9.10 Township of Delanco

This section presents the jurisdictional annex for the Township of Delanco.

9.10.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan’s primary and alternate points of contact.

<table>
<thead>
<tr>
<th>Primary Point of Contact</th>
<th>Alternate Point of Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Janice Lohr, Assistant Administrator / Municipal Clerk</td>
<td>Michael Templeton, Twp. Committeeman</td>
</tr>
<tr>
<td>770 Coopertown Road, Delanco, NJ 08075</td>
<td>770 Coopertown Road, Delanco, NJ 08075</td>
</tr>
<tr>
<td>856.461.0561 ext. 224</td>
<td>856.764.1907</td>
</tr>
<tr>
<td><a href="mailto:jlohr@delancotownship.com">jlohr@delancotownship.com</a></td>
<td><a href="mailto:42mtempy55@gmail.com">42mtempy55@gmail.com</a></td>
</tr>
</tbody>
</table>

9.10.2 Municipal Profile

Delanco is located in northern Burlington County and is bordered by Beverly City and Edgewater Park to the east, Willingboro to the south, Delran to the south-west and Riverside to the west. The Township borders Pennsylvania to the north. The Township encompasses approximately 3.2 miles and naturally bordered by both the Delaware River and Rancocas Creek. Delanco touches Route 130 and is less than a 15-minute drive to Interstate 295 and the New Jersey Turnpike. According to the 2010 Census, the community's population was 4,283.

The Township Committee is the township's governing body. This elective body is responsible for formulating policies, approving the annual budget and enacting ordinances and resolutions to provide a legislative framework. Beginning in 2002 the Township Committee increased to a five-member committee. This increase in the committee was approved by the voters in the 2000 General Election. The Township Committee consists of a mayor, deputy mayor and three committee members.

Growth/Development Trends

The following table summarizes recent residential/commercial development since 2013 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in 9.10.8 of this annex which illustrates the hazard areas along with the location of potential new development.

Table 9.10-1. Growth and Development

<table>
<thead>
<tr>
<th>Property or Development Name</th>
<th>Type (e.g. Res., Comm.)</th>
<th># of Units / Structures</th>
<th>Location (address and/or Parcel ID)</th>
<th>Known Hazard Zone(s)</th>
<th>Description/Status of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highpoint at Newton's Landing</td>
<td>Res.</td>
<td>13</td>
<td>John Maher Way; 100.01/50.02 thru 50.8, 2100.12/1 thru 4, 6, 7</td>
<td>Could not locate.</td>
<td>Under Construction</td>
</tr>
<tr>
<td>Cornerstone at Delanco</td>
<td>Res.</td>
<td>64/10</td>
<td>Coopertown Road; 2100/1, 2100.12/48</td>
<td>Flood: 1% Event: A-Zone; SLOSH: Category 1; Sea-Level Rise: 2 ft. SLR Partial Zone X</td>
<td>Under Construction</td>
</tr>
</tbody>
</table>
Section 9.10: Township of Delanco

<table>
<thead>
<tr>
<th>Property or Development Name</th>
<th>Type (e.g. Res., Comm.)</th>
<th># of Units / Structures</th>
<th>Location (address and/or Parcel ID)</th>
<th>Known Hazard Zone(s)</th>
<th>Description/Status of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-Atlantic Logistics Center</td>
<td>Comm.</td>
<td>4</td>
<td>Coopertown Road; 1900/8</td>
<td>Wildfire: High; SLOSH: Category 4</td>
<td>Under Construction</td>
</tr>
</tbody>
</table>

**Known or Anticipated Development in the Next Five (5) Years**

<table>
<thead>
<tr>
<th>Property or Development Name</th>
<th>Type (e.g. Res., Comm.)</th>
<th># of Units / Structures</th>
<th>Location (address and/or Parcel ID)</th>
<th>Known Hazard Zone(s)</th>
<th>Description/Status of Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crossings @ Delanco</td>
<td>Res.</td>
<td>261</td>
<td>Coopertown Road</td>
<td>NA</td>
<td>Prelim. Approval</td>
</tr>
</tbody>
</table>

* Only location-specific hazard zones or vulnerabilities identified.

### 9.10.3 Natural Hazard Event History Specific to the Municipality

Burlington County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2013 to present were summarized to indicate the range and impact of hazard events in the community. Information regarding specific damages is included, if available, based on reference material or local sources. This information is presented in the table below. For details of these and additional events, refer to Volume I, Section 5.0 of this plan.

#### Table 9.10-2. Hazard Event History

<table>
<thead>
<tr>
<th>Dates of Event</th>
<th>Event Type</th>
<th>Burlington County Designated?</th>
<th>Summary of Damages/Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 30-May 1, 2014</td>
<td>Heavy Rain and Flooding</td>
<td>N/A</td>
<td>Heavy rain caused considerable poor drainage and creek flooding in northern Burlington County. Rancocas Creek was hit the hardest by flooding. Many roads were flooded and closed. Approximately $1 million in property damage in the County. While the event impacted the entire County, the Township did not experience significant losses or damages.</td>
</tr>
<tr>
<td>June 23, 2015</td>
<td>Severe Storm (DR-4231)</td>
<td>Yes</td>
<td>$10 million in property damage in the County ($8 million in Medford, $1 million in Mt Laurel and $1 million in Medford Lakes). While the event impacted the entire County, the Township did not experience significant losses or damages.</td>
</tr>
<tr>
<td>January 22-24, 2016</td>
<td>Severe Winter Storm (DR-4264)</td>
<td>Yes</td>
<td>Heavy snow fell throughout the County; snowfall totals ranged from 12 inches to 16.4 inches. While the event impacted the entire County, the Township did not experience significant losses or damages.</td>
</tr>
</tbody>
</table>

**Notes:**

* EM Emergency Declaration (FEMA)
* FEMA Federal Emergency Management Agency
* DR Major Disaster Declaration (FEMA)
* N/A Not applicable

### 9.10.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The following summarizes the hazard vulnerabilities and their ranking in the Township of Delanco. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.

**Hazard Risk/Vulnerability Risk Ranking**
The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of Delanco. During the review of the hazard/vulnerability risk ranking, the Township indicated the following:

- Coastal erosion was originally ranked low. The Township has seawalls that are deteriorating and some that are close to collapsing along the Delaware River. This is happening from the ongoing erosion from the wave energy, tides, storms, etc. There are storm water outfalls at these locations and the road (Delaware Ave.) runs parallel to the river. As a result, the municipality changed the ranking for coastal erosion to high.
- Flood was changed from a low hazard to a medium hazard.
- After reviewing what areas would be vulnerable to landslide, the municipality felt the estimated potential loss value was much higher than what could be expected and changed the ranking from high to medium.

### Table 9.10-3. Hazard Risk/Vulnerability Risk Ranking

<table>
<thead>
<tr>
<th>Hazard type</th>
<th>Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard</th>
<th>Probability of Occurrence</th>
<th>Risk Ranking Score (Probability x Impact)</th>
<th>Hazard Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coastal Erosion*</td>
<td>RCV Exposed to CE Hazard Area: $15,862,028</td>
<td>Frequent</td>
<td>12</td>
<td>High</td>
</tr>
<tr>
<td>Drought</td>
<td>Damage estimate not available.</td>
<td>Frequent</td>
<td>30</td>
<td>Medium</td>
</tr>
<tr>
<td>Earthquake</td>
<td>100-Year GBS: $0</td>
<td>Occasional</td>
<td>28</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>500-Year GBS: $776,057</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,500-Year GBS: $11,537,751</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flood*</td>
<td>1% Annual Chance: $142,092,069</td>
<td>Frequent</td>
<td>18</td>
<td>Medium</td>
</tr>
<tr>
<td>Landslide*</td>
<td>RCV Exposed to Landslide Hazard Area: $1,422,201,479</td>
<td>Occasional</td>
<td>36</td>
<td>Medium</td>
</tr>
<tr>
<td>Severe Storm</td>
<td>100-year MRP: $980,085</td>
<td>Frequent</td>
<td>48</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>500-year MRP: $8,442,694</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annualized: $53,304</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe Winter Weather</td>
<td>1% GBS: $9,185,599</td>
<td>Frequent</td>
<td>51</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>5% GBS: $45,927,993</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wildfire</td>
<td>Estimated Value in the Extreme, Very High, and High Hazard Areas: $1,117,160</td>
<td>Occasional</td>
<td>12</td>
<td>Low</td>
</tr>
</tbody>
</table>

Notes:

- Building damage ratio estimates based on FEMA 386-2 (August 2001)
- The valuation of general building stock and loss estimates was based on custom inventory for the municipality.
- High = Total hazard priority risk ranking score of 31 and above
- Medium = Total hazard priority risk ranking of 20-30+
- Low = Total hazard risk ranking below 20
- Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- Loss estimates for the flood and earthquake hazards represent both structure and contents.
- The HAZUS-MH earthquake model results are reported by Census Tract.
- * The Township of Delanco changed the ranking for coastal erosion from low to high, flood from low to medium, and landslide from high to medium.

### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Delanco.
Table 9.10-4. NFIP Summary

<table>
<thead>
<tr>
<th>Municipality</th>
<th># Policies (1)</th>
<th># Claims (Losses)</th>
<th>Total Loss Payments (2)</th>
<th># Rep. Loss Prop. (1)</th>
<th># Severe Rep. Loss Prop. (1)</th>
<th># Policies in 100-year Boundary (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Township of Delanco</td>
<td>102</td>
<td>21</td>
<td>$67,299.23</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: FEMA Region 2 2017, 2018
(1) Repetitive loss and severe repetitive loss statistics provided by FEMA Region 2 and are current as of 10/31/2017. Policy and claims statistics current as of 9/30/2018. Please note the total number of repetitive loss properties does not include the severe repetitive loss properties. The number of claims represents claims closed by 9/30/2018.
(2) Total building and content losses from the claims file provided by FEMA Region 2.
(3) The policies inside and outside of the flood zones are based on the addresses geocoded from the FEMA Region 2 policy file – 10/31/2017.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility. A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.

Critical Facilities

The table below presents Hazards United States (HAZUS) – Multi-Hazards (MH) estimates of the damage and loss of use to critical facilities in the community as a result of a 1-percent annual chance flood event. These facilities are not owned or controlled by the Township.

Table 9.10-5. Potential Flood Losses to Critical Facilities

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Exposure</th>
<th>1% Event</th>
<th>0.2% Event</th>
<th>Potential Loss from 1% Flood Event</th>
<th>Percent Structure Damage</th>
<th>Percent Content Damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>269 - Pennington Park Structure</td>
<td>County Building</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>275 - Pennington Park Yard &amp; Outside</td>
<td>County Building</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>399 - Rhawn Property - Main House</td>
<td>County Building</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>437 - Rhawn Property - Shed - Delanco Township</td>
<td>County Building</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delanco Light Rail Station – New Jersey Transit property</td>
<td>Light Rail</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: FEMA 2017, Burlington County
Note: - = Damages not calculated by HAZUS-MH v4.0

These facilities are not owned or controlled by the Township. Responsibility for these facilities falls on the County and New Jersey Transit.

Other Vulnerabilities Identified

The municipality has identified the following vulnerabilities within their community:

- Flood: Frequent
- Severe Storm: Frequent
- Severe Winter Storm: Frequent
- Coastal Erosion: Frequent
- Wildfire: Occasional
Drought: Frequent
Earthquake: Rare
Landslide: Occasional

The municipality identified the following areas of concern:

- **Bogg’s Run (aka, Bogg’s Ditch)** is a natural drainage originating in Edgewater Park. The outflow of Bogg’s Run at the Delaware River was modified by the Corps of Engineers in the 1940’s and 1950’s when CDF’s #13 & #13a were built (where the Riversedge residential development is now located). The Bogg’s Run outflow is now restricted and easily clogged with river debris. This is the United States Army Corps of Engineers’ responsibility. The upper section of Bogg’s, east of Burlington Avenue, is within an easement to the Veterans Administration to ensure runoff from the Beverly National Cemetery. The Bogg’s drainage passes under the NJT tracks through an undersized and easily clogged culvert. Impeded runoff floods residential property along Perkins Lane in Edgewater Park.
- The “canal” at Delanco’s West Avenue Trail Park extends east and north through Beverly. The canal was built by the Corps in the early 1960’s when ground water was blocked from the natural flow to the river after CDF’s 13A & 14 were built. The canal outflow at the Delaware River in Beverly is often blocked by debris and silting, resulting in restricted flow, higher water tables, and recurring basement flooding to the adjacent residential neighborhood.
- The Beverly Sewerage Treatment Plant provides water treatment services to Beverly and Delanco. This is a critical facility along the Delaware River.
- Delanco Township has experienced significant river shoreline erosion and loss of land along its Delaware River shore. Nearly 1000 feet of riverfront seawall has collapsed. An additional several hundred feet of seawall is threatened.
- Wildfire is unlikely, but if coupled with drought, this would generate a risk with large forested areas at both ends of Delanco (Hawk Island [120 acres] & West Ave. Park [50+ acres]) close to dense residential neighborhoods.
- FEMA flood scenarios (1.0% & 0.2%) would impact Burlington Avenue (at Rancocas Creek & at Bogg’s Ditch) and Cooper Street (Hickory Street to Pennsylvania Avenue / RR tracks), with significant effect on evacuation routes, emergency services (FD / EMS) and relief access. All three roads into Delanco would be covered by floodwaters.
- Delanco – Riverside Bridge would be affected by FEMA flooding scenarios (1.0% & 0.2%; aka 100yr & 500yr) as both bridge approaches would be inundated. Significant flooding or flood debris could damage the bridge or mechanical function (movable swing bridge), severing a vital transportation connection. Currently spring and storm flood tides inundate and block the bridge approach from Riverside.

### 9.10.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community classification
- National Flood Insurance Program
- Integration of mitigation planning into existing and future planning mechanisms

**Planning and Regulatory Capability**

The table below summarizes the regulatory tools that are available to the Township of Delanco.
### Table 9.10-6. Planning and Regulatory Tools

<table>
<thead>
<tr>
<th>Tool / Program (code, ordinance, plan)</th>
<th>Do you have this? (Yes/No) If Yes, date of adoption or update</th>
<th>Authority (local, county, state, federal)</th>
<th>Dept./Agency Responsible</th>
<th>Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planning Capability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master Plan</td>
<td>Yes (2009)</td>
<td>Local</td>
<td>Land Use Board</td>
<td></td>
</tr>
<tr>
<td>Capital Improvements Plan</td>
<td>Yes (2017)</td>
<td>Local</td>
<td>Township Committee</td>
<td></td>
</tr>
<tr>
<td>Floodplain Management / Basin Plan</td>
<td>Yes (2017)</td>
<td>Local</td>
<td>Township Committee</td>
<td></td>
</tr>
<tr>
<td>Stormwater Management Plan</td>
<td>Yes (2006)</td>
<td>Local</td>
<td>Township Committee</td>
<td></td>
</tr>
<tr>
<td>Open Space Plan</td>
<td>Yes (2009)</td>
<td>Local</td>
<td>Township Committee &amp; JLUB</td>
<td>Incorporated in Master Plan 2009</td>
</tr>
<tr>
<td>Stream Corridor Management Plan</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Watershed Management or Protection Plan</td>
<td>Yes (2006)</td>
<td>Local</td>
<td>Township Committee</td>
<td>Chapter 65</td>
</tr>
<tr>
<td>Economic Development Plan</td>
<td>Yes</td>
<td>Local</td>
<td>Township Committee</td>
<td>Incorporated in Master Plan 2009</td>
</tr>
<tr>
<td>Post-Disaster Recovery Plan</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Transportation Plan</td>
<td>Yes (2009)</td>
<td>Local</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Strategic Recovery Planning Report</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Other Plans:</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Regulatory Capability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zoning Ordinance</td>
<td>Yes (2003, amended in 2017)</td>
<td>-</td>
<td>-</td>
<td>Chapter 110: Zoning</td>
</tr>
<tr>
<td>Subdivision Ordinance</td>
<td>Yes (2003, amended in 2011)</td>
<td>-</td>
<td>-</td>
<td>Chapter 100: Subdivision of Land</td>
</tr>
<tr>
<td>NFIP Flood Damage Prevention Ordinance</td>
<td>Yes (2017)</td>
<td>Federal, State, Local</td>
<td>-</td>
<td>Chapter 65, Ordinance 2017-15</td>
</tr>
<tr>
<td>NFIP: Cumulative Substantial Damages</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>NFIP: Freeboard</td>
<td>Yes (2017)</td>
<td>State, Local</td>
<td>-</td>
<td>Chapter 65, Ordinance 2017-15</td>
</tr>
<tr>
<td>Growth Management Ordinances</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Site Plan Review Requirements</td>
<td>Yes</td>
<td>Local</td>
<td>Land Use Board</td>
<td>Chapter 91: Site Plan Approval</td>
</tr>
</tbody>
</table>
Administrative and Technical Capability

The table below summarizes potential staff and personnel resources available to the Township of Delanco.

