

# Mitigation Action Plan—City of Durham

The Mitigation Action Plan for the City of Durham is divided into two subsections:

7.1 Status of Previously Adopted Mitigation Actions

7.2 New 2015 Mitigation Actions

## 7.1 Status of Previously Adopted Mitigation Actions

This subsection contains all previously adopted mitigation actions for the City of Durham.

The “2015 Status” field provides a one-word description of the status of the mitigation action. Options for this field are:

- Completed
- Completed/To Be Continued
- Partially Completed/In Progress
- Deferred
- Deleted

The “Narrative Explanation” field provides a brief (two to three sentence) written explanation of the status of the action. As examples:

- If the status is “Completed” or “Completed/To Be Continued,” the narrative explanation includes specific dates or other pertinent details providing documentation of the action’s completion. Where applicable, this also includes any notes describing how successful the action has been.
- If the status is “Partially Completed/In Progress,” the narrative explanation will explain where the project is in terms of completion and if there are any barriers to implementation, such as lack of funding.
- If the status is “Deferred” or “Deleted,” the narrative explanation will explain why the action has not been started or why the jurisdiction desires to abandon the action. An example of the type of response provided here could be, “Altered conditions due to disaster events and recovery priorities have postponed or permanently delayed the implementation of the action.” Any deleted actions will remain in this status update section until the next plan update. At that time, the action will be completely removed from the Plan.

Mitigation Action 1	Continued enforcement of Flood Damage Prevention Ordinance.
Goal:	#1
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City-County Planning Department
Estimated Cost:	N/A
Potential Funding Sources:	Self-funded
Implementation Schedule:	2015-2020
Priority (High, Moderate, Low):	High
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>
<b>Narrative Explanation:</b>	<p><b>City Public Works reviews all floodplain building permit applications for City/County Building Inspections (25 last fiscal year). City Public Works reviews all floodplain development permits/site plans for City/County Planning Department (57 last fiscal year). City and County recertify for CRS on a yearly basis.</b></p> <p>2018 Update:</p> <p>City/County Planning and Building Inspections Departments review all floodplain building permit applications within the City and County.</p> <p>City/County Planning Department reviews all floodplain development permit applications within the City and County.</p> <p>City and County recertify for CRS on a yearly basis.</p> <p>City Public Works Department received hazard mitigation grants from FEMA and State for mitigation of 9 flood-prone properties. HMGP projects 4167-0009-R (one elevation) and 4167-0014-R (eight acquisition/open space) are in progress.</p> <p>City Public Works Department, County, State of NC and FEMA revised FEMA Flood Insurance Rate Maps (FIRM) on approximately half of City/County flooding sources – Published Effective Date: 19 October, 2018. Now all Durham City &amp; County flood maps contain 1% Future Conditions mapped floodplains (required by City/County Unified Development Ordinance).</p>

Mitigation Action 2	Continued enforcement of Subdivision Ordinance.
Goal:	#1
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood; All Hazards for Ingress and Egress
Lead Agency/Department Responsible:	City-County Planning Department

Estimated Cost:	N/A
Potential Funding Sources:	Self-funded
Implementation Schedule:	2015-2020
Priority (High, Moderate, Low):	High
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>
<b>Narrative Explanation:</b>	<p><b>City Public Works reviews all floodplain building permit applications for City/County Building Inspections (25 last fiscal year). City Public Works reviews all floodplain development permits/site plans for City/County Planning Department (57 last fiscal year).</b></p> <p>2018 Update:</p> <p>City/County Planning and Building Inspections Departments review all floodplain building permit applications within the City and County.</p> <p>City/County Planning Department reviews all floodplain development permit applications within the City and County.</p> <p>City and County recertify for CRS on a yearly basis.</p> <p>City Public Works Department received hazard mitigation grants from FEMA and State for mitigation of 9 flood-prone properties. HMGP projects 4167-0009-R (one elevation) and 4167-0014-R (eight acquisition/open space) are in progress.</p> <p>City Public Works Department, County, State of NC and FEMA revised FEMA Flood Insurance Rate Maps (FIRM) on approximately half of City/County flooding sources – Published Effective Date: 19 October, 2018. Now all Durham City &amp; County flood maps contain 1% Future Conditions mapped floodplains (required by City/County Unified Development Ordinance).</p>

