Kearny when a car was stranded in flood waters on Harrison Avenue. In Jersey City, Route 400 and at the Duncan intersection was closed due to fresh water flooding. In North Bergen, Secaucus Road was flooded and all lanes were closed and detoured. In the Township of Weehawken, wires were down and injured two people.</p>
October 29, 2011	Severe Storm / Nor'Easter	DR-4048	No	<p>Rain began to fall in southern New Jersey early on October 29, 2011 and spread north. Some northern areas of the State saw the precipitation begin as snow and during the morning, the rain turned</p>





Table E-3. Coastal Storm Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				<p>to snow in central and northern New Jersey. Moderate to heavy snow continued into the afternoon, mixing with sleet in lower elevations. Once the snow tapered off during the morning of October 30, 2011, New Jersey had experienced its largest October snowstorm since the late 18th century. Snowfall totals ranged from 0.2 inches in several locations to 19.1 inches in Vernon Township (Sussex County) (record storm total). Several other locations broke records for October snowfall totals.</p> <p>Once several inches of snow had accumulated, tree branches and entire trees began to snap and crash onto homes, power lines and cars. By the end of the storm, over 600,000 customers lost power, with some remaining without power for over a week. The areas impacted by snow did not experience large wind gusts. However, areas along the shore did. Overall, this severe storm event resulted in eight deaths in New Jersey.</p> <p>In Hudson County, a significant number of trees came down due to the heavy, wet snow. In the Town of Harrison, a tree branch fell on a car on Grant Avenue, forcing the road to be closed. Another tree was reported down on Cleveland Avenue. In the Town of Harrison, numerous tree limbs and wires were down. Snowfall totals ranged from two inches in the City of Hoboken to 4.3 inches in the Town of Harrison. The Town of Harrison also experienced 1.76 inches of rain.</p>
<p>October 26 – November 8, 2012</p>	<p>Hurricane Sandy</p>	<p>DR-4086</p>	<p>Yes</p>	<p>Hurricane Sandy was the costliest natural disaster by far in the State of New Jersey. Record-breaking high tides and wave action combined with sustained winds as high as 60 to 70 mph with wind gusts as high as 80 to 90 mph to batter the State. Statewide, Sandy caused an estimated \$29.4 billion in damage, destroyed or significantly damaged 30,000 homes and businesses, affected 42,000 additional structures, and was responsible directly or indirectly for 38 deaths. A new temporary inlet formed in Mantaloking (Ocean County) where some homes were swept away. About 2.4 million households in the State lost power. It would take two weeks for power to be fully restored to homes and businesses that were inhabitable. Also devastated by the storm was New Jersey’s shellfish hatcheries including approximately \$1 million of losses to buildings and equipment, and product losses in excess of \$10,000 at one location alone.</p> <p>As storm surge from Sandy was pushed into the New York and Raritan Bays, sea water piled up within the Hudson River and coastal waterways and wetlands of northeastern New Jersey, including Newark Bay, Passaic and Hackensack Rivers, Kill van Kull, and Arthur Kill. Mandatory evacuations of people living along the coasts and rivers in Union, Essex, and Hudson Counties. Record breaking high tides and wave action was combined with sustained winds of 40 to 60 mph with gusts of 70 to 80 mph. Mandatory evacuations of people living along the coasts and rivers of Union, Essex, and Hudson Counties were conducted. Widespread power outages to more than one million people lasted up to two weeks.</p>





Table E-3. Coastal Storm Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				<p>Overall, Sandy caused approximately \$30 billion in damages in New Jersey and caused 12 deaths in the State.</p> <p>Hudson County sustained significant damage from the storm. Sandy impacted infrastructure, transportation and electrical facilities, as well as county, municipal and private properties. A wind gust of up to 77 mph was reported near the City of Bayonne. A wind gust of up to 68 mph was reported in the Town of Harrison. One fatality in Hudson County was reported. Several municipalities, including Jersey City, Hoboken, and Weehawken, experienced major flooding due to their low-lying locations and the unprecedented storm surge. The six hardest hit municipalities were Bayonne, Harrison, Hoboken, Jersey City, Kearny, and Weehawken. Flooding was concentrated in Jersey City, Bayonne, and Hoboken. There were major power outages throughout Hudson County, with some lasting up to 10 days. The Hudson County jail in the Town of Kearny suffered flooding as deep as two feet and corrections officers had to move some of the inmates into upper floors of the facility. The Palisades Medical Center in North Bergen required evacuations due to major flooding, as well as a loss of power and the failure of two generators. Twenty-two traffic signal controllers throughout Hudson County were damaged and repairs were required. Sandy had a major negative impact on businesses and industry in Hudson County. Many structures and facilities were damaged by storm surge or wind damage, along with equipment and stock within. According to NJDCA data, 2% of the households in the County had homes that sustained “severe” or “major” damage, totaling 4,407 units. Damages to the homes included damaged roofs and flying debris due to heavy winds. Flooding from storm surge and leaky roofs caused water damage. A total of 10,864 households applied for FEMA Individual Assistance with total estimated loss of houses exceeding \$25 million. Total debris in the County exceeded 150,000 cubic yards which required significant amount of resources for removal and disposal.</p> <p>Other effects of Superstorm Sandy included losses incurred by businesses unable to operate due to damage, lack of electricity, or the inability of employees to reach their workplace; as well as the loss of spending from commuters and tourists. The PATH system sustained approximately \$800 million in damages, which especially affected their low-lying stations. About \$120 million of NJ Transit’s total \$4 billion in Sandy losses occurred in Kearny and Hoboken. Several rail stations were flooded including the Hoboken Terminal. The Hudson-Bergen Light Rail experienced track washouts at the Port Imperial and West Side Avenue stations as well as flooding in Hoboken. Overall, the County had approximately \$20.95 million in property damage, with \$5 million of the damage to public infrastructure in the County.</p>
November 7-8, 2012	Nor’Easter	N/A	N/A	A strong Nor’Easter caused high winds along the coast, heavy snow in east central New Jersey, 10 foot waves along the ocean front and minor tidal flooding along the ocean front with the overnight high tide on November 7. It caused setbacks with restoration efforts





Table E-3. Coastal Storm Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				near and along coastal areas caused by post tropical storm Sandy, particularly in Monmouth and Ocean Counties. It also forced some coastal area evacuations again. Elsewhere across the state, winds were lighter, but accumulating snows occurred in most areas. Snowfall averaged one to five inches in most of the state, but reached six to 12 inches in Middlesex, Monmouth and Ocean Counties. In Hudson County, six inches of snow fell in Jersey City.
December 26-27, 2012	Nor'Easter	N/A	N/A	This Nor'Easter brought strong east winds to the region which resulted in three to five feet of storm surge and widespread minor to locally moderate coastal flooding along the coast. In Hudson County, Belleville Turnpike (Route 7) was closed from Schuyler Avenue to the S90 railroad track due to tidal flooding of the Hackensack River during the morning high tide on December 27 th .
February 13-14, 2014	Nor'Easter	N/A	N/A	A low pressure system developed along the northern Gulf Coast on February 12 th and moved towards Cape Hatteras and Virginia. It then moved up the east coast, passing east of Long Island and into the Gulf of Maine early on February 14 th . This system brought heavy snow and ice to northeast New Jersey. In Hudson County, widespread snowfall totals of 12 to 14 inches were reported. Freezing rain accretion of up to 3/10-inch was also reported.

Source: Hudson County Strategic Recovery Report 2014; FEMA 2014; NCDC 2014; NWS 2014; NJ HMP 2014; Blake et al. 2013

DR Major Disaster Declaration

EM Emergency Declaration

FEMA Federal Emergency Management Agency

Mph miles per hour

N/A Not Applicable

NJDCA New Jersey Department of Community Affairs

E.3.3 DROUGHT

Table E-4. Drought Incidents in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
2010	Drought	N/A	N/A	During the summer and fall, New Jersey experienced its hottest and 10 th driest summer since 1895. The drought watch originally was declared for Bergen, Essex, Hudson, Morris, and Passaic Counties, then was expanded statewide. It was the first time since 2005 that a statewide drought watch had been declared. The drought continued through the summer and into the fall until a wet October led to the cancellation of the drought watch on October 26, 2010. The drought was taxing for New Jersey farmers and the U.S. Secretary of Agriculture Thomas Vilsack declared all counties in southern, central and northwest New Jersey to be natural disaster areas. The declaration made farm operators eligible for assistance from the Farm Service Agency. The





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				assistance included low interest loans which could cover up to 100% of the dollar value of the crop losses.
June – July 2012	Rainfall Deficit and Extreme Temperatures	N/A	N/A	Rainfall total for June was only 0.05 inches; 0.47 inches below normal. This, along with extreme temperatures, has impacted the vegetation in Hudson County.
September – October 2012	Rainfall Deficit	N/A	N/A	A rainfall deficit at the Kearny weather station was the highest it has been in a year, 7.43 inches below normal. Monthly rainfall deficit was 0.89 inches below normal.
November 2013	Drought	N/A	N/A	A substantial portion of New Jersey was in its early stages of drought in November. Northern and central portions of the State have been exceedingly dry for several months which prompted the federal drought monitoring group to list about a quarter of the State as experiencing moderate drought, which included Hudson County. The northernmost quarter of New Jersey has seen a rainfall deficit of six to nine inches over the past several months.

Source: NOAA-NCDC 2014; FEMA 2014; NJ.com; Drought Impact Reporter 2014

E.3.4 EARTHQUAKE

Table E-5. Earthquake Events in New Jersey, 2008 to 2014

Date(s) of Event	Magnitude	Location	Losses/Impacts
February 3, 2009	3.0	3.5km South-Southwest of Rockaway, NJ	There were reports of people having felt this earthquake throughout New Jersey, including residents of Hudson County (Bayonne, Kearny, and North Bergen).
February 14, 2009	2.4	5 km North-Northeast of Boonton, NJ	There were reports of people having felt this earthquake throughout New Jersey.
July 1, 2009	2.8	2.25km East-Southeast of Pennsville, NJ	There were reports of people having felt this earthquake throughout New Jersey.
February 21, 2010	2.6	Gladstone, NJ	This earthquake hit just before 9 a.m. and prompted numerous phone calls to police. No damages were reported. Many people in New Jersey reported having felt this earthquake.
June 6, 2010	2.3	6 km Southeast of Sayreville, NJ	People reported having felt this earthquake throughout New Jersey.
August 23, 2011	5.8	Central Virginia	A moderate earthquake occurred in central Virginia and was felt throughout most of the east, from Georgia to southern Canada and from Indiana to coastal Maine. It was followed by four aftershocks. In New Jersey, the intensity ranged from 1 to 4 (weak to light). Areas underlain by thick silt and clay felt a stronger ground motion than did those where rock was very close to the surface. The quake was felt in South Brunswick and residents were calling 911 wanting to know what happened; some thought it was an explosion. It was also felt in the offices of Alcatel-Lucent in Murray Hill (Union County). Ceiling tiles fell out at a Sears store in Middletown. In Plainfield (Union County), employees in the Park Madison building were evacuated after the tremor. Union County’s administration building in Elizabeth reported continuous shaking. In New Brunswick (Middlesex County), employees





Table E-5. Earthquake Events in New Jersey, 2008 to 2014

Date(s) of Event	Magnitude	Location	Losses/Impacts
			<p>were evacuated from the County administration building. Atlantic City (Atlantic County) went into emergency mode with evacuations of high rises, hospitals, schools, casinos, and hotels. The County OEM received reports of a crack in a wall in a house and broken water pipe in a building. There were minor scattered power outages reported throughout the state.</p> <p>In Hudson County, residents in Jersey City exited their buildings as a tremor shook portions of the east coast and City Hill was evacuated. Numerous people were evacuated from their buildings in Journal Square. The earthquake triggered a spike in 911 calls in Jersey City. In the City of Hoboken, two buildings split from each other and all buildings from River Street were evacuated. Tremors from the earthquake were felt in the upper levels of the town halls of West New York, Secaucus, and North Bergen.</p>
November 5, 2012	2.0	3 km Southwest of Mahwah, NJ	People reported having felt this earthquake in various parts of New Jersey.
November 23, 2012	2.2	Greater Philadelphia Area/New Jersey	Numerous reports of people having felt the earthquake in southwestern New Jersey.
July 8, 2014	1.6	3 km W of Jersey City, NJ	This was identified as a micro-earthquake that occurred at 5:08am.