Table 9.10-7. Administrative and Technical Capabilities

<table>
<thead>
<tr>
<th>Resources</th>
<th>Is this in place? (Yes or No)</th>
<th>Department/ Agency/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Administrative Capability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planning Board</td>
<td>Yes</td>
<td>Joint Land Use Board</td>
</tr>
<tr>
<td>Mitigation Planning Committee</td>
<td>Yes</td>
<td>Township Committee / JLUB / OEM</td>
</tr>
<tr>
<td>Environmental Board/Commission</td>
<td>Yes</td>
<td>Environmental Advisory Board</td>
</tr>
<tr>
<td>Open Space Board/Committee</td>
<td>Yes</td>
<td>Recreation Commission</td>
</tr>
<tr>
<td>Economic Development Commission/Committee</td>
<td>Yes</td>
<td>Economic Advisory Council</td>
</tr>
<tr>
<td>Maintenance programs to reduce risk</td>
<td>Yes</td>
<td>Twp. Committee / DPW / OEM</td>
</tr>
<tr>
<td>Mutual aid agreements</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td><strong>Technical/Staffing Capability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planner(s) or engineer(s) with knowledge of land</td>
<td>Yes</td>
<td>Environmental Resolutions, Inc.</td>
</tr>
<tr>
<td>development and land management practices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineer(s) or professional(s) trained in</td>
<td>Yes</td>
<td>Environmental Resolutions, Inc.</td>
</tr>
<tr>
<td>construction practices related to buildings and/or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planners or engineers with an understanding of</td>
<td>Yes</td>
<td>Environmental Resolutions, Inc.</td>
</tr>
<tr>
<td>natural hazards</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Resources

<table>
<thead>
<tr>
<th>Resources</th>
<th>Is this in place? (Yes or No)</th>
<th>Department/ Agency/Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFIP Floodplain Administrator (FPA)</td>
<td>Yes</td>
<td>Construction Official</td>
</tr>
<tr>
<td>Surveyor(s)</td>
<td>Yes</td>
<td>Environmental Resolutions, Inc.</td>
</tr>
<tr>
<td>Personnel skilled or trained in GIS and/or Hazards</td>
<td>Yes</td>
<td>Environmental Resolutions, Inc.</td>
</tr>
<tr>
<td>United States (HAZUS) – Multi-Hazards (MH) applications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scientist familiar with natural hazards</td>
<td>Yes</td>
<td>Environmental Resolutions, Inc.</td>
</tr>
<tr>
<td>Emergency Manager</td>
<td>Yes</td>
<td>Municipal OEM</td>
</tr>
<tr>
<td>Grant writer(s)</td>
<td>Yes</td>
<td>Environmental Resolutions, Inc.</td>
</tr>
<tr>
<td>Staff with expertise or training in benefit/cost analysis</td>
<td>Yes</td>
<td>Environmental Resolutions, Inc.</td>
</tr>
</tbody>
</table>

### Fiscal Capability

The table below summarizes financial resources available to the Township of Delanco.

**Table 9.10-8. Fiscal Capabilities**

<table>
<thead>
<tr>
<th>Financial Resources</th>
<th>Accessible or Eligible to Use (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community development Block Grants (CDBG, CDBG-DR)</td>
<td>Yes</td>
</tr>
<tr>
<td>Capital improvements project funding</td>
<td>Yes</td>
</tr>
<tr>
<td>Authority to levy taxes for specific purposes</td>
<td>Yes</td>
</tr>
<tr>
<td>User fees for water, sewer, gas or electric service</td>
<td>Yes</td>
</tr>
<tr>
<td>Impact fees for homebuyers or developers of new development/homes</td>
<td>Yes</td>
</tr>
<tr>
<td>Stormwater utility fee</td>
<td>No</td>
</tr>
<tr>
<td>Incur debt through general obligation bonds</td>
<td>Yes</td>
</tr>
<tr>
<td>Incur debt through special tax bonds</td>
<td>Yes</td>
</tr>
<tr>
<td>Incur debt through private activity bonds</td>
<td>No</td>
</tr>
<tr>
<td>Withhold public expenditures in hazard-prone areas</td>
<td>No</td>
</tr>
<tr>
<td>Other federal or state Funding Programs</td>
<td>Yes</td>
</tr>
<tr>
<td>Open Space Acquisition funding programs</td>
<td>Yes</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
</tr>
</tbody>
</table>

### Community Classifications

The table below summarizes classifications for community program available to the Township of Delanco.

**Table 9.10-9. Community Classifications**

<table>
<thead>
<tr>
<th>Program</th>
<th>Do you have this? (Yes/No)</th>
<th>Classification (if applicable)</th>
<th>Date Classified (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Rating System (CRS)</td>
<td>NP</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Building Code Effectiveness Grading Schedule (BCEGS)</td>
<td>NP</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Public Protection (ISO Fire Protection Classes 1 to 10)</td>
<td>NP</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Storm Ready Certification</td>
<td>NP</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Program | Do you have this? (Yes/No) | Classification (if applicable) | Date Classified (if applicable)
---|---|---|---
Firewise Communities classification | NP | N/A | N/A
Natural disaster/safety programs in/for schools | TBD | - | -
Organizations with mitigation focus (advocacy group, non-government) | NP | - | -
Public education program/outreach (through website, social media) | Yes | - | -
Public-private partnership initiatives addressing disaster-related issues | NP | - | -

**Note:**
- **N/A**  Not applicable
- **NP** Not participating
- **-** Unavailable

The classifications listed above relate to the community’s ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at [https://www.isomitigation.com/ppc/](https://www.isomitigation.com/ppc/)

**Self-Assessment of Capability**

The table below provides an approximate measure of the Township of Delanco’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

**Table 9.10-10. Self-Assessment Capability for the Municipality**

<table>
<thead>
<tr>
<th>Area</th>
<th>Degree of Hazard Mitigation Capability</th>
<th>Limited (If limited, what are your obstacles?) *</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and regulatory capability</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative and technical capability</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiscal capability</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community political capability</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Community resiliency capability</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Capability to integrate mitigation into municipal processes and activities</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Thomas Casey, Construction Official

Flood Vulnerability Summary

The Township of Delanco does not maintain inventories of properties that have been damaged by flooding or property owners who are interested in mitigation. The FPA did not have knowledge of any structures that have required Substantial Damage. The FPA indicated that there are currently no residents interested in elevation.

Resources

The FPA assumes the responsibilities of floodplain administration for the Township of Delanco in conjunction with support staff. NFIP administration services and functions provided to residents of Delanco include plan review, inspections, assessments, and consultation to Township officials. The Township provides education and access to FEMA information regarding flood hazards / risk or flood risk reduction through municipal website and annual Community Day event. The FPA stated there are currently no barriers to running an effective floodplain management program and feels adequately supported and trained to fulfill his responsibilities as the municipal floodplain administrator. The FPA would consider attending continuing education and certification training on floodplain management if it were offered in the future.

Compliance History

The Township is in good compliance with the NFIP. The date of the most recent Community Assistance Visit is unknown.

Regulatory

The Township of Delanco’s floodplain management ordinance (Flood Damage Prevention Ordinance 2017-15, Chapter 65, adopted December 2017) meets the minimum requirements set by FEMA and the State of New Jersey. The FPA indicated that there are other local ordinances, plans, or programs that support floodplain management. The Township has considered enrolling in the CRS program and indicated they would attend a CRS seminar if it was offered locally.

Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community’s progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

Planning

**Hazard Mitigation:** The Township of Delanco actively participated in the 5-year update of the Burlington County Hazard Mitigation Plan. The Township continues to support the implementation, monitoring, maintenance, and updating of the plan.

**Master Plan:** The Township of Delanco’s Master Plan was adopted on January 6, 2009. It includes elements for land use, circulation, historic preservation, capital improvements, and open space and recreation.

