ACQUISITION ACTION PLAN
Borough of Manville

Public Document
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EXECUTIVE SUMMARY

After applying for and receiving a 2015 FEMA Flood Mitigation Assistance (FMA) planning grant, the Borough of Manville partnered with Tetra Tech Inc. (Tetra Tech) to rank flood-prone structures in the Borough and prioritize mitigation target areas. The purpose was to provide the Borough with a third party unbiased evaluation of structures in flood-prone areas suitable for acquisition and develop a multi-year prioritized mitigation strategy, in the form of an action plan, to pursue FEMA Hazard Mitigation Assistance (HMA) funding to mitigate these flood-prone structures.

The Borough formed a committee of municipal officials to work directly with Tetra Tech and contribute to this process. The committee consisted of:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrea Bierwirth</td>
<td>Borough Administrator</td>
</tr>
<tr>
<td>Richard Onderko</td>
<td>Mayor</td>
</tr>
<tr>
<td>Vince LoMedico</td>
<td>Director of Public Works</td>
</tr>
<tr>
<td>Patrick Renaldi</td>
<td>Director of Code Enforcement</td>
</tr>
<tr>
<td>John Tamburini</td>
<td>Construction Official</td>
</tr>
<tr>
<td>Philip Petrone</td>
<td>Councilman</td>
</tr>
<tr>
<td>Michele Magnani</td>
<td>Councilwoman</td>
</tr>
<tr>
<td>Dayna Camacho</td>
<td>Councilwoman</td>
</tr>
<tr>
<td>Stan Schrek</td>
<td>Borough Engineer</td>
</tr>
</tbody>
</table>

Together with the Borough committee, prioritization criteria were identified to individually rank each property in the Borough. Elements noted in the prioritization criteria listed in the 2016 FEMA Notice of Funding Opportunity were considered and incorporated into the Borough's ranking criteria to ensure competitive future grant applications. The committee developed the ranking criteria to ensure a fair and equitable ranking structure for all properties. Utilizing the total score of each property, a spatial analysis was conducted in ArcGIS utilizing the ‘hot spot analysis (Getis-Ord Gi*) tool to identify statistically significant hot spots, or clusters of properties.

The hot-spot analysis results were presented to the committee and further evaluated. Defined clusters were delineated and reviewed with the committee to ensure each cluster contained an appropriate number of properties (approximately 50 structures) the Borough can manage and oversee successfully per application cycle through project implementation and completion. The committee also strove to ensure that each cluster contained at least one NFIP-defined Repetitive Loss or Severe Repetitive Loss property in anticipation of future FEMA grant funding. Exhibit A summarizes the cluster of properties prioritized for future hazard mitigation grant funding applications sponsored by the Borough. Future grant funding availability includes FEMA Hazard Mitigation Assistance (HMA) Grant opportunities, FEMA Hazard Mitigation Grant Program (HMGP) opportunities and NJ Department of Environmental Protection funding.
Exhibit A. Borough of Manville Prioritized Action Plan

<table>
<thead>
<tr>
<th>Acquisition Opportunity</th>
<th>Cluster Name</th>
<th>Number of Properties</th>
<th>Number of Properties with NFIP Policies</th>
<th>Number of RL Properties</th>
<th>Number of SRL Properties</th>
<th>Total Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lost Valley Floodway</td>
<td>45</td>
<td>15</td>
<td>33</td>
<td>4</td>
<td>271</td>
</tr>
<tr>
<td>2</td>
<td>North Second</td>
<td>38</td>
<td>15</td>
<td>26</td>
<td>5</td>
<td>192</td>
</tr>
<tr>
<td>3</td>
<td>Pope, Kyle, View</td>
<td>49</td>
<td>30</td>
<td>31</td>
<td>3</td>
<td>257</td>
</tr>
<tr>
<td>4</td>
<td>Dukes Floodway, First, Third</td>
<td>52</td>
<td>29</td>
<td>24</td>
<td>1</td>
<td>235</td>
</tr>
<tr>
<td>5</td>
<td>Lost Valley, Huff, Bridge, North</td>
<td>36</td>
<td>12</td>
<td>28</td>
<td>5</td>
<td>195</td>
</tr>
<tr>
<td>6</td>
<td>Lost Valley, Boesel Floodway</td>
<td>47</td>
<td>12</td>
<td>34</td>
<td>2</td>
<td>223</td>
</tr>
<tr>
<td>7</td>
<td>Lost Valley, Boesel, View, Bridge</td>
<td>41</td>
<td>25</td>
<td>22</td>
<td>3</td>
<td>189</td>
</tr>
<tr>
<td>8</td>
<td>St. John, Gress</td>
<td>58</td>
<td>37</td>
<td>6</td>
<td>0</td>
<td>168</td>
</tr>
</tbody>
</table>

The Borough will review this acquisition action plan on an annual basis, and update as needed. The following describes potential time horizons and conditions in which the plan may be reviewed and the analysis updated:

- In future years, the FEMA FMA program may change their priorities for project selection. If this occurs, the Borough committee may re-evaluate the ranking criteria and re-run the hot-spot analysis to ensure future grant applications remain competitive.