Source: NJGWS 2014; USGS 2014; Won-Young Kim, Lamont-Doherty Earth Observatory of Columbia University 1999

km Kilometers

N/A Not Applicable/Not Available

NJ New Jersey

OEM Office of Emergency Management

E.3.5 GEOLOGIC

Table E-6. Geological Hazard Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
April 17, 2011	Debris Flow	N/A	N/A	Heavy rain caused a debris flow in Jersey City. A backyard was destroyed after a retaining wall collapsed during the heavy rain on Odgen Avenue. Debris fell onto hill overlooking Paterson Plank Road
January 27, 2013	Debris Flow	N/A	N/A	Debris flow in Jersey City.
November 27, 2013	Debris Flow	N/A	N/A	Paterson Plank Road was closed from Congress Street in Jersey City to Harrison Place in the City of Hoboken due to debris flow after a heavy rain.

Source: NJDEP 2014; NOAA-NCDC 2014

N/A Not applicable

NCDC National Climatic Data Center

NJDEP New Jersey Department of Environmental Protection

NOAA National Oceanic and Atmospheric Administration





E.3.6 SEVERE WEATHER

Table E-7. Severe Weather Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
June 10, 2008	Thunderstorms and Wind	N/A	N/A	A strong cold front moved across northeast New Jersey causing multiple severe thunderstorms across the region. Strong winds in Hudson County ranged from 59 mph to over 100 mph. There was one injury and one fatality as a result of these strong winds. In the Town of Harrison, multiple downed trees were reported. A factory roof was destroyed on Passaic Avenue. In the Town of Kearny, numerous trees and wires were reported down, including one that fell on a person and injured them. Multiple tree limbs were reported down in the Town of Secaucus. Overall, the County had approximately \$92,000 in property damage from this event.
June 22, 2008	Severe Thunderstorms and Hail	N/A	N/A	Severe thunderstorms moved across northeast New Jersey. In Hudson County, golf ball sized hail was reported in the City of Bayonne. Nickel size hail was reported near Liberty State Park in Jersey City.
June 29, 2008	Severe Thunderstorm and Wind	N/A	N/A	An isolated thunderstorm over Hudson County brought strong winds to the area. In the City of Hoboken, a large well-anchored tent was blown over at Exchange Place, injuring one person. Wind speeds reached 57 mph and caused approximately \$1,000 in property damage.
July 23, 2008	Thunderstorms and Wind	N/A	N/A	Numerous showers and thunderstorms impacted the tri-state region, including Hudson County. In the Borough of East Newark, trees and wires were down which caused a structure fire and a care fire. Wind speeds reached up to 59 mph in the County. The storms caused approximately \$9,000 in property damage.
July 26, 2009	Thunderstorms and Wind	N/A	N/A	Multiple severe thunderstorms produced flash flooding across northeast New Jersey. In Hudson County, wind speeds ranged from 57 mph to 70 mph. In the Borough of East Newark, a tree down at Davis Avenue, landing on two cars and damaging a shed. Lightning struck and damaged a chimney of a home on Ann Street. In Jersey City, power lines were reported down. Overall, the County had approximately \$20,000 in property damage.
July 29, 2009	Thunderstorms and Wind	N/A	N/A	Scattered thunderstorms across northeast New Jersey produced heavy rain, strong winds and flash flooding. In Hudson County, power lines were reported down in the City of Bayonne. Also in Bayonne, the fire house at the corner of 4 th Street and Zabriskie Avenue was struck by lightning which caused the phone system and computers to fail. Two utility poles fell down onto Hook Road, bringing down power lines. Power lines were also reported down on Cottage Street. Wind speeds ranged from 57 to 59 mph in Bayonne. Overall, the County had approximately \$8,500 in property damage.
August 18, 2009	Hail	N/A	N/A	Three quarter-inch sized hail was reported in the City of Hoboken which was result of isolated severe thunderstorms that moved through Hudson County.





Table E-7. Severe Weather Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
October 7, 2009	Strong Wind	N/A	N/A	Strong west winds developed across Hudson County. Peak gusts ranged from 45 to 55 mph which caused scattered power outages.
January 25, 2010	Strong Wind	N/A	N/A	Strong southerly winds impacted Hudson County. The strong winds blew scaffolding off of a building in Jersey City; residents were evacuated. This caused approximately \$25,000 in property damage.
July 25, 2010	Severe Thunderstorms and Wind	N/A	N/A	A cold front produced severe thunderstorms across the region. In Hudson County, a tree downed wires on Rodgers Boulevard in the Borough of East Newark. Strong winds reached 59 mph. Overall, the County had approximately \$2,000 in damages from this event.
August 16, 2010	Thunderstorm and Strong Winds	N/A	N/A	An approaching cold front triggered isolated severe thunderstorms and strong winds, which impacted Bergen and Hudson Counties. Winds of 59 mph were reported in the City of Bayonne. The County had approximately \$2,000 in property damage.
February 18, 2011	High Wind	N/A	N/A	High winds across the region downed trees and tree limbs in Hudson County caused approximately \$100,000 in property damage.
August 19, 2011	Severe Thunderstorm	N/A	N/A	A passing mid-level disturbance triggered severe thunderstorms that produced large hail, damaging winds and lightning strikes across Bergen, Essex, Hudson, and Passaic Counties. Several homes were reported struck by lightning in the town of Bergenfield. A lightning strike ignited a fire at a house on York Street in Lambertville.
September 29, 2011	Severe Thunderstorms and Wind	N/A	N/A	Strong winds in Hudson County reached 70 mph in the Town of Secaucus which downed numerous trees throughout the Town. The County had approximately \$5,000 in damages.
July 18, 2012	Hail	N/A	N/A	Three quarter-inch sized hail impacted the Township of Weehawken and 0.88 inch size hail impacted the Borough of East Newark.
October 26 – November 8, 2012	Hurricane Sandy	DR-4048	Yes	<p>Hurricane Sandy was the costliest natural disaster by far in the State of New Jersey. Record-breaking high tides and wave action combined with sustained winds as high as 60 to 70 mph with wind gusts as high as 80 to 90 mph to batter the State. Statewide, Sandy caused an estimated \$29.4 billion in damage, destroyed or significantly damaged 30,000 homes and businesses, affected 42,000 additional structures, and was responsible directly or indirectly for 38 deaths. A new temporary inlet formed in Mantaloking (Ocean County) where some homes were swept away. About 2.4 million households in the State lost power. It would take two weeks for power to be fully restored to homes and businesses that were inhabitable. Also devastated by the storm was New Jersey's shellfish hatcheries including approximately \$1 million of losses to buildings and equipment, and product losses in excess of \$10,000 at one location alone.</p> <p>As storm surge from Sandy was pushed into the New York and Raritan Bays, sea water piled up within the Hudson River and coastal waterways and wetlands of northeastern New Jersey,</p>





Table E-7. Severe Weather Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				<p>including Newark Bay, Passaic and Hackensack Rivers, Kill van Kull, and Arthur Kill. Mandatory evacuations of people living along the coasts and rivers in Union, Essex, and Hudson Counties. Record breaking high tides and wave action was combined with sustained winds of 40 to 60 mph with gusts of 70 to 80 mph. Mandatory evacuations of people living along the coasts and rivers of Union, Essex, and Hudson Counties were conducted. Widespread power outages to more than one million people lasted up to two weeks. Overall, Sandy caused approximately \$30 billion in damages in New Jersey and caused 12 deaths in the State.</p> <p>Hudson County sustained significant damage from the storm. Sandy impacted infrastructure, transportation and electrical facilities, as well as county, municipal and private properties. A wind gust of up to 77 mph was reported near the City of Bayonne. A wind gust of up to 68 mph was reported in the Town of Harrison. One fatality in Hudson County was reported.</p> <p>Several municipalities, including Jersey City, Hoboken, and Weehawken, experienced major flooding due to their low-lying locations and the unprecedented storm surge. The six hardest hit municipalities were Bayonne, Harrison, Hoboken, Jersey City, Kearny, and Weehawken. Flooding was concentrated in Jersey City, Bayonne, and Hoboken. There were major power outages throughout Hudson County, with some lasting up to 10 days. The Hudson County jail in the Town of Kearny suffered flooding as deep as two feet and corrections officers had to move some of the inmates into upper floors of the facility. The Palisades Medical Center in North Bergen required evacuations due to major flooding, as well as a loss of power and the failure of two generators. Twenty-two traffic signal controllers throughout Hudson County were damaged and repairs were required. Sandy had a major negative impact on businesses and industry in Hudson County. Many structures and facilities were damaged by storm surge or wind damage, along with equipment and stock within. According to NJDCA data, 2% of the households in the County had homes that sustained “severe” or “major” damage, totaling 4,407 units. Damages to the homes included damaged roofs and flying debris due to heavy winds. Flooding from storm surge and leaky roofs caused water damage. A total of 10,864 households applied for FEMA Individual Assistance with total estimated loss of houses exceeding \$25 million. Total debris in the County exceeded 150,000 cubic yards which required significant amount of resources for removal and disposal.</p> <p>Other effects of Superstorm Sandy included losses incurred by businesses unable to operate due to damage, lack of electricity, or the inability of employees to reach their workplace; as well as the loss of spending from commuters and tourists. The PATH system sustained approximately \$800 million in damages, which especially affected their low-lying stations. About \$120 million of NJ Transit’s total \$4 billion in Sandy losses occurred in Kearny</p>





Table E-7. Severe Weather Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				and Hoboken. Several rail stations were flooded including the Hoboken Terminal. The Hudson-Bergen Light Rail experienced track washouts at the Port Imperial and West Side Avenue stations as well as flooding in Hoboken. Overall, the County had approximately \$20.95 million in property damage, with \$5 million of the damage to public infrastructure in the County.
January 31, 2013	High Winds	N/A	N/A	High south winds resulted in areas of damage and disruptions to power. In Hudson County, in the Town of Harrison, parts of a roof were blown off and landed on two cars. Scattered power outages were reported in the area. The County had approximately \$50,000 in property damage.
May 11, 2013	Thunderstorm and Wind	N/A	N/A	Isolated severe thunderstorms struck the northeast New Jersey metro area, producing heavy rain, strong winds, and flash flooding. In Hudson County, winds reached up to 70 mph. In the Town of Kearny, wires and a large tree branch were reported down on Washington Place. The County had approximately \$2,000 in property damage.
November 27, 2013	Rain and Wind	N/A	N/A	Rainfall totals in Hudson County ranged from 2.95 inches in the Town of Kearny to 3.09 inches in the Town of Harrison. Wind gusts of 37 mph were recorded in the City of Bayonne.
April 29- May 1, 2014	Heavy Rain	N/A	N/A	Rainfall totals in Hudson County reached 4.96 inches in the Town of Harrison.
May 23, 2014	Hail	N/A	N/A	Strong thunderstorms in the northeast corner of New Jersey brought large hail and flash flooding to the area. In Hudson County, 2.39 inches of hail was reported in the Town of Kearny.
July 3, 2014	Severe Thunderstorms and Flooding	N/A	N/A	In Hudson County, winds from the storm downed a tree on Pleasant Place in the Town of Kearny. Flash flooding was reported in the Borough of East Newark and the Town of Harrison. Passaic and Johnson Avenues were closed in the Borough of East Newark due to the flooding.