**Land Use:** Land use is discussed as an element in the Master Plan. Goals in the Master Plan include:
• Enhance and redevelop older residential areas.
• Create new residential neighborhoods in appropriate locations.
• Preserve and enhance the town’s traditional residential village character and provide appropriate buffers between the mixed-use village from more intensive industrial uses along the railroad.
• Encourage development that respects existing development intensities, densities and patterns and environmental constraints.
• Discourage illegal apartment conversions that create higher residential densities, overcrowding, insufficient parking and other detrimental conditions and promote the rehabilitation of structures to their original single-family character.
• Reuse vacant land and underutilized sites.
• Encourage the creation of infill commercial development along Burlington Avenue in appropriate locations.
• Continue to reexamine ordinances regarding industrial, commercial and residential development requirements and provisions, i.e. setbacks, minimum area landscaping, parking, buffers etc.
• Encourage the development of green buildings; and have Delanco Township lead by example by constructing LEED–certified buildings.

**Stormwater Management:** Stormwater management is discussed as an element in the Master Plan. Stormwater management goals include:

- Reduce flood damage, including damage to life and property.
- Minimize, to the extent practical, any increase in stormwater runoff from any new development or redevelopment.
- Reduce soil erosion from any development or construction project.
- Assure the adequacy of existing and proposed culverts and bridges, and other instream structures.
- Maintain groundwater recharge where feasible.
- Prevent, to the greatest extent feasible, an increase in non-point pollution.
- Maintain the integrity of stream channels for their biological functions, as well as for drainage.
- Minimize pollutants in stormwater runoff from new and existing development to restore, enhance, and maintain the chemical, physical, and biological integrity of the waters for the State, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial, and other uses of water.
- Protect public safety through the proper design and operation of stormwater basins.
- Maintain and enhance water quality so that all waterways meet surface water quality standards for fishing and swimming.
- Promote Stormwater Management practices that retain stormwater on site.
- Retrofit existing storm systems that discharge to waterways.
- Promote land use, site design, and stormwater practices to allow stream base flows to approximate pre-development conditions.
- Identify methods to equitably distribute water supplies while encouraging water conservation and reuse.
- Develop regional distribution systems for water reuse.

**Regulatory and Enforcement (Ordinances)**

The Township of Delanco’s codebook can be found online at [https://ecode360.com/DE0379?needHash=true](https://ecode360.com/DE0379?needHash=true).

**Flood Damage Prevention:** The purpose of the flood damage prevention ordinance (Chapter 65 of the municipal code) is to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- Protect human life and health.
- Minimize expenditure of public money for costly flood control projects.
• Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public.
• Minimize prolonged business interruptions.
• Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains.
• Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas.
• Ensure that potential buyers are notified that property is in a flood area.

Land Use Procedures Ordinance: The Township’s Land Use Procedures Ordinance (Chapter 50) establishes the members and practices of the Joint Land Use Board.

Zoning Ordinance: The Township’s Zoning Ordinance (Chapter 110) establishes general regulations and district regulations.

NJDEP Municipal Stormwater Regulation Program: New Jersey Department of Environmental Protection issued the statewide municipal stormwater permits that became effective January 1, 2018 and authorizes stormwater discharges from municipal separate storm sewer systems (MS4s) to the waters of the state. Municipalities that have been issued a Notice of Authorization (NOA) to discharge under the Tier A (urban and coastal municipalities) or Tier B (more rural municipalities) master general permit must develop and implement a stormwater program. The first New Jersey Pollutant Discharge Elimination System (NJPDES) permit authorizing discharges from MS4 municipalities became effective in 2004 (subsequently renewed in 2009 and now in 2018), so most municipalities have developed stormwater programs; however, the 2018 permit requires municipalities to maintain a stormwater management plan and enforce stormwater ordinances to address development and redevelopment consistent with the Stormwater Management rules at N.J.A.C 7:8, as well as implementation of additional requirements. For more information on the municipal stormwater regulation program, see http://www.nj.gov/dep/dwq/msrp_home.htm. Delanco is a Tier A municipality.

Stormwater Management: Chapter 249 of the municipal code discusses stormwater management. The chapter is intended to regulate the feeding of wildlife, disposal of waste, including pet solid waste, yard waste collection, litter, and other waste and pollution that may find its way into stormwater runoff in order to improve, preserve and protect the water quality of waters and streams within the Township and surrounding communities that may be downstream from the Township so as to protect the health safety and welfare of the public. This chapter also regulates connections to the municipal separate storm sewer system (MS4) operated by the Township and establishes penalties for violations of the provisions of this chapter.

Operational and Administration

Mutual Aid Agreements: The Township maintains mutual aid agreements with neighboring communities for continuity of operations.

Information Sharing: The Township is working with Burlington County to improve municipal communications systems to include information sharing with the county and surrounding municipalities. The Township also utilizes Swift911 to share information with residents.

Floodplain Administrator: The Township promotes the participation of the Floodplain Administrator within the hazard mitigation planning process and other plans and activities.

Joint Land Use Board: The Delanco Township Joint Land Use Board serves as both a planning board and a zoning board of adjustment pursuant to the provisions of N.J.S.A.40:55D-25d and has been established in accordance with the provisions set forth in N.J.S.A.40:55D-1 et seq. The Joint Land Use Board is authorized to
Section 9.10: Township of Delanco

adopt such rules and regulations as may be necessary to carry into effect the provisions and purposes of the land use chapters of the Delanco Code. The nine-member board meets each March 2019 at 7:00PM in the Municipal Court Room. Please check the current meeting schedule for specific meeting dates.

Historic Preservation Advisory Board: The Delanco Historic Preservation Advisory Board (HPAB) was created by a resolution of the Delanco Township Committee on April 4, 2005. Its purpose is to:

- Create an inventory of historic sites within the municipality and gather information with regard to their historic character.
- Recommend and prioritize historic sites for potential acquisition within the municipality, whether through the recently adopted open space tax approved by the voters or other funding.
- Recommend any lesser means of preservation that may be instituted to ensure the continuation of historic sites.
- Promote the history of Delanco Township and its historic sites.

Environmental Advisory Board: The Delanco Environmental Advisory Board advises the Mayor and Township Committee as to the ecological considerations of the Township. The Board meets on the first Thursday of each March 2019 at 7:00PM in the Municipal Building. The Board is made up of five members, one of which is a member of the Shade Tree Commission and one of which is a member of the Planning Board.

Economic Advisory Council: The purpose of the Economic Advisory Council’s purpose is to:

- To promote the economic growth of the Township of Delanco.
- To plan, implement and inform the community and surrounding areas about economic growth, business and opportunity within the Township of Delanco.
- To make recommendations to the Township Committee with regard to economic, business and related issues impacting the Township.
- To submit a semiannual report to the Township Committee regarding its activities over the prior six months and, if requested, appear before the Township Committee for the discussion of same.

Shade Tree Commission: The mission of the Delanco Shade Tree Commission, founded on October 12, 1971 is as follows:

- Serve as volunteer advocates for the incorporation of trees and green spaces in the Township.
- To maintain and preserve the trees on township property.
- To facilitate the planting of new trees in public venues.
- To educate the public with regard to the care and benefits of trees in their environment.
- To remain informed, accredited, and active in the future planning of the Community Forest.

The Shade Tree Commission meets the fourth Wednesday of every March 2019, with the exception of November and December, at Town Hall, 770 Coopertown Road.

Funding

The Township of Delanco plans to add a line item for mitigation project funding in the municipal budget for and look at mitigation actions when allocating funding in the future. The Township also plans to add a line item for mitigation project funding in the Capital Improvement Budget in the next five years. The Township has provided funding for mitigations projects that have been identified in the hazard mitigation plan and plans to provide protection for buildings and infrastructure in high hazard areas.
Education and Outreach

The Township conducts and facilitates public education and outreach for residents and businesses to promote natural hazard risk reduction on hazard mitigation and disaster preparedness. Natural disaster/safety programs take place in schools. The Township maintains a municipal website (http://www.delancotownship.com/) where they post information regarding upcoming community events, important municipal decisions, and information about the municipality. The website also contains website links to NJ & Federal emergency preparedness sites. The Township’s Police and Fire Departments also maintain Facebook pages and the Police Department maintains a Twitter page.

Burlington County utilizes the Swift911 Emergency Notification system. Swift911 is used in order to keep residents informed during fires, outages, floods, hurricanes, evacuations, road closures and more. All notifications are delivered for the sole purpose of delivering emergency messages and public notifications that are time sensitive in order to increase the safety and security. This service is also extended to the 40 municipalities within Burlington County, including the Township of Delanco.