- A future flood event may change the NFIP status of policy holders.

- As acquisition projects are implemented and completed in the Borough, residents that were contacted and who decided not to participate in previous grant applications may be contacted again to reconsider participating in future grant opportunities.

- As additional funding sources become available outside of the FEMA HMA program, the Borough and residents may reconsider the frequency in which to apply for grant funding.

- As acquisition projects are implemented, the Borough may consider including additional clusters beyond ‘Acquisition Opportunity #8’ to the updated Action Plan.

The Borough anticipates utilizing this plan to continue to apply for FEMA Hazard Mitigation Assistance funding to prioritize and provide flood-prone residents an option to have their home acquired and eliminate all future flood risk for this property.
BACKGROUND

The Borough of Manville is centrally located within the County of Somerset at the convergence of the Raritan and Millstone Rivers. Manville shares boundaries with Bridgewater Township to the north, Franklin Township to the east and Hillsborough Township to the south and west. The Borough is located in one of the most sensitive flood-prone areas in the State of New Jersey and has experienced severe flooding within the 1-percent and 0.2-percent annual change flood zones of both the Raritan River and Millstone River. Extensive damage has been recorded to residential buildings, commercial structures, parklands, roadways, and other public infrastructure. The Borough continues to take significant steps to improve flood mitigation efforts throughout the community and specifically for the property owners located in the floodplain. These efforts are demonstrated through the Borough’s participation in the National Flood Insurance Program’s (NFIP) Community Rating System (CRS) as a Class 7 community, effective October 1, 2016. In October 2017, the Borough submitted supporting documentation for their annual re-certification in the CRS. In addition, the Borough has applied for and received 2016 Federal Emergency Management Agency (FEMA) hazard mitigation assistance funding to acquire four repetitive loss flood-prone structures.

OBJECTIVE

After applying for and receiving a 2015 FEMA Flood Mitigation Assistance (FMA) planning grant, the Borough of Manville partnered with Tetra Tech Inc. (Tetra Tech) to rank flood-prone structures in the Borough and prioritize mitigation target areas. The purpose was to provide the Borough with a third party unbiased evaluation of structures in flood prone areas suitable for acquisition and develop a multi-year prioritized mitigation strategy, in the form of an action plan, to pursue FEMA Hazard Mitigation Assistance (HMA) funding to mitigate these flood-prone structures.

METHODOLOGY

The Borough formed a committee of municipal officials to work directly with Tetra Tech and contribute to this process. The committee consisted of Andrea Bierwirth, Borough Administrator; Richard Onderko, Mayor; Vince LoMedico, Director of Public Works; Patrick Renaldi, Director of Code Enforcement; John Tamburini, Construction Official; Philip Petrone, Councilman; Michele Magnani, Councilwoman; Dayna Camacho, Councilwoman and Stan Schrek, Borough Engineer.

At project commencement, Tetra Tech met with the committee to determine the area of focus in the Borough and initiate the data collection process. The first step was to develop a detailed spatial inventory of the structures within the Borough. To begin, the building inventory was generated using parcels and building footprints provided by the Borough and 2017 Tax Assessment data from the New Jersey Department of the Treasury - Division of Taxation. All recent acquisitions and elevations were identified and removed from the structural inventory. Tetra Tech mapped all structures in the 2016 effective 1-percent annual chance floodplain. (refer to Figure 2).
Together with the Borough committee, prioritization criteria were identified to rank each property located in the Borough. The criteria were selected to assist with the identification of the highest at-risk flood-prone properties. Bank-owned and abandoned properties were excluded from the analysis. Elements noted in the prioritization criteria listed in previous FEMA FMA Notice of Funding Opportunities (NOFO) were considered and incorporated into the Borough’s ranking criteria in an attempt to ensure competitive future grant applications. Table 1 summarizes the criteria identified and the associated numeric score. The total score for each property was calculated by summing the scores across all criteria. For the purposes of this analysis, the NFIP RL and SRL property data provided by NJOEM (dated as of April 2017) and the policy and claim data received from FEMA Region 2 (dated as of March 31, 2015) were utilized.