<b>Mitigation Action 3</b>	<b>Continued enforcement of City Zoning Ordinance.</b>
Goal:	#1
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City-County Planning Department
Estimated Cost:	N/A
Potential Funding Sources:	Self-funded
Implementation Schedule:	2015-2020
Priority (High, Moderate, Low):	Moderate
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>
<b>Narrative Explanation:</b>	<b>City Public Works reviews all floodplain building permit applications for City/County Building Inspections (25 last fiscal year). City Public</b>

**Mitigation Action 3**

**Continued enforcement of City Zoning Ordinance.**

**Works reviews all floodplain development permits/site plans for City/County Planning Department (57 last fiscal year).**

2018 Update:

City/County Planning and Building Inspections Departments review all floodplain building permit applications within the City and County.

City/County Planning Department reviews all floodplain development permit applications within the City and County.

City and County recertify for CRS on a yearly basis.

City Public Works Department received hazard mitigation grants from FEMA and State for mitigation of 9 flood-prone properties. HMGP projects 4167-0009-R (one elevation) and 4167-0014-R (eight acquisition/open space) are in progress.

City Public Works Department, County, State of NC and FEMA revised FEMA Flood Insurance Rate Maps (FIRM) on approximately half of City/County flooding sources – Published Effective Date: 19 October, 2018. Now all Durham City & County flood maps contain 1% Future Conditions mapped floodplains (required by City/County Unified Development Ordinance).

<b>Mitigation Action 4</b>		<b>Continued enforcement of Soil Erosion and Sedimentation Control Ordinance.</b>
Goal:	#1	
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Flood	
Lead Agency/Department Responsible:	Durham County Erosion Control	
Estimated Cost:	N/A	
Potential Funding Sources:	Self-funded	
Implementation Schedule:	2015-2020	
Priority (High, Moderate, Low):	Moderate	
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>	
<b>Narrative Explanation:</b>	<p><b>Administration of the City and County Erosion Control Program through field inspections and enforcement actions</b></p> <p><b>2016 Update: Changed Lead Party to Durham County Erosion Control (Deleted City-County Planning Department)</b></p>	

<b>Mitigation Action 5</b>		<b>Continued enforcement of safe and sanitary housing ordinances and codes.</b>
Goal:	#1	
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All	
Lead Agency/Department Responsible:	Durham Housing Authority; City-County Inspections Department; Neighborhood Improvement Services	
Estimated Cost:	N/A	
Potential Funding Sources:	Self-funded	
Implementation Schedule:	2015-2020	
Priority (High, Moderate, Low):	Moderate	
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>	
<b>Narrative Explanation:</b>	<p><b>Enforce Floodplain Ordinance through permitting process and field inspections</b></p> <p><b>2016 Update: Updated the Lead Agencies to include Neighborhood Improvement Services. Future modifications will change the Mitigation Action language to “Continued enforcement of safe and sanitary housing ordinances and Minimum Housing Code”.</b></p>	

<b>Mitigation Action 6</b>		<b>Continued enforcement of Fire Prevention/Hazardous Materials Permitting and Storage regulations.</b>
Goal:	#1	
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	Chemical Accidents	
Lead Agency/Department Responsible:	Durham Fire Department and City Storm Water Services	

<b>Mitigation Action 6</b>	<b>Continued enforcement of Fire Prevention/Hazardous Materials Permitting and Storage regulations.</b>
Estimated Cost:	N/A
Potential Funding Sources:	Self-funded
Implementation Schedule:	2015-2020
Priority (High, Moderate, Low):	High
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>
<b>Narrative Explanation:</b>	<p>Annual inspections and permitting program ensures proper amounts and storage to reduce risk to the storm water basins from unauthorized releases and spills.</p> <p>2016 Update: Added Storm Water Services to Lead Agency.</p> <p>2018 Update: January 1, 2019 update to the fire code increases regulations on permitting for hazardous materials.</p>