9.10.6 Mitigation Strategy and Prioritization

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

Past Mitigation Initiative Status

The following table indicates progress on the community’s mitigation strategy identified in the 2013 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under ‘Capability Assessment’ presented previously in this annex.
<table>
<thead>
<tr>
<th>Action Number</th>
<th>2013 Mitigation Action</th>
<th>Responsible Party</th>
<th>Status (In progress, No progress, Complete)</th>
<th>Describe Status</th>
<th>Next Steps</th>
</tr>
</thead>
</table>
| DCO-1         | Bogg’s Run - implement improvements to increase the capacity of culverts at the Light Rail Line and Burlington Avenue | Lead: Delanco OEM, Edgewater OEM Support: USACE, County OEM, NJ Transit  | No Progress                             | 1. 0% complete  
2. NJ Transit responsibility; low priority for NJT.”  
3. No funding secured | 1. Include in 2019 HMP  
2. See table 9.10-13  
3. N/A |
| DCO-2         | Perform seawall repairs on Delaware Riverfront                                          | Township Committee                                                                                   | In Progress                              | 1. 0% complete  
2. NJDEP regulations, changing policy have inhibited progress. Permitting & review in progress.  
3. No funding secured | 1. Include in 2019 HMP  
2. See table 9.10-13  
3. N/A |
| DCO-3         | Perform drainage improvements at Hickory St.                                            | Township Committee                                                                                   | No Progress                               | 1. 0% complete  
2. Funding allocated  
3. No funding secured | 1. Include in 2019 HMP  
2. See table 9.10-13  
3. N/A |
| DCO-4         | Purchase new OEM phone system                                                           | Township Committee                                                                                   | In Progress                              | 1. 95% complete  
2. N/A  
3. N/A | 1. Include in 2019 HMP  
2. See table 9.10-13  
3. N/A |
| DCO-5         | Establish Street Tree inspection program and implement removal of dangerous trees         | Township Committee                                                                                   | In Progress                              | 1. 5% complete  
2. N/A  
3. N/A | 1. Include in 2019 HMP  
2. See table 9.10-13  
3. N/A |
| DCO-6         | Evaluate benefits of participating in CRS program                                        | Twp. Committee; Planning                                                                             | In Progress                              | 1. Review and Revisions to Ordinances  
2. N/A  
3. NA | 1. Include in 2019 HMP  
2. See table 9.10-13  
3. N/A |
| DCO-7         | Conduct and facilitate community and public education and outreach for residents and businesses to promote natural hazard risk reduction to include:  
• Disaster preparedness  
• Hazard mitigation | Municipality with support from Planning Partners, County Planning, NJOEM, FEMA | In Progress                              | 1. 5% complete  
2. Ongoing  
3. N/A | 1. Discontinue  
2.  
3. Ongoing capability |
<table>
<thead>
<tr>
<th>Action Number</th>
<th>2013 Mitigation Action</th>
<th>Responsible Party</th>
<th>Status (In progress, No progress, Complete)</th>
<th>Describe Status</th>
<th>Next Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>DCO-8</td>
<td>Improve municipal communications systems to include information sharing with county and surrounding municipalities.</td>
<td>Municipality with support from County, NJOEM and FEMA</td>
<td>In Progress</td>
<td>1. 100% Complete. Using Swift 911 system and also communication with the county through their radio and pager alerts</td>
<td>1. Discontinue 2. N/A 3. Ongoing capability</td>
</tr>
<tr>
<td>DCO-9</td>
<td>Obtain and install backup power sources at critical facilities.</td>
<td>Municipality with support from County, NJOEM and FEMA</td>
<td>In Progress</td>
<td>1. 50% Complete. Firehouse, Muni bldg., Schools have backup power</td>
<td>1. Include in 2019 HMP 2. Certify backup power to critical bldg circuits. 3. N/A</td>
</tr>
<tr>
<td>DCO-11</td>
<td>Continue to support the implementation, monitoring, maintenance, and updating of this Plan through participating in the 5 year Plan Update</td>
<td>Municipality with support from Planning Partners, County Planning, NJOEM, FEMA</td>
<td>In Progress</td>
<td>1. Ongoing 2. N/A 3. N/A</td>
<td>1. Discontinue 2. N/A 3. Ongoing capability</td>
</tr>
<tr>
<td>DCO-12</td>
<td>Promote the participation of Floodplain Administrator within the planning process and other activities.</td>
<td>Municipality with support from County, NJOEM and FEMA</td>
<td>In Progress</td>
<td>1. Ongoing 2. N/A 3. N/A</td>
<td>1. Discontinue 2. N/A 3. Ongoing capability</td>
</tr>
<tr>
<td>DCO-13</td>
<td>Enhance resilience to severe storms by joining the NOAA “Storm Ready” program.</td>
<td>Municipality with support from County, NJOEM and FEMA</td>
<td>No Progress</td>
<td>1. 0% 2. N/A 3. N/A</td>
<td>1. Include in 2019 HMP 2. See table 9.10-13 3. N/A</td>
</tr>
<tr>
<td>DCO-14</td>
<td>Provide public education and outreach on proper installation and/or use of backup power</td>
<td>Municipal Clerk</td>
<td>No Progress</td>
<td>1. 0% 2. N/A 3. N/A</td>
<td>1. Include in 2019 HMP 2. See table 9.10-13 3. N/A</td>
</tr>
</tbody>
</table>

1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?
Completed Mitigation Initiatives Not Identified in the Previous Mitigation Strategy

The Township of Delanco has identified the following mitigation projects/activities that have also been completed but were not identified in the previous mitigation strategy in the 2013 Plan:

- None identified

Proposed Hazard Mitigation Initiatives for the Plan Update

The Township of Delanco participated in a mitigation action workshop in March 2018 and was provided the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 ‘Selecting Appropriate Mitigation Measures for Floodprone Structures’ (March 2007) and FEMA ‘Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards’ (January 2013).

Table 9.10-12 summarizes the comprehensive-range of specific mitigation initiatives the Township of Delanco would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as ‘High’, ‘Medium’, or ‘Low.’ The table below summarizes the evaluation of each mitigation initiative, listed by Action Number.

Table 9.10-13 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.
### Table 9.10-12. Proposed Hazard Mitigation Initiatives

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Mitigation Initiative</th>
<th>Critical Facility (Yes/No)</th>
<th>Hazard(s) Mitigated</th>
<th>Goals Met</th>
<th>Lead and Support Agencies</th>
<th>Estimated Benefits</th>
<th>Estimated Cost</th>
<th>Sources of Funding</th>
<th>Timeline</th>
<th>Priority</th>
<th>Mitigation Category</th>
<th>CRS Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Delanco - 1 (former DCO-1)</td>
<td>Bogg's Run – Phase implement improvements to increase the capacity of culverts at the Light Rail Line and Burlington Avenue</td>
<td>No</td>
<td>Flood</td>
<td>1</td>
<td>Lead: USACE, NJ Transit, County, State Support: Municipality</td>
<td>High</td>
<td>High</td>
<td>USACE, VA, NJ Transit</td>
<td>Long Term</td>
<td>Medium</td>
<td>NSP</td>
<td>NR</td>
</tr>
<tr>
<td>T. Delanco – 2 (former DCO-2)</td>
<td>Perform seawall repairs on Delaware Riverfront</td>
<td>No</td>
<td>Flood</td>
<td>1, 3</td>
<td>Township Committee</td>
<td>High</td>
<td>High</td>
<td>Municipal Budget, federal, state programs with local or county match</td>
<td>Medium</td>
<td>High</td>
<td>SIP, PP, NR</td>
<td>ES</td>
</tr>
<tr>
<td>T. Delanco – 3 (former DCO-3)</td>
<td>Perform drainage improvements at Hickory St.</td>
<td>No</td>
<td>Flood</td>
<td>1, 2</td>
<td>Township Committee</td>
<td>High</td>
<td>High</td>
<td>Municipal Budget, HMA programs with local or county match</td>
<td>Medium</td>
<td>High</td>
<td>SIP</td>
<td>ES</td>
</tr>
<tr>
<td>T. Delanco – 4 (former DCO-4)</td>
<td>Purchase new OEM phone system</td>
<td>No</td>
<td>Flood, Storms, All Emergency Situations</td>
<td>1, 6</td>
<td>Township Committee</td>
<td>Medium</td>
<td>Medium</td>
<td>Municipal Budget, HMA programs with local or county match</td>
<td>Short</td>
<td>Medium</td>
<td>ISP</td>
<td>SP</td>
</tr>
<tr>
<td>T. Delanco – 5 (former DCO-5)</td>
<td>Establish Street Tree inspection program and implement removal of dangerous trees</td>
<td>No</td>
<td>Flood, Storms, All Emergency Situations</td>
<td>1, 2, 6</td>
<td>Township Committee</td>
<td>Medium</td>
<td>Medium</td>
<td>Municipal Budget, HMA programs with local or county match</td>
<td>Short</td>
<td>Medium</td>
<td>SIP</td>
<td>NR, PP, PR</td>
</tr>
<tr>
<td>T. Delanco – 6 (former DCO-6)</td>
<td>Evaluate benefits of participating in CRS program</td>
<td>No</td>
<td>All</td>
<td>1, 2, 3, 4, 5, 6</td>
<td>Twp. Committee; Planning</td>
<td>Medium</td>
<td>Low</td>
<td>Twp./Publ ic</td>
<td>OG</td>
<td>Medium</td>
<td>LPR</td>
<td>PR, PI</td>
</tr>
</tbody>
</table>
### Section 9.10: Township of Delanco