**Table 1. Ranking Criteria and Scores**

<table>
<thead>
<tr>
<th>Ranking Criteria</th>
<th>Score</th>
</tr>
</thead>
</table>
| Is the property located in the 2016 FEMA Flood Insurance Rate Map-defined floodway? | Yes – 1  
No - 0                                                             |
| Is the property located in the 2016 FEMA Flood Insurance Rate Map-defined floodplain? | In 100 year zone - 2  
In 500 year zone - 1  
Out of floodplain – 0 |
| Most current National Flood Insurance Program Status                             | Severe Repetitive Loss property – 3  
Repetitive Loss property – 2  
Claims on policy – 1  
Policy holder with no claims - 0 |
| Contiguous to Open Space                                                        | Contiguous to Open Space – 1                                      |
| Adjacent to Abandoned Structure                                                  | Adjacent to Abandoned Structure - 1                                |
| Flood Insurance (based on 2015 NFIP policy data)                                 | Insured property – 1  
Non-insured property – 0                                                |
| Length of Ownership                                                              | Home purchased before September 2011 – 1  
Home purchased after September 2011 – 0                                 |
| Cumulative NFIP Claim Totals                                                     | Cumulative NFIP claim total is greater than 200% of market value – 3  
Cumulative NFIP claim total is between 100%-199% of market value – 2  
Cumulative NFIP claim total is between 50%-99% of market value - 1 |

Utilizing the total score of each property, a spatial analysis was conducted in ArcGIS utilizing the ‘hot spot analysis (Getis-Ord Gi*) tool to identify statistically significant hot spots, or clusters of properties. In summary, the analysis identifies statistically significant spatial clusters of high values (hot spots) and low values (cold spots). ArcGIS creates a new output feature class with a z-score, p-value, and confidence level bin for each feature. The higher (or lower) the z-score, the more intense the clustering. A z-score near zero indicates no apparent spatial clustering.

As shown in Figure 1, the absolute value of the z scores (high and low or red and blue on our maps) indicate there is statistically significant clustering (confidence level of 99 percent) using the property scores. The red or >+2.58 represent ‘hot spots’ or clustering of high scoring properties. The purple or <-2.58 represents ‘cold spots’ or clustering of low scoring properties. The yellow indicates the pattern exhibited could very likely be random.
Figure 1. The Standard Normal Distribution of the $p$ and $z$ values

<table>
<thead>
<tr>
<th>$z$-score (Standard Deviations)</th>
<th>$p$-value (Probability)</th>
<th>Confidence level</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;-1.65 or &gt;+1.65</td>
<td>&lt; 0.10</td>
<td>90%</td>
</tr>
<tr>
<td>&lt;-1.96 or &gt;+1.96</td>
<td>&lt; 0.05</td>
<td>95%</td>
</tr>
<tr>
<td>&lt;-2.58 or &gt;+2.58</td>
<td>&lt; 0.01</td>
<td>99%</td>
</tr>
</tbody>
</table>

Source: http://help.arcgis.com/en/arcsdesktde/10.0/help/index.html#/What_is_a_z_score_What_is_a_p_value/005p000000000600000000/
RESULTS

The results of the analysis are presented in Table 2 in this section with maps of the NFIP areas and hot-spots following the narrative. Figure 2 illustrates the location of all Borough properties for reference. Figure 3 illustrates the statistically significant hot spots and cold spots using the Getis-Ord Gi* statistics in the Borough study area. As noted, the higher (or lower) the z-score, the more intense the clustering. A z-score near zero indicates no apparent spatial clustering.

The hot-spot analysis results were presented to the committee and further evaluated. Defined clusters were delineated and reviewed with the committee to ensure each cluster contained an appropriate number of properties the Borough can manage and oversee per application cycle through project implementation (approximately 50 structures). Figure 4 displays the committee-agreed upon clusters. The cluster names are labeled as black underlined text and are associated with the street names in which they cover. The cluster boundaries that have been identified as groups of properties to include in future FEMA grant applications in the defined study area are depicted by lines of varying colors.