<b>Mitigation Action 7</b>	<b>Continue all aspects of the Floodplain Management Program.</b>
Goal:	#1 (Reduce damage to built environment from flooding.)
Category:	Local Plans and Regulations
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City-County Planning Department
Estimated Cost:	N/A
Potential Funding Sources:	Self-funded
Implementation Schedule:	2015-2020
Priority (High, Moderate, Low):	High
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>
<b>Narrative Explanation:</b>	<p>City Public Works reviews all floodplain building permit applications for City/County Building Inspections (25 last fiscal year). City Public Works reviews all floodplain development permits/site plans for City/County Planning Department (57 last fiscal year). City Public Works also applies for State &amp; Federal grants for hazard mitigation at all opportunities (one to three times per year) and renew City's CRS certification annually. City Public Works also works with City/County Planning on enforcement actions when floodplain violations are found (average approximately 1.5 per year).</p> <p><b>2018 Update:</b></p> <p>City/County Planning and Building Inspections Departments review all floodplain building permit applications within the City and County (XX fiscal year ending July 1, 2018). City/County Planning Department reviews all floodplain development permit applications within the City and County (XX fiscal year ending July 1, 2018).</p> <p>City and County recertify for CRS on a yearly basis.</p> <p>City Public Works Department received hazard mitigation grants from FEMA and State for mitigation of 9 flood-prone properties. HMGP projects 4167-0009-R (one elevation) and 4167-0014-R (eight acquisition/open space) are in progress.</p> <p>City Public Works also works with City/County Planning on enforcement actions when floodplain violations are found (average approximately 1.5 per year).</p>

<b>Mitigation Action 8</b>	<b>Continue tree-trimming programs for storm damage prevention.</b>
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<b>Mitigation Action 8</b>		<b>Continue tree-trimming programs for storm damage prevention.</b>
Goal:	#5 (Reduce the effect of power outages from falling trees and branches.)	
Category:	Structure and Infrastructure Projects	
Hazard(s) Addressed:	All	
Lead Agency/Department Responsible:	Durham General Services Department	
Estimated Cost:	N/A	
Potential Funding Sources:	Self-funded	
Implementation Schedule:	2015-2020	
Priority (High, Moderate, Low):	High	
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>	
<b>Narrative Explanation:</b>	<p>Program continues throughout the jurisdiction continually. Major focus on N. Mangum Street in Spring 2015, with trimming to progress North to Interstate 85 and West to Hillandale Road. Additional routes will be trimmed in perpetuity.</p> <p><b>2016 Update: No changes required.</b></p>	

<b>Mitigation Action 9</b>		<b>Continued enforcement of state building codes and more stringent local building requirements.</b>
Goal:	#1	
Category:	Local Plans and Regulations	
Hazard(s) Addressed:	All	
Lead Agency/Department Responsible:	City-County Inspections Department	
Estimated Cost:	N/A	
Potential Funding Sources:	Self-funded	
Implementation Schedule:	2015-2020	
Priority (High, Moderate, Low):	High	
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>	
<b>Narrative Explanation:</b>	<p>Enforce Floodplain Ordinance through permitting process and field inspections. City Public Works reviews all floodplain building permit applications for City/County Building Inspections (25 last fiscal year). City Public Works reviews all floodplain development permits/site plans for City/County Planning Department (57 last fiscal year). City/County also assists Building Inspections and Planning Departments in regulating to two feet above Future Conditions BFEs.</p> <p><b>2016 Update:</b></p> <p>City Public Works reviews all floodplain building permit applications for City/County Building Inspections (27 last fiscal year). City Public Works reviews all floodplain development permits/site plans for City/County Planning Department (93 last fiscal year). City and County recertify for CRS on a yearly basis.</p>	

<b>Mitigation Action 9</b>	<b>Continued enforcement of state building codes and more stringent local building requirements.</b>
	City needs to add a Mitigation Action for CRS, especially since the City is a CRS 8 under the 2013 CRS Manual (more stringent than previous CRS Manual).