Source: Hudson County Strategic Recovery Report 2014; NCDC 2014; SPC 2014; NWS 2014

FEMA Federal Emergency Management Agency

mph miles per hour

N/A Not Applicable

NOAA National Oceanic and Atmospheric Administration

NCDC National Climatic Data Center

NWS National Weather Service

E.3.7 SEVERE WINTER STORM

Table E-8. Severe Winter Weather Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
December 26-27, 2010	Severe Winter Storm and Snowstorm	DR-1954	Yes	An intense low pressure system spread snowfall across the region, with bands of heavy snow, thunderstorms and strong winds. This blizzard brought between 20 and 30





Table E-8. Severe Winter Weather Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				inches of snow across northeast New Jersey. Winds of 25 to 40 mph and gusts exceeded 60 mph also impacted the area. A state of emergency was declared for New Jersey and all three major airports were closed during the storm. NJ Transit bus lines and several lines of PATH train service were suspended. About 8,000 customers were without power during the height of the storm.
October 29, 2011	Severe Storm	DR-4048	Yes	<p>Rain began to fall in southern New Jersey early on October 29, 2011 and spread north. Some northern areas of the State saw the precipitation begin as snow and during the morning, the rain turned to snow in central and northern New Jersey. Moderate to heavy snow continued into the afternoon, mixing with sleet in lower elevations. Once the snow tapered off during the morning of October 30, 2011, New Jersey had experienced its largest October snowstorm since the late 18th century.</p> <p>Once several inches of snow had accumulated, tree branches and entire trees began to snap and crash onto homes, power lines and cars. By the end of the storm, over 600,000 customers lost power, with some remaining without power for over a week.</p> <p>Snowfall totals in Hudson County ranged from two inches in the City of Hoboken to 4.3 inches in North Harrison. Damages in the County included a fallen tree branch on cars and other downed trees in the Town of Harrison.</p>
November 7-8, 2012	Winter Weather	N/A	N/A	This storm came on the heels of Hurricane Sandy, producing heavy wet snow, strong winds and minor coastal flooding. Snowfall totals ranged from three to six inches across the region. In Hudson County six of snow was reported in Jersey City.
February 8-9, 2013	Winter Storm	N/A	N/A	Heavy snowfall and gusty winds moved across northeast New Jersey bringing between eight and 12.5 inches of snow to Hudson County and wind gusts of up to 39 mph.
March 7-8, 2013	Winter Weather	N/A	N/A	Winter weather impacted northeast New Jersey, bringing sustained wind of 30 to 39 mph and gusts of 40 to 55 mph. Snowfall totals in Hudson County ranged from 4.8 inches in Secaucus to 7.8 inches in Harrison.
December 14, 2013	Snow	N/A	N/A	In Hudson County, snowfall totals ranged from five inches in the Town of Harrison and Jersey City to 5.5 inches in the Town of Secaucus.
January 2-3, 2014	Snow	N/A	N/A	In Hudson County, snowfall totals ranged from 6.5 inches in the Town of Harrison to eight inches in Jersey City, North Bergen, and Secaucus.
January 21-22, 2014	Snow	N/A	N/A	This was the largest snowstorm of January 2014. Snowfall rates exceeded two inches per hour at some locations in the State. In Hudson County, snowfall totals ranged from 9.5 inches in Hoboken to 12.5 inches in Secaucus.





Table E-8. Severe Winter Weather Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
February 3, 2014	Snow	N/A	N/A	Heavy, wet snow fell in the northern half of the State, where the southern part saw rain. Snow increased rapidly to the north with most counties receiving more than eight inches of snow. In Hudson County, snowfall totals ranged from six inches in Secaucus to 7.5 inches in North Bergen.
February 5, 2014	Winter Storm	N/A	N/A	Heavy snow, sleet, and freezing rain fell in northeast New Jersey, with 3.2 to 5.5 inches of snow in Hudson County and 0.1 to 0.3 inches of ice accretion from freezing rain. Schools in the County closed due to the storm.
February 13-14, 2014	Winter Storm	N/A	N/A	This was the largest snowstorm of the 2013-2014 winter season. The northwest saw snow while other parts of the State saw a mix of snow, sleet, freezing rain, and rain. Snowfall totals in Hudson County ranged from 12.1 inches in Hoboken to 14.5 inches in Harrison. Freezing rain accretion of up to 3/10 inch also occurred in surrounding areas.

Source: NOAA-NCDC 2014; NWS 2014; FEMA 2014; SPC 2014; ONJSC 2014

DR Disaster Declaration

FEMA Federal Emergency Management Agency

N/A Not Applicable

NCDC National Climatic Data Center

NOAA National Oceanic and Atmospheric Administration

NWS National Weather Service

SPC Storm Prediction Center

E.3.8 WILDFIRE

Table E-9. Wildfire Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
March 17, 2009	Brush Fire	N/A	N/A	A vacant warehouse caught fire in the City of Hoboken. Embers flew over the neighborhood and set a brush fire to the west of the warehouse along the Palisades cliffs on the Union City side of the NJ Transit light rail tracks. NJ Transit was notified to shut down the power on the two rail lines located between a fence along the driveway and the cliffs.
April 9, 2013	Brush Fires	N/A	N/A	Warm and dry conditions were blamed for three brush fires along the New Jersey Turnpike. The fires burned in Carlstadt (Bergen County), Ridgely (Bergen County), and the Town of Kearny (Hudson County). The total burn area from these three fires was one mile long and 500 feet wide.
March 26, 2014	Brush Fire	N/A	N/A	A large brush fire broke out in the Meadowlands along Route 280 near the New Jersey Turnpike in the Town of Harrison. Fire departments from Kearny, East Newark, and Harrison were on scene. The fire was close to the NJ Transit tracks, forcing the Montclair-Boonton and Morris-Essex lines to suspend service. Other lines suspended their services between Newark and New York City. PATH service between Newark and Journal Square were also suspended in both directions.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
April 3, 2014	Brush Fire	N/A	N/A	Several small brush fires broke out near the tracks of the Hudson-Bergen light rail at Liberty State Park station (Jersey City). The fire caused delays on the light rail.
April 19, 2014	Brush Fire	N/A	N/A	Brush fire along Fish House Road in Kearny

Source(s): NJHMP 2014; NJFFS 2014; NOAA-NCDC 2014
 FEMA Federal Emergency Management Agency
 HMP Hazard Mitigation Plan
 N/A Not applicable
 NCDC National Climatic Data Center
 NJ New Jersey
 NJFFS New Jersey Forest Fire Service
 NOAA National Oceanic and Atmospheric Administration
 PATH Port Authority Trans-Hudson

E.3.9 EXTREME TEMPERATURE

Table E-10. Extreme Temperature Events in Hudson County, 2008 to 2014

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
July 4 to 7, 2010	Extreme Heat	N/A	N/A	A hot air mass developed over the central portion of the U.S. moved eastward and settled over the New York/New Jersey area during the second half of the 4 th of July weekend. As the weather pattern stalled, the air mass was able to warm further due to a lack of moisture over the region. Several records were broken. Temperatures ranged from 90°F to 105°F. One fatality was reported from this event.
July 21 to 24, 2011	Heat Wave	N/A	N/A	One of the most oppressive heat waves since July 1995. It caused two deaths and hundreds of heat-related injuries. Many locations had high temperatures that were in excess of 100°F. July 22 was the hottest, with heat index values of 110°F to 120°F. Many counties and municipalities opened cooling centers for its residents. In Hudson County, temperatures hit 104°F in Jersey City on the 22 nd . In the Town of Harrison, temperatures reached 107°F, setting a record for the weather station in the Town.
July 17-20, 2013	Excessive Heat / Heat Wave	N/A	N/A	A large area of high pressure remained nearly stationary to the south which resulted in excessive heat across northeast New Jersey. Temperatures reached 100°F in some areas with the heat index nearly 110°F in multiple locations. Many locations in northern New Jersey saw temperatures peak anywhere from the middle 90s to the low 100s during this heat wave. In Hudson County, dozens of firefighters were treated for heat exhaustion in Jersey City after a four-alarm fire. The maximum temperature for July 19 th in Jersey City was 98°F with a minimum temperature of only 83°F.
Winter 2013/2014	Cold	N/A	N/A	Enduring wind chill resulted in a December through March average statewide temperature of 31.9°F. This was the 20 th coldest period on record. In Hudson County, the Town of Harrison had its lowest minimum temperature of 1°F on





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Hudson County Designated?	Description
				January 8, 2014, setting a record for the weather station at the Town.

Source: NOAA-NCDC 2014; ONJSC Rutgers University 2013a; MRCC 2014; NWS 2014

°F degrees Fahrenheit

FEMA Federal Emergency Management Agency

MRCC Midwestern Regional Climate Center

N/A Not Applicable

NCDC National Climatic Data Center

NOAA National Oceanic and Atmospheric Administration

ONJSC Office of the New Jersey State Climatologist





APPENDIX F. MITIGATION STRATEGY SUPPLEMENT

This appendix summarizes additional activities and resources provided to plan participants to support the update of the mitigation strategy.

F.1 2015 Mission Statement, Goals and Objectives Review

County and jurisdiction planning documents and recent policies changes were reviewed and discussed with the Planning Partnership to help inform the review and update of the mission statement, goals and objectives. Table F-1 summarizes the Steering Committee review and evaluation of the 2015 mitigation statement, goals and objectives. Red text notes decisions or changes made.