Table 2. Borough of Manville Prioritized Action Plan

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<th>Acquisition Opportunity</th>
<th>Cluster Name</th>
<th>Number of Properties</th>
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NFIP = National Flood Insurance Program
RL = NFIP-defined repetitive loss property
SRL = NFIP-defined severe repetitive loss property

Beyond the acquisition opportunities displayed in Table 2, the Borough may, upon Committee approval, open up applications to other areas in the Borough; to include NFIP-insured properties outside of these clusters.
PLAN MAINTENANCE

The Borough will review this acquisition action plan on an annual basis, and update as needed. The following describes potential time horizons and conditions in which the plan may be reviewed and the analysis updated:

- The FEMA floodplain and floodway delineations may be updated as part of the FEMA Risk Mapping, Assessment and Planning (Risk Map) program. If this occurs, the Borough committee may evaluate these changes to determine if property scores need to be updated and the analysis re-run to ensure results are based on best-available flood risk information.

- In future years, the FEMA FMA program may change their priorities for project selection. If this occurs, the Borough committee may re-evaluate the ranking criteria, potentially adjust based on the NOFO, and re-run the hot-spot analysis to ensure future grant applications remain competitive.

- Over time, property ownership may change and/or additional residents may obtain flood insurance in clusters that already had FEMA FMA grant applications submitted, making them eligible to participate. The Borough committee will evaluate when including these residents in future grant applications is appropriate.

- A future flood event may change the NFIP status of policy holders. For example, a repetitive loss property may become a severe repetitive loss property as a result of an additional flood event and the total amount of the paid claim. The Borough may consider updating the ranking and re-running the hot-spot analysis based on updated NFIP statistics which are released by FEMA quarterly.

- As acquisition projects are implemented and completed in the Borough, residents that did not participate in previous grant applications may be asked again to participate in the future.

- As additional funding sources become available outside of the FEMA HMA program, the Borough and residents may reconsider the frequency in which to apply for grant funding.

CONCLUSION

The Borough anticipates utilizing this acquisition action plan to continue to apply for FEMA Hazard Mitigation Assistance funding to prioritize and provide flood-prone residents an option to have their home acquired which will eliminate all future flood risk for their property.
Figure 2. Borough of Manville Properties
Figure 3. Borough of Manville Hot-Spot Analysis Results
Figure 4. Borough of Manville Priority Cluster Areas
Appendix A

Property Owner Outreach Material
Notice of Voluntary Interest

Borough of Manville
Property Acquisition Project
Homeowner Voluntary Interest Notice

Please complete this form if you are interested in exploring further your options for reducing your flood losses. Signing this does not commit you to any action.

Property Address:

Owner(s) Mailing Address:

Owner(s) Name(s):

Contact Telephone Number:

The local government is required by FEMA to inform you that your participation in this project for open-space acquisition is voluntary. Neither the State nor the Local Government will use its eminent domain authority to acquire the property for open-space purposes if you choose not to participate in a Hazard Mitigation Assistance grant program, or if negotiations fail.

____________________  ____________
Owners Signature     Date

____________________  ____________
Owners Signature     Date

____________________  ____________
Owners Signature     Date
Voluntary Participation Agreement: Acquisition – Due:
FEMA Hazard Mitigation Grant Program (FMA)

Please drop off or mail your completed agreement with signature to:

Borough of Manville
325 North Main Street, Manville, NJ 08835 (908) 725-9478 x103

(Separate forms needed for each property owned, including Vacant Lots if on separate deed)

Property Owner: ________________________

(Co-Owner’s Full Name): ________________________

Phone #: ( ) __________________ Work #: ( ) __________________ Cell #: ( ) __________________

Property Address: ________________________ (To be acquired)

Mailing Address: (If different)

County: ________________________

E-Mail: ________________________

PROPERTY INFORMATION

Body of water causing flooding: ________________________

Do you currently have Flood Insurance?  Yes  No

Insurance Company: ________________________

Flood Insurance Policy #: ________________________

Please circle the appropriate answers below:

Is your property in foreclosure?  Y  N  If yes, please indicate mortgage lender: ________________________

Have you filed claims in last 10 years?  Y  N  ICC?  Y  N  Is home substantially damaged?  Y  N