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Mitigation Initiative</th>
<th>Critical Facility (Yes/No)</th>
<th>Hazard(s) Mitigated</th>
<th>Goals Met</th>
<th>Lead and Support Agencies</th>
<th>Estimated Benefits</th>
<th>Estimated Cost</th>
<th>Sources of Funding</th>
<th>Timeline</th>
<th>Priority</th>
<th>Mitigation Category</th>
<th>CRS Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Delanco 7(former DCO-9)</td>
<td>Certify backup power to critical building circuits.</td>
<td>Yes</td>
<td>All Hazards</td>
<td>1, 3, 6</td>
<td>Municipality with support from County, NJOEM and FEMA</td>
<td>Medium</td>
<td>Medium</td>
<td>HMA grants, Municipal Budget</td>
<td>Short Term</td>
<td>Medium</td>
<td>SIP</td>
<td>ES</td>
</tr>
<tr>
<td>T. Delanco - 8</td>
<td>Enhance resilience to severe storms by joining the NOAA “Storm Ready” program.</td>
<td>No</td>
<td>Severe Storm</td>
<td>1, 3</td>
<td>Municipality with support from County, NJOEM and FEMA</td>
<td>Medium</td>
<td>Low</td>
<td>Municipal Budget</td>
<td>Short Term</td>
<td>Medium</td>
<td>EAP</td>
<td>PI</td>
</tr>
<tr>
<td>T. Delanco - 9 (former DCO-1)</td>
<td>Provide public education and outreach on proper installation and/or use of backup power</td>
<td>No</td>
<td>Severe Storm</td>
<td>1, 5</td>
<td>Municipal Clerk</td>
<td>Medium</td>
<td>Low</td>
<td>Municipal Budget</td>
<td>Short</td>
<td>High</td>
<td>LPR</td>
<td>EAP</td>
</tr>
<tr>
<td>T. Delanco - 10</td>
<td>The Township will continue to promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss (SRL), such as acquisition/relocation or elevation depending on feasibility. The parameters for this initiative would be: funding, benefits versus cost, and willing participation of property owners.</td>
<td>No</td>
<td>Flood</td>
<td>1, 2, 3, 4</td>
<td>Municipality</td>
<td>High</td>
<td>High</td>
<td>HMGP, PDM, Municipal Budget</td>
<td>Short Term</td>
<td>High</td>
<td>SIP</td>
<td>PR</td>
</tr>
<tr>
<td>T. Delanco - 11</td>
<td>Ensure that new development pays its fair share of improvements to the storm sewerage system necessary to accommodate increased flows from the development.</td>
<td>No</td>
<td>All Hazards</td>
<td>1, 2</td>
<td>Municipality with support from Planning, Code Enforcement</td>
<td>High</td>
<td>Low</td>
<td>Municipal Budget</td>
<td>Short Term</td>
<td>High</td>
<td>LRP</td>
<td>PR</td>
</tr>
<tr>
<td>T. Delanco - 12</td>
<td>Coordinate flood prevention projects w/Beverly, Delanco, Edgewater Park; Bogg’s Run, DSA/BSA</td>
<td>No</td>
<td>Flood</td>
<td>1-1 3-1</td>
<td>Lead: USACE Support: Delanco.</td>
<td>High</td>
<td>Low</td>
<td>Federal</td>
<td>Medium</td>
<td>High</td>
<td>LPR</td>
<td>PR, PP, NR, SP</td>
</tr>
</tbody>
</table>
### Initiative

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Mitigation Initiative</th>
<th>Critical Facility (Yes/No)</th>
<th>Hazard(s) Mitigated</th>
<th>Goals Met</th>
<th>Lead and Support Agencies</th>
<th>Estimated Benefits</th>
<th>Estimated Cost</th>
<th>Sources of Funding</th>
<th>Timeline</th>
<th>Priority</th>
<th>Mitigation Category</th>
<th>CRS Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plant, West Avenue / Memorial Drive “canal”. Address shared flooding concerns.</td>
<td>No</td>
<td>Flood</td>
<td>1</td>
<td>Beverly, &amp; Edgewater Park</td>
<td>High</td>
<td>High</td>
<td>USACE, County Bridge Commission</td>
<td>Long Term</td>
<td>Medium</td>
<td>NSP</td>
<td>PP, NR, SP</td>
<td></td>
</tr>
</tbody>
</table>

**T. Delanco – 13**

Bogg’s Run; Clearing of lower section, Burlington Avenue to river, USACE responsibility. Deadfalls & debris restrict outflow causing upstream flooding to residential property.

<table>
<thead>
<tr>
<th>Goals Met</th>
<th>Lead and Support Agencies</th>
<th>Estimated Benefits</th>
<th>Estimated Cost</th>
<th>Sources of Funding</th>
<th>Timeline</th>
<th>Priority</th>
<th>Mitigation Category</th>
<th>CRS Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flood</td>
<td>1</td>
<td>Lead: USACE Support: Delanco &amp; Edgewater Park</td>
<td>High</td>
<td>High</td>
<td>USACE, County Bridge Commission</td>
<td>Long Term</td>
<td>Medium</td>
<td>NSP</td>
</tr>
</tbody>
</table>

**Notes:**

Not all acronyms and abbreviations defined below are included in the table.

*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.*

**Acronyms and Abbreviations:**

- CAV: Community Assistance Visit
- CRS: Community Rating System
- DPW: Department of Public Works
- FEMA: Federal Emergency Management Agency
- FPA: Floodplain Administrator
- HMA: Hazard Mitigation Assistance
- N/A: Not applicable
- NFIP: National Flood Insurance Program
- OEM: Office of Emergency Management

**Potential FEMA HMA Funding Sources:**

- FMA: Flood Mitigation Assistance Grant Program
- HMGP: Hazard Mitigation Grant Program
- PDM: Pre-Disaster Mitigation Grant Program
- RFC: Repetitive Flood Claims Grant Program (discontinued in 2015)
- SRL: Severe Repetitive Loss Grant Program (discontinued in 2015)

**Timeline:**

- Short: 1 to 5 years
- Long Term: 5 years or greater
- OG: On-going program
- DOF: Depending on funding

**Costs:**

- Low: < $10,000
- Medium: $10,000 to $100,000
- High: > $100,000

Where actual project costs cannot reasonably be established at this time:

- Low: Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.
- Medium: $10,000 to $100,000
- High: > $100,000

**Benefits:**

Where possible, an estimate of project benefits (per FEMA’s benefit calculation methodology) has been evaluated against the project costs, and is presented as:

- Low: < $10,000
- Medium: $10,000 to $100,000
- High: > $100,000

Where numerical project benefits cannot reasonably be established at this time:

- Low: Long-term benefits of the project are difficult to quantify in the short term.
### Costs:

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.</td>
</tr>
<tr>
<td>High</td>
<td>Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.</td>
</tr>
</tbody>
</table>

### Benefits:

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.</td>
</tr>
<tr>
<td>High</td>
<td>Project will have an immediate impact on the reduction of risk exposure to life and property.</td>
</tr>
</tbody>
</table>

### Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP) - 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. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) - These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – 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 and Firewise Communities.

### CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.
### Table 9.10-13. Summary of Prioritization of Actions

<table>
<thead>
<tr>
<th>Mitigation Action / Project Number</th>
<th>Mitigation Action/Initiative</th>
<th>Life Safety</th>
<th>Property Protection</th>
<th>Cost-Effectiveness</th>
<th>Technical</th>
<th>Political</th>
<th>Legal</th>
<th>Fiscal</th>
<th>Environmental</th>
<th>Social</th>
<th>Administrative</th>
<th>Multi-Hazard</th>
<th>Timeline</th>
<th>Agency Champion</th>
<th>Other Community</th>
<th>Total</th>
<th>High / Medium / Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Delanco - 1 (former DCO-1)</td>
<td>Bogg's Run - implement improvements to increase the capacity of culverts at the Light Rail Line and Burlington Avenue</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>Medium</td>
</tr>
<tr>
<td>T. Delanco – 2 (former DCO-2)</td>
<td>Perform seawall repairs on Delaware Riverfront</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>11</td>
<td>High</td>
</tr>
<tr>
<td>T. Delanco – 3 (former DCO-3)</td>
<td>Perform drainage improvements at Hickory St.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>High</td>
</tr>
<tr>
<td>T. Delanco – 4 (former DCO-4)</td>
<td>Purchase new OEM phone system</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>Medium</td>
</tr>
<tr>
<td>T. Delanco – 5 (former DCO-5)</td>
<td>Establish Street Tree inspection program and implement removal of dangerous trees</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>Medium</td>
</tr>
<tr>
<td>T. Delanco – 6 (former DCO-6)</td>
<td>Evaluate benefits of participating in CRS program</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
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<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>Medium</td>
</tr>
<tr>
<td>T. Delanco – 7 (former DCO-9)</td>
<td>Certify backup power to critical building circuits.</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>High</td>
</tr>
<tr>
<td>T. Delanco – 8 (former DCO-13)</td>
<td>Enhance resilience to severe storms by joining the NOAA “Storm Ready” program.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
<td>Medium</td>
</tr>
<tr>
<td>T. Delanco – 9 (former DCO-14)</td>
<td>Provide public education and outreach on proper installation and/or use of backup power</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>Medium</td>
</tr>
<tr>
<td>T. Delanco - 10</td>
<td>The Township will continue to promote and support non-structural flood hazard mitigation alternatives for at risk properties within the floodplain, including those that have been identified as Repetitive Loss (RL) and Severe Repetitive Loss</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-1</td>
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<td>1</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>Medium</td>
</tr>
</tbody>
</table>
Table 9.10-13. Summary of Prioritization of Actions

<table>
<thead>
<tr>
<th>Mitigation Action / Project Number</th>
<th>Mitigation Action/Initiative</th>
<th>Life Safety</th>
<th>Property Protection</th>
<th>Cost-Effectiveness</th>
<th>Technical</th>
<th>Political</th>
<th>Legal</th>
<th>Fiscal</th>
<th>Environmental</th>
<th>Social</th>
<th>Administrative</th>
<th>Multi-Hazard</th>
<th>Timeline</th>
<th>Agency Champion</th>
<th>Other Community</th>
<th>Total</th>
<th>High / Medium / Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Delanco - 11</td>
<td>Ensure that new development pays its fair share of improvements to the storm sewerage system necessary to accommodate increased flows from the development.</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>Medium</td>
</tr>
<tr>
<td>T. Delanco - 12</td>
<td>Continue multi-jurisdictional planning discussions between Beverly, Delanco, and Edgewater Park to develop projects to address shared flooding concerns.</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
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<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>T. Delanco – 13</td>
<td>Bogg’s Run; Clearing of lower section, Burlington Avenue to river, USACE responsibility. Deadfalls &amp; debris restrict outflow causing upstream flooding to residential property.</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>High</td>
</tr>
</tbody>
</table>

Note: Refer to Section 6, which conveys guidance on prioritizing mitigation actions.
9.10.7 Future Needs to Better Understand Risk/Vulnerability

None at this time.

9.10.8 Hazard Area Extent and Location

Hazard area extent and location maps have been generated for the Township of Delanco that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Township of Delanco has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

9.10.9 Additional Comments

None at this time.
Figure 9.10-1. Township of Delanco Hazard Area Extent and Location Map 1
Figure 9.10-2. Township of Delanco Hazard Area Extent and Location Map 2
### Action Number:

**T. Delanco – 1 (former DCO-1)**

### Mitigation Action/Initiative:

**Bogg's Run - implement improvements to increase the capacity of culverts at the Light Rail Line and Burlington Avenue**

### Assessing the Risk

<table>
<thead>
<tr>
<th>Hazard(s) addressed:</th>
<th>Flood, Severe Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific problem being mitigated:</td>
<td>Bogg’s Run (aka, Bogg’s Ditch), a natural drainage was modified by the Corp of Engineers in the 1940’s &amp; 1950’s when the adjacent CDF’s #13 &amp; 13A were built (where the Riversedge residential development is now located). This is Corps responsibility. The upper section of Bogg’s, east of Burlington Avenue, appears to be within an easement to the Veterans Administration to ensure runoff from the National Cemetery. The Bogg’s drainage passes under the NJT tracks through an undersized and easily clogged culvert. Impeded runoff floods residential property along Perkins Lane in Edgewater Park.</td>
</tr>
</tbody>
</table>

### Evaluation of Potential Actions/Projects

<table>
<thead>
<tr>
<th>Actions/Projects Considered (name of project and reason for not selecting):</th>
<th>No action: problem continues</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Replace culvert with higher bridge: not feasible</td>
</tr>
</tbody>
</table>

### Action/Project Intended for Implementation

<table>
<thead>
<tr>
<th>Description of Selected Action/Project</th>
<th>Culverts at the Light Rail Line and Burlington Avenue will be improved through methods such as increased culvert size, realignment, etc. in order to increase the capacity of the culverts and reduce flooding at Boggs Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action/Project Category</td>
<td>NSP</td>
</tr>
<tr>
<td>Goals Met</td>
<td>1</td>
</tr>
<tr>
<td>Critical Facility (Y/N)</td>
<td>No</td>
</tr>
<tr>
<td>Benefits (losses avoided)</td>
<td>High</td>
</tr>
<tr>
<td>Estimated Cost</td>
<td>High</td>
</tr>
<tr>
<td>Priority*</td>
<td>Medium</td>
</tr>
</tbody>
</table>

### Plan for Implementation

<table>
<thead>
<tr>
<th>Responsible Organization</th>
<th>Lead: Delanco OEM, Edgewater OEM Support: USACE, County OEM, NJ Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Planning Mechanism</td>
<td>Hazard mitigation planning, stormwater planning</td>
</tr>
<tr>
<td>Potential Funding Sources</td>
<td>Municipal Budget, HMA programs with local or county match</td>
</tr>
<tr>
<td>Timeline for Completion</td>
<td>Long Term</td>
</tr>
</tbody>
</table>

### Reporting on Progress

<table>
<thead>
<tr>
<th>Date of Status Report/ Report of Progress</th>
<th></th>
</tr>
</thead>
</table>
### Action Number:
T. Delanco – 1 (former DCO-1)

### Mitigation Action/Initiative:
Bogg's Run - implement improvements to increase the capacity of culverts at the Light Rail Line and Burlington Avenue

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Numeric Rank (-1, 0, 1)</th>
<th>Provide brief rationale for numeric rank when appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Safety</td>
<td>1</td>
<td>Reduce or eliminate the need to close roads due to flooding; allows residents and emergency personnel to access this area of the township during heavy rain or flood events</td>
</tr>
<tr>
<td>Property Protection</td>
<td>1</td>
<td>Reduces or eliminates flooded roadways and damages caused by flooding</td>
</tr>
<tr>
<td>Cost-Effectiveness</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Technical</td>
<td>1</td>
<td>Project is technically feasible</td>
</tr>
<tr>
<td>Political</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Legal</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fiscal</td>
<td>1</td>
<td>Funded through the municipal budget; grant funding where needed/applicable</td>
</tr>
<tr>
<td>Environmental</td>
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<tr>
<td>Social</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Administrative</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Multi-Hazard</td>
<td>1</td>
<td>Flood, Severe Storm</td>
</tr>
<tr>
<td>Timeline</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Agency Champion</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Other Community Objectives</td>
<td>0</td>
<td></td>
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<tr>
<td>Total</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Priority (High/Med/Low)</td>
<td>Medium</td>
<td></td>
</tr>
</tbody>
</table>
### Section 9.10: Township of Delanco