Table F-1. Steering Committee Review of the 2015 Mission Statement, Goals and Objectives

2015 Mission Statement	Mission Statement Evaluation (Keep as is? Change?)
The mission of the Hudson County Hazard Mitigation Plan is to identify and minimize, through cost-effective and sustainable mitigation efforts, the vulnerability to natural hazards in order to protect the health, safety, property, quality of life, environment and economy within Hudson County.	<i>Keep as is</i>

Goal	Goal Evaluation	Objective	Objective Evaluation
Goal 1: Protect life	<i>Keep as is</i>	1.1: Develop, enhance and protect early warning and emergency communications systems	<i>Keep as is</i>
		1.2: Improve and support Comprehensive Regional Evacuation Plan	Keep; this is still a priority. Currently, there are tiered evacuation zones being established with USACE
		1.3: Strengthen County and local planning, building codes, ordinances and enforcement	<i>Keep as is</i>
		1.4: Identify the need for, and acquire, any special emergency services, training, and equipment to enhance response capabilities for specific hazards.	<i>Keep as is</i>
		<i>NEW: Enhance sheltering capabilities at the local level</i>	<i>Sheltering continues to be a challenge in and for the County. There are shelter locations and capacity is available through American Red Cross; however, we do not have sufficient capacity for all residents and to support neighboring jurisdictions.</i>
Goal 2: Protect property	<i>Keep as is</i>	2.1: <i>Protect, maintain and</i> increase resilience of infrastructure and critical facilities	<i>Reworded for clarity</i>
		2.2: Reduce repetitive and severe repetitive losses	<i>Keep as is</i>
		2.3: Assure coordination between communities and encourage shared	<i>Keep as is</i>





Goal	Goal Evaluation	Objective	Objective Evaluation
		services in acquiring, maintaining and providing emergency services	
		2.4: Reduce the risk of utility failure	<i>Keep as is</i>
		2.5: Review existing local laws and ordinances, safety inspection procedures, and applicable rules to help ensure that they employ the most recent and generally accepted standards for the protection of buildings and environmental resources	<i>Keep as is</i>
Goal 3: Promote a sustainable economy	<i>Keep as is</i>	3.1: Identify and pursue funding opportunities to develop and implement local and county mitigation activities.	<i>Keep as is</i>
		3.2: Provide/Improve flood protection with flood control structures, and drainage maintenance plans	<i>Keep as is</i>
		3.3: Enhance stakeholder education and training about hazard risks and mitigation	<u>Made more specific to fit under this goal</u>
Goal 4: Protect the environment	<i>Keep as is</i>	4.1: Review and incorporate updated hazard data into the County Hazard Mitigation Plan and other county and local planning mechanisms	
		4.2: Increase support for the development of local mitigation planning and projects that provide co-benefits and support a healthy and equitable environment	<i>Made more specific to support a healthy and equitable environment</i>
		4.3: Better characterize flood/stormwater hazard events by conducting additional hazard studies and identify inadequate stormwater facilities and poorly drained areas	<i>Keep as is</i>
		4.4: Prevent (or discourage) new development in hazardous areas or ensure that if building occurs in high-risk areas that it is done in such a way as to minimize risk	<i>Keep as is</i>
		NEW: Strengthen understanding of, and adaptation to, a changing climate	
Goal 5: Increase public awareness	<i>Keep as is</i>	5.1: Educate the public on the risk from natural and man-made hazards and increase personal hazard preparation, mitigation, response, and recovery activities for socially-vulnerable populations.	<i>Keep and added socially-vulnerable populations</i>
		5.2: Encourage and support additional related training and education of public officials	<i>Keep as is</i>
		5.3: Integrate the recommendations of this plan into existing local plans/programs.	<i>Keep as is</i>
Goal 6: Support continuity of operations pre-,	<i>Keep as is</i>	6.1: Ensure continuity of government operations, emergency services and essential facilities during and	<i>Keep as is</i>





Goal	Goal Evaluation	Objective	Objective Evaluation
during and post-hazard events		immediately after disaster and hazard events	
		6.2: Increase resiliency by facilitating rapid disaster recovery	<i>Keep as is</i>
		6.3: Support and encourage the implementation of alternative energy source	<i>Keep as is</i>
		NEW: Implement mitigation measures that promote the reliability of lifeline systems	

F.2 Mitigation Strategy Workshop Resources

In January 2020, a Mitigation Strategy Workshop was held for all plan participants. The workshop consisted of an overview of the mitigation strategy update followed by a break-out of small groups. The small groups discussed common problem statements and vulnerabilities and assisted each other by identifying mitigation alternatives. Resources available at the workshop included the following to assist with the identification of mitigation alternatives and the development of the mitigation strategy workshops found in Section 9 (Jurisdictional Annexes).

1. FEMA Local Mitigation Handbook
2. Strengths, Weaknesses, Obstacles and Opportunities exercise results
3. Citizen survey results
4. FEMA Mitigation action types (Table F-2)
5. FEMA Mitigation Ideas
6. Mitigation Catalog for Hudson County (Table F-3)
7. FEMA Project Useful Life factsheet
8. Mitigation funding sources at the federal, state and local levels (Table F-4)

F.2.1 TYPES OF MITIGATION ACTIONS

A mitigation action is a specific action, project, activity, or process taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. Implementing mitigation actions helps achieve the plan’s mission and goals. The actions to reduce vulnerability to threats and hazards form the core of the plan and are a key outcome of the planning process.

The primary types of mitigation actions to reduce long-term vulnerability are:

- Local Plans and Regulations (LPR)
- Structure and Infrastructure Projects (SIP)
- Natural Systems Protection (NSP)
- Education and Awareness Programs (EAP)





Table F-2. FEMA Mitigation Action Types

Mitigation Type	Description	Examples
Local Plans and Regulations	These actions include government authorities, policies, or codes that influence the way land and buildings are developed and built.	<ul style="list-style-type: none"> Comprehensive plans Land use ordinances Subdivision regulations Development review Building codes and enforcement NFIP Community Rating System Capital improvement programs Open space preservation Stormwater management regulations and master plans
Structure and Infrastructure Projects	<p>These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure.</p> <p>This type of action also involves projects to construct manmade structures to reduce the impact of hazards.</p> <p>Many of these types of actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.</p>	<ul style="list-style-type: none"> Acquisitions and elevations of structures in flood prone areas Utility undergrounding Structural retrofits Floodwalls and retaining walls Detention and retention structures Culverts Safe rooms
Natural Systems Protection	These are actions that minimize damage and losses and also preserve or restore the functions of natural systems.	<ul style="list-style-type: none"> Sediment and erosion control Stream corridor restoration Forest management Conservation easements Wetland restoration and preservation
Education and Awareness Programs	These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady or Firewise Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an important foundation. A greater understanding and awareness of hazards and risk among local officials, stakeholders, and the public is more likely to lead to direct actions.	<ul style="list-style-type: none"> Radio or television spots Websites with maps and information Real estate disclosure Presentations to school groups or neighborhood organizations Mailings to residents in hazard-prone areas StormReady Firewise Communities

F.2.2 MITIGATION CATALOG

Table F-3 presents mitigation alternatives organized by hazard of concern at the personal, corporate and government scale.





Table F-3. Mitigation Catalog

COASTAL EROSION/SEA LEVEL RISE		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Retrofit/elevate structures ○ Purchase flood insurance • Increase Capability <ul style="list-style-type: none"> ○ Improve awareness of hazard and insurance options 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Relocate critical infrastructure, such as power lines, underground ○ Retrofit structures, elevate mechanicals • Increase Capability: <ul style="list-style-type: none"> ○ Improve awareness of hazard and insurance options 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Support sustainable and resilient land use and community development ○ Recognize sea level rise and erosion areas as a hazard overlay for planning ○ Limit new development and critical infrastructure inside the sea level rise area ○ Develop design standards for development inside sea level rise hazard area ○ Incentivize improved flood risk management • Increase Capability: <ul style="list-style-type: none"> ○ Develop guidance and checklist for developers to assist with integration and incorporation of green and sustainable approaches ○ Encourage property owners to purchase flood insurance





COASTAL STORM/SEVERE WEATHER		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Retrofit structures (improved roofing, glazing, insulation, etc.) ○ Provide for redundant heat and power ○ Contact municipality or utilities to trim or remove trees that could affect power lines ○ Plant appropriate trees near home and power lines ("Right tree, right place" National Arbor Day Foundation Program. • Increase Capability <ul style="list-style-type: none"> ○ Improve awareness of impending severe weather (e.g. obtain a NOAA weather radio) ○ Promote 72-hour self-sufficiency ○ Provide for redundant heat and power ○ Participate in NOAA's SKYWARN training to increase knowledge and awareness of hazard 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Relocate critical infrastructure, such as power lines, underground ○ Reinforce or relocate critical infrastructure such as powerlines so that it meets performance expectations. • Increase Capability: <ul style="list-style-type: none"> ○ Contact municipality or utilities to trim or remove trees that could affect power lines ○ Create redundancy (e.g. backup generators) ○ Improve awareness of impending severe weather (e.g. obtain a NOAA weather radio) ○ Develop a Continuity of Operations Plan (COOP) ○ Monitor impending storm events so that you can release employees in such a manner as to not negatively impact emergency response personnel/services. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Harden infrastructure such as locating utilities underground. ○ Trimming trees back from power lines ○ Designate snow routes and strengthen critical road sections and bridges. ○ Adopt ordinances that regulate the type and quantity of trees planted near utility lines ○ Relocate critical infrastructure, such as power lines, underground • Increase Capability: <ul style="list-style-type: none"> ○ Support programs that proactively manage problem areas by use of selective removal of hazardous trees, tree replacement, etc. ○ Enforce building codes that require all roofs to withstand snow loads. ○ Increase communication alternatives ○ Modify land use and environmental regulations to support vegetation management activities that improve reliability in utility corridors. ○ Modify landscape and other ordinances to encourage appropriate planting near overhead power, cable, and phone lines ○ Promote awareness and participation in alert systems ○ Provide NOAA weather radios to the public ○ Create/Enhance "mutual aid" agreements for response to all emergencies ○ Create/identify evacuation routes to be utilized during severe storm events. ○ Develop debris management plans. ○ Join "Storm-Ready" program ○ Provide early warning of impending severe storm events to identified critical or essential facilities. This would include facilities such as large employment centers, schools, hospitals





COASTAL STORM/SEVERE WEATHER		
		<ul style="list-style-type: none"> ○ Promote emergency power supplies to private property. ○ Improve, expand or harden communications facilities and services ○ Recruit additional emergency personnel or use mutual aid agreements ○ Increase sheltering capabilities ○ Increase capability to respond to power outages and downed power lines. Establish partnerships with utility providers through pro-active planning.

DAM AND LEVEE FAILURE		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> ● Manipulate the Hazard: <ul style="list-style-type: none"> ○ ● Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ No further development in failure inundation zone ● Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Regular inspection, maintenance and enforcement program to help ensure structural integrity of dams and levees ● Increase Capability <ul style="list-style-type: none"> ○ Dam owner/operators should continue to be aware of and understand dam inspection and reporting requirements. 	<ul style="list-style-type: none"> ● Manipulate the Hazard: <ul style="list-style-type: none"> ○ Increase freeboard ● Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ No further development in failure inundation zone ● Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Regular inspection, maintenance and enforcement program to help ensure structural integrity of dams and levees ● Increase Capability: <ul style="list-style-type: none"> ○ Dam owner/operators should continue to be aware of and understand dam inspection and reporting requirements. ○ Ensure EAPs are kept in compliance with State regulations 	<ul style="list-style-type: none"> ● Manipulate the Hazard: <ul style="list-style-type: none"> ○ Increase freeboard ● Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ No further development in failure inundation zone ● Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Structural flood control: levee's, dams, channelization, revetments. ○ Regular inspection, maintenance and enforcement program to help ensure structural integrity of dams and levees ● Increase Capability: <ul style="list-style-type: none"> ○ More public outreach and education efforts ○ Conduct a watershed analysis for proposed dam or reservoir projects





DROUGHT		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Consider stored water/captured water techniques during dry seasons. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Drought resistant landscapes ○ Reduce water system losses ○ Regularly check for leaks to minimize water supply losses ○ Install low-flow water saving showerheads and toilets ○ Turn water flow off while brushing teeth or during other cleaning activities ○ Adjust sprinklers to water the lawn and not the sidewalk or street. ○ Run the dishwasher and washing machine only when they are full. ○ Check for leaks in plumping or dripping faucets. ○ Install rain-capturing devices for irrigation. ○ Install graywater systems in homes to encourage water reuse. • Increase Capability <ul style="list-style-type: none"> ○ Practice active water conservation techniques. ○ Seek ways to operate wells in such a way to enhance their functional longevity and supply capability. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Consider stored water/captured water techniques during dry seasons. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Drought resistant landscapes ○ Reduce private water system losses ○ Identify alternate water supply sources. ○ Install low-flow water saving showerheads and toilets ○ Adjust sprinklers to water the lawn and not the sidewalk or street. • Increase Capability: <ul style="list-style-type: none"> ○ Practice active water conservation ○ Develop a COOP ○ Create a water conservation plan. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ Groundwater recharge through stormwater management • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Identify and create groundwater back up sources. ○ Create /identify new impounded water supply points. ○ Developing new or upgrading existing water delivery systems to eliminate breaks and leaks. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Water use conflict regulations ○ Reduce water system losses ○ Distribute water saving kits ○ Identify sites ideally suited for ground water recharge. ○ Implement stormwater retention in regions ideally suited for groundwater recharges. ○ Utilize drought resistant landscapes on community owned facilities. ○ Encourage citizens to take water-saving measures • Increase Capability: <ul style="list-style-type: none"> ○ Public education on drought resistance ○ Identify alternative water supplies for time of drought. Mutual aid agreements with alternative suppliers. ○ Develop a drought contingency plan ○ Develop criteria-"triggers" for drought related actions ○ Improve accuracy of water supply forecasts ○ Provide incentives to influence active water conservation techniques such as water user rate reductions. ○ Establish protocol for salt water desalination to be implemented during conditions of severe drought.