<table>
<thead>
<tr>
<th>Property:</th>
<th>Type Home:</th>
<th>Foundation Type:</th>
<th>Type Structure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner Occupied-Primary</td>
<td>Single Family</td>
<td>Basement Y N</td>
<td>Wood</td>
</tr>
<tr>
<td>Owner Occupied- Secondary Rental</td>
<td>2-4 Family</td>
<td>If yes, Finished Y N or Partial Y N</td>
<td>Masonry (Brick)</td>
</tr>
<tr>
<td>Vacant Lot</td>
<td>Multi (5+)</td>
<td>Crawlspace Y N</td>
<td>Stone</td>
</tr>
<tr>
<td>Other (Explain)</td>
<td>Manufactured</td>
<td>Elevated on piers/columns/posts/piles</td>
<td>Cement</td>
</tr>
<tr>
<td></td>
<td>Vacant Land</td>
<td>Slab on Grade</td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Other (Explain)</td>
<td>Vacant Land</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Basement Outside Entrance Y N</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (Explain)</td>
<td></td>
</tr>
</tbody>
</table>

If rented now, please provide name, address, and phone number of renter (use extra pages as needed)

TAX Parcel #: ________________________  Date of Construction: __________  Number of Stories above ground: __________

Total Living Area in Sq Ft. (All floors) __________  Estimate the Fair Market Value of your home: $ __________

Flood and Damage History (use extra pages as needed):

<table>
<thead>
<tr>
<th>Date: __________</th>
<th>Damage $’s: __________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date: __________</td>
<td>Damage $’s: __________</td>
</tr>
</tbody>
</table>

I understand that the sale of this property under the FEMA Flood Mitigation Assistance Program’s Acquisition Component is voluntary in nature, and that I am under NO obligation to participate, and that I may withdraw from the program at any time.

I currently plan to participate in the voluntary property acquisition program.

Print Name(s) of Property Owner(s) ________________________

Signature: __________________________________________ Date: __________________

Co-Owner’s Signature (If applicable) ________________________
DECLARATION AND RELEASE

In order to be eligible to receive FEMA Disaster Assistance, a member of the household must be a citizen, non-citizen national or qualified alien of the United States. Please read the form carefully, sign the sheet and return it to the Inspector, and show him/her a current form of photo identification. Please feel free to consult with an attorney or other immigration expert if you have any questions.

I hereby declare, under penalty of perjury that (check one):

☐ I am a citizen or non-citizen national of the United States.
☐ I am a qualified alien of the United States.

Print full name and age of minor child: I am the parent or guardian of a minor child who resides with me and who is a citizen, non-citizen national or qualified alien of the United States. Print full name and age of minor child:

By my signature I certify that:

* Only one application has been submitted for my household.
* All information I have provided regarding my application for FEMA disaster assistance is true and correct to the best of my knowledge.
* I will return any disaster aid money I received from FEMA or the State if I receive insurance or other money for the same loss, or if I do not use FEMA disaster aid money for the purpose for which it was intended.

I understand that, if I intentionally make false statements or conceal any information in an attempt to obtain disaster aid, it is a violation of federal and State laws, which carry severe criminal and civil penalties, including a fine up to $250,000, imprisonment, or both (18 U.S.C. §§ 287, 1001, and 3571).

I understand that the information provided regarding my application for FEMA disaster assistance may be subject to sharing within the Department of Homeland Security (DHS) including, but not limited to, the Bureau of Immigration and Custom Enforcement.

I authorize FEMA to verify all information given by me about my property/place of residence, income, employment and dependents in order to determine my eligibility for disaster assistance; and

I authorize all custodians of records of my insurance, employer, any public or private entity, bank financial or credit data service to release information to FEMA and/or the State upon request.

NAME (print) SIGNATURE DATE OF BIRTH DATE SIGNED

INSPECTOR ID NO. FEMA APPLICATION NO. DISASTER NO.

ADDRESS OF DAMAGED PROPERTY CITY STATE ZIP CODE

PRIVACY ACT STATEMENT


PRINCIPAL PURPOSE(S): This information is being collected for the primary purpose of determining eligibility and administering financial assistance under a Presidentially-declared disaster. Additionally, information may be reviewed internally within FEMA for quality control purposes.

ROUTINE USE(S): The information on this form may be disclosed as generally permitted under 5 U.S.C. § 552a(b) of the Privacy Act of 1974, as amended. This includes using this information as necessary and authorized by the routine uses published in DHS/FEMA - 008 Disaster Recovery Assistance Files System of Records (September 24, 2009, 74 FR 48763) and upon written request, by agreement, or as required by law.

DISCLOSURE: The disclosure of information on this form is voluntary; however, failure to provide the information requested may delay or prevent the individual from receiving disaster assistance.

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this data collection is estimated to average 2 minutes per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting this form. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 20598-3005, Paperwork Reduction Project (1660-0002) NOTE: Do not send your completed form to this address.