<b>Mitigation Action 10</b>	<b>Look for opportunities to mitigate repetitive loss structures.</b>
Goal:	#4
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	Durham County Emergency Management
Estimated Cost:	N/A
Potential Funding Sources:	HMGP or PDM with local or State match
Implementation Schedule:	2015-2020
Priority (High, Moderate, Low):	Moderate
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>
<b>Narrative Explanation:</b>	<p><b>Emergency Management will work with Public Works to continue to search out PDM mitigation opportunities: streambed restoration and property buy-outs.</b></p> <p><b>2016 Update:</b></p> <p><b>City is in the end stage of getting FEMA grant for mitigation of 11 flood-prone properties. Final status and number of properties mitigated depends on the results of an historical analysis by the State Historic Preservation Office on Acadia Street properties.</b></p>

## 7.2 New 2015 Mitigation Actions

This subsection contains the new mitigation actions for the City of Durham for the 2015-2020 planning cycle. These actions are in addition to any actions that are ongoing from the previous list of mitigation items.

<b>Mitigation Action 1</b>	<b>Identify and obtain additional properties to increase protected open space as a land-use tool to reduce adverse impacts from floods.</b>
Goal:	#4
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	Flood
Lead Agency/Department Responsible:	City-County Planning Department
Estimated Cost:	N/A
Potential Funding Sources:	HMGP or PDM with local or State match
Implementation Schedule:	2015-2020
Priority (High, Moderate, Low):	Moderate
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>
<b>Narrative Explanation:</b>	<p><b>Emergency Management will work with Public Works to continue to search out PDM mitigation opportunities: streambed restoration and property buy-outs.</b></p>

<b>Mitigation Action 1</b>	<b>Identify and obtain additional properties to increase protected open space as a land-use tool to reduce adverse impacts from floods.</b>
	<b>2016 Update:</b>  City is in the end stage of getting FEMA grant for mitigation of 9 flood-prone properties. Final status and number of properties mitigated depends on the results of an historical analysis by the State Historic Preservation Office on Acadia Street properties.

<b>Mitigation Action 2</b>	<b>Seek funding to retrofit critical facilities and City-owned facilities for improved resilience to all hazards with the use of the latest building materials and technology. This could include, but is not limited to: wind retrofits, low water consumption fixtures, leak detectors, backup generators, ignition-resistant materials, 320 or 361 compliant safe rooms, lightning protection, hail resistant roofing, and anchoring fixed building equipment.</b>
Goal:	#4
Category:	Structure and Infrastructure Projects
Hazard(s) Addressed:	All
Lead Agency/Department Responsible:	City-County Planning, City-County Inspections, City General Services, Emergency Management
Estimated Cost:	To be determined on a case-by-case basis
Potential Funding Sources:	Local, State Grants, UHMA Grants, other federal grants
Implementation Schedule:	2015-2020
Priority (High, Moderate, Low):	Moderate
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>
<b>Narrative Explanation:</b>	<b>Emergency Management will work with General Services to continue to search out PDM mitigation opportunities: resilient critical infrastructure.</b>  <b>2016 Update: Cleaned up names of Lead Agencies.</b>

<b>Mitigation Action 3</b>	<b>Seek funding to install backup generators or quick connect hook ups for mobile generators on any newly constructed City critical facilities.</b>
Goal:	#4
Category:	Other Types of Actions
Hazard(s) Addressed:	All
Lead Agency/Department Responsible:	City-County Planning, City-County Inspections, City General Services, Emergency Management
Estimated Cost:	To be determined on a case-by-case basis
Potential Funding Sources:	Local, State Grants, UHMA Grants, other federal grants
Implementation Schedule:	2015-2020
Priority (High, Moderate, Low):	Moderate
<b>2015 Status:</b>	<b>Partially Completed/In Progress</b>
<b>Narrative Explanation:</b>	<b>Emergency Management will work with General Services to continue to search out PDM mitigation opportunities: resilient critical facilities – emergency power supply.</b>  <b>2016 Update: Cleaned up names of Lead Agencies.</b>