DROUGHT		
		<ul style="list-style-type: none">○ Consider providing incentives to property owners that utilize drought resistant landscapes in the design of their homes.○ Use of water buffalo tankers○ Promote well usage techniques that strive to enhance functional longevity and supply capability of private water supply wells.○ Develop an ordinance to restrict the use of public water resources for non-essential usage, such as landscaping, washing cars, filling swimming pools, etc.





EARTHQUAKES		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Locate outside of hazard area (off soft soils) • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Retrofit structure (anchor house structure to foundation) ○ Secure household items that can cause injury or damage such as water heaters, bookcases, and other appliances ○ Build to higher design standards • Increase Capability <ul style="list-style-type: none"> ○ Practice "drop, cover and hold" ○ Develop household mitigation plan, such as creating a retrofit savings account, communication capability with outside, 72 hr. self-sufficiency during an event ○ Increase capability by having cash reserves for reconstruction ○ Become informed on the hazard and risk reduction alternatives available. ○ Develop a post-disaster action plan for your household. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Locate/relocate mission critical functions outside hazard area where possible. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Build redundancy for critical functions/facilities ○ Retrofit critical buildings/areas housing mission critical functions. • Increase Capability: <ul style="list-style-type: none"> ○ Adopt higher standard for new construction -- Consider "performance-based design" when building new structures ○ Increase capability by having cash reserves for reconstruction ○ Inform your employees on the possible impacts of earthquake and how to deal with them at your work facility. ○ Develop a Continuity of Operations Plan (COOP) 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Locate critical facilities or functions outside of hazard area where possible. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Harden infrastructure ○ Provide redundancy for critical functions ○ Adopt higher regulatory standards for structures ○ Conduct "rapid screening" programs for critical facilities to identify facilities that may be particularly prone to EQ damage, then develop investigation/action plans to address such structures • Increase Capability: <ul style="list-style-type: none"> ○ Provide better hazard maps ○ Provide technical information and guidance ○ Enact tools to help manage development in hazard areas: tax incentives, information ○ Include retrofitting/replacement of critical system elements in CIP





EARTHQUAKES		
		<ul style="list-style-type: none"> ○ Develop strategy to take advantage of post disaster opportunities ○ Warehouse critical infrastructure components such as pipe, power line, and road repair material. ○ Develop and adopt a Continuity of Operations / Continuity of Government Plan (COOP/COG) ○ Initiate triggers guiding improvements such as: (< 50% substantial damage/improvements) ○ Further enhance seismic risk assessment to target high hazard buildings for mitigation opportunities. ○ Develop a post disaster action plan that includes a grant funding and debris removal components. ○ Utilize warning systems ○ Educate builders and developers on seismic construction standards

EXTREME TEMPERATURES		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> ● Manipulate the Hazard: <ul style="list-style-type: none"> ○ None ● Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Insulate structure ○ Provide redundant power. 	<ul style="list-style-type: none"> ● Manipulate the Hazard: <ul style="list-style-type: none"> ○ None ● Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Create redundancy to power supply to deal with power grid vulnerability during high demands ● Reduce vulnerability to the hazard: 	<ul style="list-style-type: none"> ● Manipulate the Hazard: <ul style="list-style-type: none"> ○ None ● Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Create redundancy to power supply to deal with power grid vulnerability during high demands ● Reduce vulnerability to the hazard:





EXTREME TEMPERATURES		
<ul style="list-style-type: none"> ○ Plant appropriate trees near home ("Right tree, right place" National Arbor Day Foundation Program). ● Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Air condition non-conditioned buildings. ○ Install backup heat (e.g. wood burning stoves) ○ Incorporate "green building" methods (e.g. green roofs) ● Increase Capability <ul style="list-style-type: none"> ○ Be aware of impending heat waves. ○ Inform yourself on the do's and don'ts during heat waves. ○ Have fans available for use during peak demands in leu of air conditioning. ○ Install back-up generators ○ Know the location of cooling and warming shelters 	<ul style="list-style-type: none"> ○ Air condition non-conditioned buildings. ○ Incorporate "green building" methods (e.g. green roofs) ● Increase Capability: <ul style="list-style-type: none"> ○ Inform employees of the seriousness of heat waves. ○ Monitor weather forecasts. ○ Establish a COOP. 	<ul style="list-style-type: none"> ○ Air condition public buildings. ○ Incorporate "green building" methods (e.g. green roofs) ● Increase Capability: <ul style="list-style-type: none"> ○ Inform the public on the seriousness of heat-waves ○ Identify populations vulnerable to extreme heat (elderly, poor) for early warning during potential heat waves. ○ Enhance weather forecasting capability ○ Distribute fans to vulnerable populations. ○ Promote selective approaches to cooling your residences and businesses during peak demands.





FLOOD		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ Clear stormwater drains and culverts • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Locate or re-locate outside of hazard area ○ Institute low impact development techniques on property • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Retrofit existing structures and utilities above Base Flood Elevation (BFE) ○ Floodproof existing structures (wet- or dry floodproofing). ○ Store hazardous materials above BFE or outside of floodprone areas • Increase Capability <ul style="list-style-type: none"> ○ Develop household mitigation plan, such as retrofit savings, communication capability with outside, 72-hr. self-sufficiency during and after an event ○ Buy flood insurance 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ Clear stormwater drains and culverts • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Locate business critical facilities or functions outside hazard area ○ Institute low impact development techniques on property • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Build redundancy for critical functions/ retrofit critical buildings. ○ Provide flood-proofing measures when new critical infrastructure must be located in floodplains. ○ Harden structures and infrastructure (wet and dry-floodproofing) ○ Store hazardous materials above BFE or outside of floodprone areas • Increase Capability: <ul style="list-style-type: none"> ○ Increase capability by having cash reserves for reconstruction ○ Develop and adopt a Continuity of Operations Plan (COOP) ○ Solicit "cost-sharing" through partnerships with private sector stakeholders on projects with multiple benefits. ○ Dam owner/operators should continue to be aware of and understand dam inspection and reporting requirements. ○ Ensure that all dam EAP's are kept in compliance with State regulations 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ Clear stormwater drains and culverts ○ Dredging, levee construction, providing retention areas... ○ Structural flood control: levee's, dams, channelization, revetments. ○ Construct regional stormwater control facilities ○ Lead and develop a county-wide stream clearing strategy including the development of thresholds for response/action. • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Locate/re-locate critical facilities outside of hazard area ○ Acquire or relocate identified repetitive loss properties. ○ Promote open space uses in identified high hazard areas via techniques such as: PUD's, easements, setbacks, greenways, sensitive area tracks. ○ Adopt land development criteria such as PUD's, Density transfers, clustering ○ Institute low impact development techniques on property ○ Acquire vacant land or promote open space uses in developing watersheds to control increases in runoff ○ Pass an ordinance to incorporate additional zoning classifications into flood zones within each municipality. ○ Increase floodplain standards within municipal. ○ Continue development application reviews by County Planning Board to reduce risky development practices. • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Harden structures and infrastructure (wet and dry-floodproofing) ○ Provide redundancy for critical functions and infrastructure





FLOOD		
		<ul style="list-style-type: none"> ○ Adopt appropriate regulatory standards such as cumulative substantial improvement/damage, freeboard, lower substantial damage threshold, compensatory storage. ○ Stormwater management regulations and master planning. ○ Adopt "no-adverse impact" floodplain management policies that strive to not increase the flood risk on down-stream communities. ○ Implement as-built regulatory requirements ○ Implement site review ordinances/requirements ○ Establish stream maintenance programs with stakeholders ○ Incorporate retrofitting/replacement of critical facilities and infrastructure in Capital Improvement Plans (CIPs) ○ Promote the use of vegetation/plants as green erosion control measures to reduce localized flooding. ● Increase Capability: <ul style="list-style-type: none"> ○ Produce better hazard maps, and improve access to flood hazard mapping ○ Capture/survey "high-water" marks during flood events. ○ Provide technical information and guidance on appropriate mitigation options available to businesses and homeowners ○ Enact tools to help manage development in hazard areas (stronger controls, tax incentives, information) ○ Establish an additional layer of zoning within flood hazard areas ○ Develop strategy to take advantage of post disaster opportunities ○ Improve compliance with and enforcement of the NFIP ○ Develop mitigation partnerships with regional stakeholders





FLOOD		
		<ul style="list-style-type: none"> ○ Join Community Rating System (CRS) program, or improve level of participation in CRS ○ Develop and implement a public information strategy for flood hazard awareness, flood insurance (NFIP) and mitigation ○ Maintain existing data as well as gather new data needed to define risks and vulnerability. ○ Create a building and elevation inventory of structures in the floodplain ○ Identify flood prone areas that may be in need of new flood studies ○ Establish a program to identify and educate owners of flood-prone properties of potential mitigation options (e.g. elevations, relocations) ○ Charge a hazard mitigation fee on all new permits to create a hazard mitigation funding source for initiatives or grant cost share requirements. ○ Integrate floodplain management policies into other planning mechanisms within the planning area. ○ Establish a Stormwater Utility to deal with urban drainage/flooding issues ○ Establish incentives to promote flood hazard mitigation of private property (e.g. permit fee waivers). ○ Adopt ordinances/standards for cumulative damages and/or improvements ○ Upgrade NFIP Floodplain ordinance, as well as other ordinances to current or above current standards. ○ Develop and adopt a COOP ○ Join "Storm Ready" Program ○ Participate in county and regional training programs ○ Provide additional training/certification to NFIP floodplain administrators and code officials.





FLOOD		
		<ul style="list-style-type: none">○ Implement annual training to account for high turnover of municipal officials.○ Maintain and enhance flood forecasting ability, including the establishment and maintenance of critical stream gages○ Promote awareness and participation in alert systems○ Support and participate in regional flood management efforts, such as the Flood Mitigation Task Force or similar efforts○ Support and implement hazard disclosure for the sale/re-sale of property in identified risk zones.○ Provide continued and enhanced training for emergency responders○ Establish a revolving "bank" or budget line item to fund grant application support○ Continue to review updated Flood Insurance Rate Maps to ensure accuracy as well as maintaining lines of communication with homeowners to make them aware of potential changes related to their property status.○ Provide trainings for FPA's on the NFIP/Floodplain Best Practices and also pursue CFM accreditation for municipal FPA's.○ Build and maintain relationships to develop regional watershed/floodplain mitigation solutions.○ Pursue grant funding opportunities to fund repairs of catchments and infrastructure on a proactive basis.○ Explore grant funding opportunities related to climate change to fund mitigation projects.