#### Action Number:
- T. Delanco – 2 (former DCO-2)

#### Mitigation Action/Initiative:
- Perform seawall repairs on Delaware Riverfront

#### Assessing the Risk

<table>
<thead>
<tr>
<th>Hazard(s) addressed:</th>
<th>Flood, Severe Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific problem being mitigated:</td>
<td>Seawall is degraded and in need of repair</td>
</tr>
</tbody>
</table>

#### Evaluation of Potential Actions/Projects

<table>
<thead>
<tr>
<th>Actions/Projects Considered (name of project and reason for not selecting):</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No action: Seawall continues to degrade</td>
</tr>
<tr>
<td>2. Remove seawall: Protection of seawall is lost</td>
</tr>
<tr>
<td>3. Implement green infrastructure to restore natural floodplain function – May be insufficient space for green infrastructure to be effective</td>
</tr>
</tbody>
</table>

#### Action/Project Intended for Implementation

<table>
<thead>
<tr>
<th>Description of Selected Action/Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>The seawall along the Delaware River will be repaired. During repairs, possible opportunity for future improvement will be investigated.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action/Project Category</th>
<th>SIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals Met</td>
<td>1, 3</td>
</tr>
<tr>
<td>Critical Facility (Y/N)</td>
<td>Existing</td>
</tr>
<tr>
<td>Benefits (losses avoided)</td>
<td>High</td>
</tr>
<tr>
<td>Estimated Cost</td>
<td>High</td>
</tr>
<tr>
<td>Priority*</td>
<td>High</td>
</tr>
</tbody>
</table>

#### Plan for Implementation

<table>
<thead>
<tr>
<th>Responsible Organization</th>
<th>Township Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Planning Mechanism</td>
<td>Hazard mitigation planning</td>
</tr>
<tr>
<td>Potential Funding Sources</td>
<td>Municipal Budget, HMA programs with local or county match</td>
</tr>
<tr>
<td>Timeline for Completion</td>
<td>Medium</td>
</tr>
</tbody>
</table>

#### Reporting on Progress

| Date of Status Report/ Report of Progress | |
|------------------------------------------| |
### Section 9.10: Township of Delanco

**Action Number:** T. Delanco – 2 (former DCO-2)  
**Mitigation Action/Initiative:** Perform seawall repairs on Delaware Riverfront

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Numeric Rank (-1, 0, 1)</th>
<th>Provide brief rationale for numeric rank when appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Safety</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Property Protection</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Cost-Effectiveness</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Technical</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>1</td>
<td>Political support to complete project</td>
</tr>
<tr>
<td>Legal</td>
<td>1</td>
<td>Township has legal authority to complete</td>
</tr>
<tr>
<td>Fiscal</td>
<td>1</td>
<td>Municipal budget to fund project</td>
</tr>
<tr>
<td>Environmental</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Administrative</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Multi-Hazard</td>
<td>1</td>
<td>Flood, Severe Storm</td>
</tr>
<tr>
<td>Timeline</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Agency Champion</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Other Community Objectives</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Priority (High/Med/Low)</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>
### Action Number:
T. Delanco – 3 (former DCO-3)

### Mitigation Action/Initiative:
Perform drainage improvements at Hickory St.

#### Assessing the Risk

<table>
<thead>
<tr>
<th>Hazard(s) addressed:</th>
<th>Flood, Severe Storm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific problem being mitigated:</td>
<td>Hickory Street has poor drainage and is prone to urban flooding issues.</td>
</tr>
</tbody>
</table>

#### Evaluation of Potential Actions/Projects

| Actions/Projects Considered (name of project and reason for not selecting): | 1. No action - Current problem continues  
2. Relocate Hickory St. - Not feasible  
3. Install green infrastructure for increased storage capacity – May be insufficient space for adequate effectiveness |
|--------------------------------------------------------------------------|

#### Action/Project Intended for Implementation

<table>
<thead>
<tr>
<th>Description of Selected Action/Project</th>
<th>Drainage along Hickory Street will be improved through various possible measures including stormwater system upgrades and natural infiltration.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action/Project Category</td>
<td>SIP</td>
</tr>
<tr>
<td>Goals Met</td>
<td>1, 2</td>
</tr>
<tr>
<td>Critical Facility (Y/N)</td>
<td>No</td>
</tr>
<tr>
<td>Benefits (losses avoided)</td>
<td>High</td>
</tr>
<tr>
<td>Estimated Cost</td>
<td>High</td>
</tr>
<tr>
<td>Priority*</td>
<td>High</td>
</tr>
</tbody>
</table>

#### Plan for Implementation

<table>
<thead>
<tr>
<th>Responsible Organization</th>
<th>Township Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Planning Mechanism</td>
<td>Hazard mitigation planning, stormwater planning</td>
</tr>
<tr>
<td>Potential Funding Sources</td>
<td>Municipal Budget, HMA programs with local or county match</td>
</tr>
<tr>
<td>Timeline for Completion</td>
<td>Medium</td>
</tr>
</tbody>
</table>

#### Reporting on Progress

| Date of Status Report/Report of Progress | |
|------------------------------------------| |
**Section 9.10: Township of Delanco**

**Action Number:**
T. Delanco – 3 (former DCO-3)

**Mitigation Action/Initiative:**
Perform drainage improvements at Hickory St.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Numeric Rank (-1, 0, 1)</th>
<th>Provide brief rationale for numeric rank when appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Safety</td>
<td>1</td>
<td>Reduce or eliminate flooding and allow roadway to remain open. This allows residents and emergency personnel to access this area of the township during flood events.</td>
</tr>
<tr>
<td>Property Protection</td>
<td>1</td>
<td>Reduce or eliminate structural damage as a result of flooding in this area</td>
</tr>
<tr>
<td>Cost-Effectiveness</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Technical</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Legal</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Fiscal</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Administrative</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Multi-Hazard</td>
<td>1</td>
<td>Flood, Severe Storm</td>
</tr>
<tr>
<td>Timeline</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Agency Champion</td>
<td>1</td>
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<tr>
<td>Other Community Objectives</td>
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<td>Total</td>
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</tr>
<tr>
<td>Priority (High/Med/Low)</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>
### Assessing the Risk

<table>
<thead>
<tr>
<th>Hazard(s) addressed:</th>
<th>All Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific problem being mitigated:</td>
<td>Critical facilities lack backup power source</td>
</tr>
</tbody>
</table>

### Evaluation of Potential Actions/Projects

| Actions/Projects Considered (name of project and reason for not selecting): | 1. No action - Current problem continues  
2. Solar panels - Weather dependent, costly  
3. Wind turbines – weather dependent, costly |

### Action/Project Intended for Implementation

| Description of Selected Action/Project | The Township will purchase and install backup power sources (generators) at critical facilities to sustain critical function during power outages. |
| Action/Project Category | SIP |
| Goals Met | 1, 3, 6 |
| Critical Facility (Y/N) | Yes |
| Benefits (losses avoided) | Medium |
| Estimated Cost | Medium |
| Priority* | High |

### Plan for Implementation

| Responsible Organization | Municipality with support from County, NJOEM and FEMA |
| Local Planning Mechanism | Hazard mitigation planning |
| Potential Funding Sources | HMA grants, Municipal Budget |
| Timeline for Completion | Short Term |

### Reporting on Progress

| Date of Status Report/Report of Progress | |

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(DMA 2000 Hazard Mitigation Plan Update – Burlington County, New Jersey 9.10-33)

Section 9.10: Township of Delanco

Action Number: T. Delanco – 7 (former DCO-9)

Mitigation Action/Initiative: Certify backup power to critical building circuits.
### Action Number:
T. Delanco – 7 (former DCO-9)

### Mitigation Action/Initiative:
Certify backup power to critical building circuits.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Numeric Rank (-1, 0, 1)</th>
<th>Provide brief rationale for numeric rank when appropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Safety</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Property Protection</td>
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</tr>
<tr>
<td>Cost-Effectiveness</td>
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</tr>
<tr>
<td>Technical</td>
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<td>Technically feasible</td>
</tr>
<tr>
<td>Political</td>
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<td>Political support to complete project</td>
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<td>Legal</td>
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<td>Fiscal</td>
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<tr>
<td>Environmental</td>
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<tr>
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<td>Administrative</td>
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<tr>
<td>Multi-Hazard</td>
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<td>All hazards</td>
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<tr>
<td>Timeline</td>
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<td>Short term project – to be completed within five years</td>
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<td>Total</td>
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<tr>
<td>Priority (High/Med/Low)</td>
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