GEOLOGIC HAZARD		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ None • Increase Capability <ul style="list-style-type: none"> ○ None 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ None • Increase Capability: <ul style="list-style-type: none"> ○ None 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Consider hazard areas in land-use planning, zoning and development siting ○ Acquire structures in highest hazard areas (demolish and convert to restricted open space) ○ Relocation of Structures ○ Open Space Preservation • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Consider hazard areas in land-use planning and development siting ○ Stabilize vulnerable slopes near structures and infrastructure. ○ Work with stakeholders to develop appropriate risk reduction strategies. • Increase Capability: <ul style="list-style-type: none"> ○ Increase understanding of hazard areas (e.g. Landslide Susceptibility Maps) -geotechnical surveys, LIDAR and mapping ○ Work with stakeholders such as USGS, NJDEP to develop appropriate risk reduction strategies. ○ Support and implement hazard disclosure for the sale/re-sale of property in identified risk zones ○ Develop county-level programs to document slide events (landslide inventory), and maintain its currency





SEVERE WINTER STORMS		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Plant appropriate trees near home and power lines (“Right tree, right place” National Arbor Day Foundation) • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Insulate House to provide greater thermal efficiency and reduce heat loss. ○ Provide redundant heat and power ○ Insulate Structure ○ Ensure natural gas input/release valves do not get covered in snow • Increase Capability <ul style="list-style-type: none"> ○ Trim or remove trees that could affect power lines ○ Prepare emergency food and supplies to be self-sufficient for at least 72 hours in the event of a severe winter storm. ○ Be aware of inclement weather conditions and move your vehicles off of the street as severe weather systems approach. ○ Retrofit structures 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Relocate critical infrastructure, such as power lines, underground ○ Reinforce or relocate critical infrastructure such as powerlines so that it meets performance expectations. ○ Install tree wire • Increase Capability: <ul style="list-style-type: none"> ○ Trim or remove trees that could affect power lines ○ Create redundancy in utilities and communications ○ Develop a Continuity of Operations Plan (COOP) to address operations before, during and after coastal storm events. ○ Utilize weather radios at the workplace to keep your employees aware of severe weather conditions. 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ None • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Harden infrastructure such as locating utilities underground where appropriate. ○ Trimming trees back from power lines ○ Designate snow routes and strengthen critical road sections and bridges. ○ Adopt codes and regulations that address the issues of parking of vehicles along roadways during severe weather events. ○ Develop or enhance the capacity/capability of stormwater conveyance systems. ○ Provide backup power sources at vital critical facilities. • Increase Capability: <ul style="list-style-type: none"> ○ Support programs such as "Tree Watch" that proactively manage problem areas by use of selective removal of hazardous trees, tree replacement, etc. ○ Establish and enforce building codes that require all roofs to withstand snow loads-- Develop/Improve/Enforce building Codes in Hazard Areas ○ Increase communication alternatives ○ Modify land use and environmental regulations to support vegetation management activities that improve reliability in utility corridors. ○ Modify landscape and other ordinances to encourage appropriate planting near overhead power, cable, and phone lines ○ Provide weather radios to vulnerable populations ○ Enhance public awareness campaigns to address those issues of alert and warning and actions to take during severe weather events.





SEVERE WINTER STORMS		
		<ul style="list-style-type: none">○ Utilize the best available technology to enhance the warning systems for all severe weather events (i.e.: tornado warning systems).○ Coordinate severe weather warning capabilities and the dissemination of warning amongst those agencies within the planning are with the highest degree of capability.○ Encourage local ordinances for planting tree near lines and join Tree City USA.○ Increase tree management programs.○ Join the Community Rating System○ Join "Storm-Ready"○ Retrofit critical structures and promote hazard resistant construction○ Keep open communications and education of hazards for mobile home communities○ Retrofit above-ground utilities to underground facilities if appropriate○ Create a salt reserve or research alternates to stretch salt reserve.○ Ensure accessibility to hospital.○ Provide better debris logistics and removal.○ Provide better communication systems and back-up communication systems to inform public of hazards and to communicate during the hazard event.





WILDFIRE		
Personal Scale	Corporate Scale	Government Scale
<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ Clear potential fuels on property; dry, overgrown underbrush; diseased trees • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Clean and maintain defensible space around structures ○ Locate outside hazard area ○ Mow regularly • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Create and maintain defensible space around structures, provide water on site. ○ Use fire-retardant building materials ○ Create defensible spaces around your home. • Increase Capability <ul style="list-style-type: none"> ○ Employ Firewise techniques to safeguard your home ○ Identify alternative water supply points proximate to your home such as swimming pools, lakes, streams ○ Support your local fire department ○ Be aware of weather conditions that support/enhance the probability of wildfires 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Create and maintain defensible space around structure and infrastructure and provide water onsite ○ Use fire-retardant building materials ○ Provide stored water to be utilized for fire fighting with appropriate fire department connections at facilities not equipped with fire hydrants or inadequate fire hydrant spacing • Increase Capability: <ul style="list-style-type: none"> ○ Support Firewise community initiatives 	<ul style="list-style-type: none"> • Manipulate the Hazard: <ul style="list-style-type: none"> ○ None • Reduce exposure to the hazard: <ul style="list-style-type: none"> ○ Clear fuels (dry underbrush, diseased trees) on land that can trigger and maintain wildfires ○ Implement Best Management Practices on public lands • Reduce vulnerability to the hazard: <ul style="list-style-type: none"> ○ Create and maintain defensible space around structure and infrastructure ○ Higher regulatory standards ○ Establish water main supply and hydrants in unhydranted areas ○ Decrease hydrant spacing ○ Purchase • Increase Capability: <ul style="list-style-type: none"> ○ More public outreach and education efforts including an active "Firewise" program ○ Identify fire response and alternative evacuation routes ○ Seek alternative water supplies in urban wildland interface areas. ○ Become a "Firewise" community ○ Increase capability to fight wildfires utilizing equipment that can support wildfire fighting such as: tankers, engines with "pump-and-run" capabilities, dump tanks for tanker shuttle operations. ○ Develop/implement wild fire management plans. ○ Establish Mutual Aid Agreements with the Tender Task Force ○ Attend the Tender Apparatus Response Plan (TARP) training conducted by Kean University ○ Develop a Water Supply Plan





POTENTIAL MITIGATION FUNDING SOURCES

While it is important to recognize the mitigation strategies for each jurisdiction to help achieve the mitigation goals and objectives of the Hazard Mitigation Plan (HMP), it is also important to provide sources for funding to implement these strategies. The table below provides a list of programs, descriptions, and links for those seeking funding sources. Please note that this table is not intended to be a comprehensive list, but rather a starting point to help identify potential sources of funding for the identified mitigation strategies.

Table F-4. Mitigation Funding Sources

Program	Description	Lead Agency	Website
Federal			
Hazard Mitigation Assistance (HMA)	Grants to provide funding for eligible mitigation activities that reduce disaster losses and protect life and property from future disaster damages – includes FMA, HMGP, PDM	FEMA	https://www.fema.gov/hazard-mitigation-assistance
Flood Mitigation Assistance (FMA)	Program Grants to States and communities for pre-disaster mitigation planning and projects to help reduce or eliminate the long-term risk of flood damage to structures insurable under the National Flood Insurance Program	FEMA	https://www.fema.gov/flood-mitigation-assistance-grant-program
Hazard Mitigation Grant Program (HMGP)	Grants to States and communities for planning and projects providing long-term hazard mitigation measures following a major disaster declaration	FEMA	https://www.fema.gov/hazard-mitigation-grant-program
Pre-Disaster Mitigation (PDM) Competitive Grant Program	Grants to States and communities for planning and projects that provide long-term hazard pre-disaster mitigation measures	FEMA	https://www.fema.gov/pre-disaster-mitigation-grant-program
Public Assistance: Hazard Mitigation Funding Under Section 406	Hazard mitigation discretionary funding available under Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act following a Presidentially declared disaster	FEMA	https://www.fema.gov/news-release/2017/05/03/4309/fema-hazard-mitigation-grants-404-and-406
Assistance to Firefighters Grant Program	The primary goal of the Assistance to Firefighters Grants (AFG) is to enhance the safety of the public and firefighters	FEMA	https://www.fema.gov/welcome-assistance-firefighters-grant-program





Program	Description	Lead Agency	Website
	with respect to fire-related hazards by providing direct financial assistance to eligible fire departments, nonaffiliated Emergency Medical Services organizations, and State Fire Training Academies. This funding is for critically needed resources to equip and train emergency personnel to recognized standards, enhance operations efficiencies, foster interoperability, and support community resilience.		
High Hazard Potential Dams (HHPD) Rehabilitation Grant	The Rehabilitation of High Hazard Potential Dams Grant Program (HHPD) provides technical, planning, design, and construction assistance in the form of grants to non-Federal governmental organizations or nonprofit organizations for rehabilitation of eligible high hazard potential dams.	FEMA	https://www.grants.gov/web/grants/view-opportunity.html?oppld=316238
Fire Management Assistance Grant Program	Assistance for the mitigation, management, and control of fires on publicly or privately-owned forests or grasslands that threaten such destruction as would constitute a major disaster. Provides a 75% Federal cost share and the State pay the remaining 25% for actual cost.	FEMA	https://www.fema.gov/fire-management-assistance-grant-program
Disaster Housing Program	Emergency assistance for housing, including minor repair of home to establish livable conditions, mortgage and rental assistance	HUD	https://www.hud.gov/program_offices/public_indian_housing/publications/dhap
HOME Investment Partnerships Program	Grants to local and state government and consortia for permanent and transitional housing, (including financial support for property acquisition and rehabilitation for low income persons)	HUD	https://www.hud.gov/program_offices/comm_planning/affordablehousing/programs/home/
HUD Disaster Recovery Assistance	Grants to fund gaps in available recovery assistance after disasters (including mitigation)	HUD	https://www.hud.gov/info/disasterresources





Program	Description	Lead Agency	Website
Section 108 Loan Guarantee	Enables states and local governments participating in the Community Development Block Grant (CDBG) program to obtain federally guaranteed loans for disaster-distressed areas	HUD	https://www.hudexchange.info/programs/section-108/
Smart Growth Implementation Assistance (SGIA) program	The SGIA program focuses on complex or cutting-edge issues, such as stormwater management, code revision, transit-oriented development, affordable housing, infill development, corridor planning, green building, and climate change. Applicants can submit proposals under 4 categories: community resilience to disasters, job creation, the role of manufactured homes in sustainable neighborhood design or medical and social service facilities siting.	EPA	https://www.epa.gov/smartgrowth
Partners for Fish and Wildlife	Financial and technical assistance to private landowners interested in pursuing restoration projects affecting wetlands and riparian habitats	U.S. Fish and Wildlife Service	https://www.fws.gov/partners/
FHWA Emergency Relief Program	Fund for the repair or reconstruction of Federal-aid highways that have suffered serious damage as a result of (1) natural disasters or (2) catastrophic failures from an external cause	U.S. Department of Transportation (DOT)	https://www.fhwa.dot.gov/programadmin/erelief.cfm
Transportation Investment Generating Economic Recovery (TIGER)	Investing in critical road, rail, transit and port projects across the nation	U.S. DOT	https://www.transportation.gov/tags/tiger-grants
Community Facilities Direct Loan & Grant Program	This program provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a	USDA	https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program





Program	Description	Lead Agency	Website
	primarily rural area, and does not include private, commercial or business undertakings.		
Emergency Loan Program	USDA’s Farm Service Agency (FSA) provides emergency loans to help producers recover from production and physical losses due to drought, flooding, other natural disasters or quarantine	USDA	https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index
Emergency Watershed Protection (EWP) program	Provide assistance to relieve imminent hazards to life and property caused by floods, fires, drought, windstorms, and other natural occurrences	NRCS	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/landscape/ewpp/
Financial Assistance	Financial assistance to help plan and implement conservation practices that address natural resource concerns or opportunities to help save energy, improve soil, water, plant, air, animal and related resources on agricultural lands and non-industrial private forest land	NRCS	https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/
Emergency Management Performance Grants (EMPG) Program	Assist local, tribal, territorial, and state governments in enhancing and sustaining all-hazards emergency management capabilities	U.S. DHS	https://www.fema.gov/emergency-management-performance-grant-program
Reimbursement for Firefighting on Federal Property	Provides reimbursement only for direct costs and losses over and above normal operating costs.	U.S. DHS	https://www.usfa.fema.gov/grants/firefighting_federal_property.html
Department of Homeland Security Grant Program (HSGP)	HSGP is composed of three interconnected grant programs including the State Homeland Security Program (SHSP), Urban Areas Security Initiative (UASI), and the Operation Stonegarden (OPSG). Together, these competitive grant programs fund a range of preparedness activities, including planning, organization, equipment purchase, training, exercises, and management and administration.	U.S. DHS	https://www.dhs.gov/homeland-security-grant-program-hsgp





Program	Description	Lead Agency	Website
Land & Water Conservation Fund	Matching grants to states and local governments for the acquisition and development of public outdoor recreation areas and facilities (as well as funding for shared federal land acquisition and conservation strategies)	National Park Service	https://www.nps.gov/subjects/lwcf/index.htm
Land and Water Conservation Fund	Funding to states, local and conservation organizations for outdoor recreational development, renovation, land acquisition, and planning.	U.S. Department of the Interior	https://www.doi.gov/lwcf
USSBA	Small Business Administration (SBA) provides low-interest disaster loans to homeowners, renters, business of all sizes, and most private nonprofit organizations. SBA disaster loans can be used to repair or replace the following items damaged or destroyed in a declared disaster: real estate, personal property, machinery and equipment, and inventory and business assets.	Small Business Administration (SBA)	https://www.sba.gov/funding-programs/disaster-assistance
State and Local			
Environmental Infrastructure Financing Program	Qualified borrowers receive loans in two equal parts: Approximately one half to three quarters comes from a 0-interest State Revolving Fund maintained by the NJDEP. The other portion comes from proceeds of highly rated tax-exempt revenue bonds sold by the Trust. Combining these two funds results in a loan that is 50 to 75% lower than traditional loan rates.	NJDEP	
Meadowlands Infrastructure Trust Fund	Grants are available for stormwater management, updating GIS systems, affordable housing planning, and solid waste disposal for the counties and municipalities that are under this Commission.	NJ Sports and Exposition Authority	





Program	Description	Lead Agency	Website
New Jersey Green Acres Program	It is financed with Garden State Preservation Trust funds through three partnering agencies: The Green Acres Program, a division of the Department of Environmental Protection to preserve natural lands and recreational parks. The Farmland Preservation Program is administered by the independent State Agriculture Development Committee to acquire the development rights on privately owned farmland. Historic Preservation Program is administered by the independent New Jersey Historic Trust to provide matching grants to save important historic buildings.	NJDEP	https://www.nj.gov/dep/greenacres/
New Jersey Small Cities Communities Development Block Grants	Provide funds for economic development, housing rehabilitation, community revitalization, and public facilities designated to benefit people with low and moderate incomes, or to address recent local needs for which no other source of funding is available to non-entitlement counties and municipalities.	NJDCA	https://www.nj.gov/dca/divisions/dhcr/offices/neighborhood.html
New Jersey Conservation Foundation (NJCF)	NJCF is a private, not-for-profit organization. Through acquisition and stewardship, NJCF protects strategic lands, promotes strong land use policies, and forges partnerships to achieve conservation goals. Grants to help fund preservation activities.	NJCF	https://www.njconservation.org/what-we-do/
The New Jersey Infrastructure Bank	Two programs provide and administer low interest rate loans to qualified municipalities, counties, regional authorities, and water purveyors in New Jersey. Approximately \$350 million is awarded annually. 1. New Jersey Environmental Infrastructure Trust (NJEIT) for the purpose of financing water quality	NJDEP	https://www.njib.gov/





Program	Description	Lead Agency	Website
	<p>infrastructure projects that enhance ground and surface water resources, ensure the safety of drinking water supplies, protect the public health and make possible responsible and sustainable economic development.</p> <p>2. The New Jersey Transportation Infrastructure Bank (NJTIB) is an independent State Financing Authority responsible for providing and administering low interest rate loans to qualified municipalities, counties, and regional authorities in New Jersey for the purpose of financing transportation quality infrastructure projects.</p>		
New Jersey Water Bank	<p>New Jersey Water Bank - NJWB (formerly New Jersey Environmental Infrastructure Financing Program - NJEIFP) is a partnership between the New Jersey Department of Environmental Protection (NJDEP) and the New Jersey Environmental Infrastructure Trust (Trust) to provide low cost financing for the design, construction, and implementation of projects that help protect and improve water quality and help ensure safe and adequate drinking water.</p>	NJDEP	https://www.nj.gov/dep/dwq/mface_njeifp.htm
Drinking Water State Revolving Fund (DWSRF)	<p>The DWSRF program assists water systems in financing the cost of infrastructure through the use of federal and New Jersey Infrastructure Trust funds. Additionally, the Water Supply program provides operator licensing and training support as well as financial assistance through the DWSRF program.</p>	NJDEP	https://www.state.nj.us/dep/watersupply/dws_loans.html





Program	Description	Lead Agency	Website
NJ Highlands	Highlands Regional Master Plan (RMP) grant funding for forest resource and stream corridor protection and management planning includes the identification of restoration, mitigation, and stewardship programming needs and mechanisms.	The New Jersey Highlands	https://www.highlands.state.nj.us/njhighlands/grantprograms/
New Jersey Department of Transportation (NJDOT)	Funding of the Program is typically federal through the Federal Highway Administration or State through the Transportation Trust Fund.	NJDOT	https://www.state.nj.us/transportation/business/localaid/funding.shtm
New Jersey Department of Transportation – Local Aid Program	Annually, local aid programs provide approximately \$400 million in a combination of federal and state transportation trust fund funding. The Transportation Trust Fund for FY 2017 thru 2024 alone provides \$310 million in state aid to municipalities and counties for local transportation improvements.	NJDOT	https://www.state.nj.us/transportation/business/localaid/funding.shtm
Board of Utilities (BPU)	New Jersey Clean Energy Program offers grant funding, energy audits and financial incentives to local government.	BPU	https://www.njcleanenergy.com/main/grants-solicitations/grants-and-solicitations-0
North Jersey Transportation Planning Authority (NJTPA) – Subregional Planning	The Subregional Transportation Planning (STP) Program provides funding to each subregion for essential transportation planning, programming and administrative activities that support regional needs assessment and strategy development. These activities include collecting data, analyzing project needs, facilitating public participation and sharing information. The activities are intended to support the goals and policies in the NJTPA Regional Transportation Plan (RTP). Funding is allocated based on each subregion's population.	NJTPA	https://www.njtpa.org/Planning/Subregional-Programs/Subregional-Planning.aspx
Hudson County Open Space, Recreation and	The County can acquire new land for open space and improve parks. The County awards grants to municipalities	Hudson County	http://www.hudsoncountynj.org/open-space-recreation-and-historic-preservation-trust-fund/





Program	Description	Lead Agency	Website
Historic Preservation Trust Fund	and non-profit organizations through the Trust Fund for these purposes. The Division of Planning meets annually with the municipalities regarding the Open Space Trust Fund and their open space and park priorities. These meetings take place before the fund opens up and the Division of Planning works with municipalities to develop projects.		





APPENDIX G. PLAN MAINTENANCE TOOLS

This appendix includes tools and worksheets to facilitate plan maintenance and review by the Hudson County Steering and Planning Committees.

In the first year of the performance period, an online performance progress reporting system, the BAToolSM will provide municipal, MUA and county representatives direct access to their mitigation initiatives to easily update the status of each project, document successes or obstacles to implementation, add or delete projects to maintain mitigation project implementation. This online program will capture information and roll all input into a report to summarize mitigation strategy progress.

The FEMA 386-4 guidance worksheets are also available to assist with progress reporting. These worksheets are provided below for ease of access to the HMP Coordinator and Planning Partnership to maintain the 2020 HMP throughout its period of performance.



Plan Goal(s)/Objective(s) Addressed:

Goal: _____

Objective: _____

Indicator of Success (e.g., losses avoided as a result of the acquisition program):

In most cases, you will list losses avoided as the indicator. In cases where it is difficult to quantify the benefits in dollar amounts, you will use other indicators, such as the number of people who now know about mitigation or who are taking mitigation actions to reduce their vulnerability to hazards.

Status (Please check pertinent information and provide explanations for items with an asterisk. For completed or canceled projects, see Worksheet #2 — to complete a project evaluation):

Project Status

Project on schedule

Project completed

Project delayed*

*explain: _____

Project canceled

Project Cost Status

Cost unchanged

Cost overrun*

*explain: _____

Cost underrun*

*explain: _____

Summary of progress on project for this report:

A. What was accomplished during this reporting period?

B. What obstacles, problems, or delays did you encounter, if any?

C. How was each problem resolved?

Next Steps: What is/are the next step(s) to be accomplished over the next reporting period?

Other comments:

<i>When gearing up for the plan evaluation, the planning team should reassess its composition and ask the following questions:</i>	YES	NO
Have there been local staffing changes that would warrant inviting different members to the planning team?		
Comments/Proposed Action:		
Are there organizations that have been invaluable to the planning process or to project implementation that should be represented on the planning team?		
Comments/Proposed Action:		
Are there any representatives of essential organizations who have not fully participated in the planning and implementation of actions? If so, can someone else from this organization commit to the planning team?		
Comments/Proposed Action:		
Are there procedures (e.g., signing of MOAs, commenting on submitted progress reports, distributing meeting minutes, etc.) that can be done more efficiently?		
Comments/Proposed Action:		
Are there ways to gain more diverse and widespread cooperation?		
Comments/Proposed Action:		
Are there different or additional resources (financial, technical, and human) that are now available for mitigation planning?		
Comments/Proposed Action:		

If the planning team determines the answer to any of these questions is “yes,” some changes may be necessary.

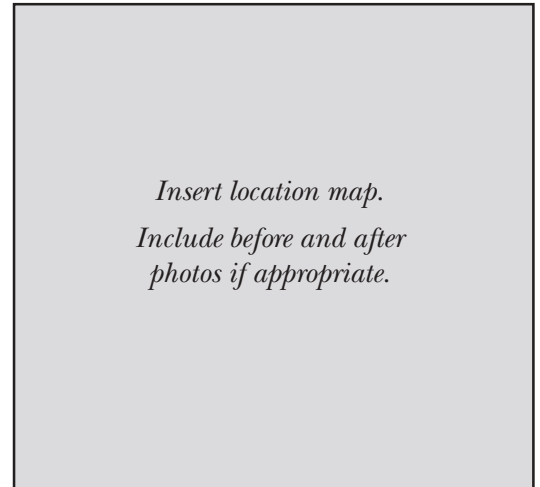
Project Name and Number: _____

Project Budget: _____

Project Description: _____

Associated Goal and Objective(s): _____

Indicator of Success (e.g., losses avoided): _____



Was the action implemented? YES NO



Why not?

Was there political support for the action?

Were enough funds available?

Were workloads equitably or realistically distributed?

Was new information discovered about the risks or community that made implementation difficult or no longer sensible?

Was the estimated time of implementation reasonable?

Were sufficient resources (for example staff and technical assistance) available?

YES NO



What were the results of the implemented action? _____

	YES	NO
Were the outcomes as expected? If No, please explain:		
Did the results achieve the goal and objective(s)? Explain how:		
Was the action cost-effective? Explain how or how not:		
What were the losses avoided after having completed the project?		
If it was a structural project, how did it change the hazard profile?		
Additional comments or other outcomes:		

Date: _____
Prepared by: _____

Risk Assessment Steps	Questions	YES	NO	COMMENTS
Identify hazards	Are there new hazards that can affect your community?			
Profile hazard events	Are new historical records available?			
	Are additional maps or new hazard studies available?			
	Have chances of future events (along with their magnitude, extent, etc.) changed?			
	Have recent and future development in the community been checked for their effect on hazard areas?			
Inventory assets	Have inventories of existing structures in hazard areas been updated?			
	Is future land development accounted for in the inventories?			
	Are there any new special high-risk populations?			
Estimate losses	Have loss estimates been updated to account for recent changes?			

If you answered "Yes" to any of the above questions, review your data and update your risk assessment information accordingly.

Worksheet #1

Progress Report

step 2

Page 1 of 3

Progress Report Period: October 1, 2003 to December 31, 2003
(date) (date)

Project Title: Raging River Views Park Flood Acquisition Project Project ID#: HVMP-2003-01

Responsible Agency: Hazardville Department of Planning

Address: 1909 Burnham Way

City/County: Hazardville, Emergency

Contact Person: Eustoe Eudlid Title: Grants Administrator

Phone #(s): (555) 555-8478 email address: eeudlid@town.hazardville.oh

List Supporting Agencies and Contacts:

Hazardville Department of Housing: Noah Hudson (555) 555-8465

Hazardville Habitat for Humanity: Carter Goodman (555) 555-9432

Total Project Cost: \$360,000

Anticipated Cost Overrun/Underrun: \$N/A

Date of Project Approval: July 21, 2003 Start date of the project: November 15, 2003

Anticipated completion date: Summer 2005

Description of the Project (include a description of each phase, if applicable, and the time frame for completing each phase):

Acquire and demolish 14 structures located at the Raging River Views Park. Work with Habitat for Humanity and the Department of Housing to construct new housing or rehabilitate existing housing for displaced low-income residents. The Department of Housing will also provide funds for temporary housing to displaced residents.

Milestones	Complete	Projected Date of Completion
Conduct surveys of ground and first-floor elevations	✓	
Obtain Notices of Intent by owners	✓	
Conduct structure appraisals	✓	
Send letters of offer to homeowners		1/31/04
Perform title work		3/30/04
Acquire structures		6/30/04
Begin construction of new housing or reconstruction of existing housing for relocated residents		6/30/04
Send payment for relocation to centers		9/30/04
Finalize contract for demolition		1/12/05
Demolish structures		4/26/05
Landscape open parcels		6/30/05

Plan Goal(s)/Objective(s) Addressed:

Goal: Minimize losses to existing and future structures within hazard areas.

Objective: Reduce potential damages to the manufactured home park in the floodplain.

Indicator of Success (e.g., losses avoided as a result of the acquisition program):

In most cases, you will list losses avoided as the indicator. In cases where it is difficult to quantify the benefits in dollar amounts, you will use other indicators, such as the number of people who now know about mitigation or who are taking mitigation actions to reduce their vulnerability to hazards.

Losses Avoided. After a major flood (100-year), the Department of Economic Development will assist the Planning Department in calculating the losses avoided.

Status (Please check pertinent information and provide explanations for items with an asterisk. For completed or canceled projects, see Worksheet #2 — to complete a project evaluation):

Project Status	Project Cost Status
<input checked="" type="checkbox"/> Project on schedule	<input checked="" type="checkbox"/> Cost unchanged
<input type="checkbox"/> Project completed	<input type="checkbox"/> Cost overrun*
<input type="checkbox"/> Project delayed*	*explain: _____
*explain: _____	_____
<input type="checkbox"/> Project canceled	<input type="checkbox"/> Cost underrun*
	*explain: _____

Summary of progress on project for this report:

A. What was accomplished during this reporting period?

The Department of Planning contacted the owners of the properties vulnerable to floods to determine their willingness to sell their properties. Of the 14 property owners contacted, 10 agreed to have their homes acquired. An appraiser contracted by the Department of Planning estimated the value of the 10 properties.

B. What obstacles, problems, or delays did you encounter, if any?

The owners of four properties refused to sell. There has been some limited neighborhood opposition to various suggestions for the community open space created by the acquisitions.

C. How was each problem resolved?

The Department of Planning has proposed to the residents a design charrette to develop alternatives for the open space that would be created, with the understanding that no permanent structures can be constructed on the open parcels after acquisition and demolition has been completed. Recreational activities will be limited to passive uses such as trails and bike paths.

Next Steps: What is/are the next step(s) to be accomplished over the next reporting period?

1. Send offer letters to homeowners.
2. Do title work.
3. Work with the Department of Housing and Habitat for Humanity to identify existing housing for rehabilitation and stable vacant parcels to construct new housing for the displaced residents.

Other comments:

None

Worksheet #2 Evaluate Your Planning Team step **3**

<i>When gearing up for the plan evaluation, the planning team should reassess its composition and ask the following questions:</i>	YES	NO
Have there been local staffing changes that would warrant inviting different members to the planning team?		✓
Comments/Proposed Action: NA		
Are there organizations that have been invaluable to the planning process or to project implementation that should be represented on the planning team?	✓	
Comments/Proposed Action: Hazardville Habitat for Humanity has been invaluable to assisting the relocation of former Ragging River Views Park residents. The organization should be invited to participate in THORR.		
Are there any representatives of essential organizations who have not fully participated in the planning and implementation of actions? If so, can someone else from this organization commit to the planning team?	✓	
Comments/Proposed Action: It is essential that the Department of Public Works be represented at each meeting because so many mitigation actions involve them. However, representatives from the department have been unable to attend meetings consistently since the development of the plan. THORR will work with the department's director to find consistent, active representation.		
Are there procedures (e.g., signing of MOAs, commenting on submitted progress reports, distributing meeting minutes, etc.) that can be done more efficiently?	✓	
Comments/Proposed Action: Again, the Department of Public Works has been unable to provide timely progress reports of its mitigation actions. Administrative duties and paperwork have fallen through the cracks since the department has been assigned numerous new duties to Hazardville's mitigation efforts. Perhaps the department, in partnership with THORR, should approach the Town Council for funding for more department staff.		
Are there ways to gain more diverse and widespread cooperation?	✓	
Comments/Proposed Action: THORR members believe that better publicity about mitigation actions will garner more interest from the public, affected/interested organizations, and state agencies.		
Are there different or additional resources (financial, technical, and human) that are now available for mitigation planning?	✓	
Comments/Proposed Action: THORR has learned about new PDM funding. The state has asked that local jurisdictions submit applications for brick and mortar projects and risk assessments studies.		

If the planning team determines the answer to any of these questions is "yes," some changes may be necessary.



Worksheet #3 Evaluate Your Project Results **step 3**

page 1 of 2

Project Name and Number:

Raging River Views Park Flood Acquisition Project (HVMP-2003-01)

Project Budget:

\$360,000

Project Description:

Acquisition and demolition of 14 flood-prone structures

Associated Goal and Objective(s):

Goal: Minimize losses to existing and future structures within hazard areas

Objective: Reduce potential damages to the manufactured home park in the floodplain

Indicator of Success (e.g., losses avoided):

Losses avoided by acquisition and demolition of flood-prone structures



Town of Hazardville Composite Loss Map developed previously during risk assessment (see FEMA 386-2).

Was the action implemented? YES NO

IF NO

Why not?

Was there political support for the action?

YES NO

Were enough funds available?

Were workloads equitably or realistically distributed?

Was new information discovered about the risks or community that made implementation difficult or no longer sensible?

Was the estimated time of implementation reasonable?

Were sufficient resources (for example staff and technical assistance) available?

IF YES

What were the results of the implemented action?

Of the 14 proposed properties, 10 were acquired. The benefit-cost ratio is 2.19, based on project benefits of \$789,000 and costs of \$360,274. Benefits are based on the net present value of the avoided damages over the project life. Furthermore, about 40 people are no longer in the path of a potential flood, making emergency rescue operations in that area less likely and evacuation easier.

	YES	NO
Were the outcomes as expected? If No, please explain:		<input checked="" type="checkbox"/>
The project originally set out to acquire 14 properties. Four of the 14 owners did not want to participate in the buyout program.		
Did the results achieve the goal and objective(s)? Explain how:	<input checked="" type="checkbox"/>	
Despite four properties still in harm's way, the objective has been largely met. See additional comments.		
Was the action cost-effective? Explain how or how not:	<input checked="" type="checkbox"/>	
The FEMA Limited Data module was used to perform the benefit-cost analysis. Data for the analysis was collected from historical flood data and used as benchmarks in the before mitigation section of the analysis. The damages after mitigation section was left blank, due to the properties being permanently acquired, and the economic risk removed completely. The analysis resulted in a benefit-cost ratio of 2.19, with benefits totaling \$789,000 for 10 properties.		
What were the losses avoided after having completed the project?		
Total avoided losses are \$789,000 over the lifetime of the project (estimated at 100 years).		
If it was a structural project, how did it change the hazard profile?		
N/A		
Additional comments or other outcomes:		
The Planning Department has agreed to work with the remaining four homeowners in evaluating other flood-proofing options.		

Date: October 12, 2005

Prepared by: Hazardville Department of Economic Development
Hazardville Department of Planning

Worksheet #4 Revisit Your Risk Assessment **step 4**

Risk Assessment Steps	Questions	YES	NO	COMMENTS
Identify hazards	Are there new hazards that can affect your community?		✓	
Profile hazard events	Are new historical records available?		✓	
	Are additional maps or new hazard studies available?	✓		Recently completed maps and studies showing vulnerability of the new coastal development to erosion and tidal surge are available.
	Have chances of future events (along with their magnitude, extent, etc.) changed?		✓	
	Have recent and future development in the community been checked for their effect on hazard areas?	✓		
Inventory assets	Have inventories of existing structures in hazard areas been updated?	✓		
	Is future land development accounted for in the inventories?	✓		The Planning Department is preparing a coastal development plan to ensure that any future development is set back far enough to be outside the erosion zones and the coastal high hazard areas. Current and future road configurations will also be studied to ensure adequate evacuation routes before hurricane events.
	Are there any new special high-risk populations?	✓		Coastal residents and business owners.
Estimate losses	Have loss estimates been updated to account for recent changes?	✓		

If you answered "Yes" to any of the above questions, review your data and update your risk assessment information accordingly.

