

SECTION 5 MITIGATION STRATEGIES

Mitigation Strategy	
<i>Requirement: §201.6(c)(3): (The plan must include) a mitigation strategy that provides the jurisdiction’s blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools. This section shall include:</i>	
<ul style="list-style-type: none"> <i>(i) A description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.</i> <i>(ii) A section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure. All plans approved by FEMA after October 1, 2008, must also address the jurisdiction’s participation in the NFIP, and continued compliance with NFIP requirements, as appropriate.</i> <i>(iii) An action plan describing how the actions identified in paragraph (c)(3)(ii) of this section will be prioritized, implemented and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.</i> <i>(iv) For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.</i> 	
Element	C1: Does the plan document each jurisdiction’s existing authorities, policies, programs and resources, and its ability to expand on and improve these existing policies and programs?
	C2: Does the Plan address each jurisdiction’s participation in the NFIP and continued compliance with NFIP requirements, as appropriate?
	C3: Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards?
	C4: Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure?
	C5: Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction?
	D2: Was the plan revised to reflect progress in local mitigation efforts?
	D3: Was the plan revised to reflect changes in priorities?

C1. Existing Authorities, Policies, Programs and Resources

Below is a summary of existing authorities, policies, programs and resources available to accomplish hazard mitigation. See also the table that follows this summary.

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- **Town Manager:** If a town has a Town Manager, the role varies greatly across the County. In many cases, a town manager may also have the roles and responsibilities of the road commissioner or EMA director. In several cases, towns share a single town manager.
- **Staff Resources:** Staff resources, where available, usually consist of a community development director. There are no towns in Aroostook County with staff resources devoted exclusively to hazard mitigation. None are known to have a municipal engineer, planner or GPS specialist on staff.
- **Public Works or Road Commissioner:** Some of the larger towns have a public works director, but most will have a road commissioner. As previously noted, the road commissioner might also be the town manager or board of selectmen.
- **Flood Hazard Ordinance:** All of the cities / towns that are in the Flood Insurance Program have a flood hazard ordinance in effect. In the following table, the designation “LUPC” indicates that the plantation’s flood plains are under the regulatory jurisdiction of the State’s Land Use Planning Commission.
- **All of the cities and towns in Aroostook County** are required to have a shoreland zoning ordinance, whether adopted by the municipality or imposed by the Maine Department of Environmental Protection. The designation LUPC indicates that the plantation’s shorelands are under the regulatory jurisdiction of the State’s Land Use Planning Commission.
- **Form of Government:** A In the following table, the letter “T” indicates town meeting form of government; a “Council” indicates a council form of government, and the designation LUPC indicates that the plantation is governed by the State’s Land Use Planning Commission.
- **Resources:** In addition to staffing or other expertise, funding resources are from local taxes and/or grants that are funded by taxes or private donations.

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Existing Authorities, Policies, Programs and Resources Available to Accomplish Hazard Mitigation							
Town	Town Manager	Staff involved in Local Planning	Public Works or Road Commissioner	EMA Director	Flood Hazard Ordinance	Shoreland Zoning Ordinance	Form of Government
Aroostook County	County Mgr.		X				County Commission
Allagash				X	X	X	T
Amity	X		X	X	X	X	T
Ashland	X		X	X	X	X	Council
Blaine	X		X	X	X	X	T
Bridgewater	X		X	X	X	X	T
Caribou	X	X	X	X	X	X	Council
Cary Pt.				X	LUPC	LUPC	LUPC
Castle Hill	X		X	X	X	X	T
Caswell			X	X	X	X	T
Chapman	X		X	X	X	X	T
Crystal	X			X	X	X	T
Cyr Pt.			X	X	LUPC	LUPC	LUPC
Dyer Brook	X		X	X		X	T
Eagle Lake	X		X	X	X	X	T
Easton	X		X	X	X	X	T
Fort Fairfield	X	X	X	X	X	X	Council
Fort Kent	X	X	X	X	X	X	Council
Frenchville	X	X	X	X	X	X	T
Garfield Pt.				X	LUPC	LUPC	LUPC
Glenwood Pt.				X	LUPC	LUPC	LUPC
Grand Isle				X	X	X	T
Hamlin			X	X	X	X	T
Hammond				X	X	X	T
Haynesville	X		X	X	X	X	T
Hersey			X	X		X	T
Hodgdon	X		X	X	X	X	T

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Existing Authorities, Policies, Programs and Resources Available to Accomplish Hazard Mitigation							
Town	Town Manager	Staff involved in Local Planning	Public Works or Road Commissioner	EMA Director	Flood Hazard Ordinance	Shoreland Zoning Ordinance	Form of Government
Houlton	X	X	X	X	X	X	Council
Island Falls	X		X	X	X	X	T
Limestone	X		X	X	X	X	T
Linneus	X			X	X	X	T
Littleton	X		X	X	X	X	T
Ludlow	X		X	X	X	X	T
Macwahoc Plt.				X	LUPC	LUPC	LUPC
Madawaska	X	X	X	X	X	X	T
Mapleton	X		X	X	X	X	T
Mars Hill	X		X	X	X	X	Council
Masardis	X		X	X	X	X	T
Merrill	X		X	X	X	X	T
Monticello	X			X	X	X	T
Moro Plt.			X	X	LUPC	LUPC	LUPC
Nashville Plt.			X	X	LUPC	LUPC	LUPC
New Canada	X			X	X	X	T
New Limerick	X		X	X	X	X	T
New Sweden				X	X	X	T
Oakfield	X	X	X	X	X	X	T
Orient			X	X	X	X	T
Oxbow Plt.				X	LUPC	LUPC	LUPC
Perham				X	X	X	T
Portage Lake	X		X	X	X	X	T
Presque Isle	X	X	X	X	X	X	Council
Reed Plt.	X		X	X	LUPC	LUPC	LUPC
Sherman	X		X	X	X	X	T
Smyrna	X		X	X	X	X	T
St. Agatha	X		X	X	X	X	T

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Existing Authorities, Policies, Programs and Resources Available to Accomplish Hazard Mitigation							
Town	Town Manager	Staff involved in Local Planning	Public Works or Road Commissioner	EMA Director	Flood Hazard Ordinance	Shoreland Zoning Ordinance	Form of Government
St. Francis			X	X	X	X	T
St. John Plt.				X	LUPC	LUPC	LUPC
Stockholm			X	X	X	X	T
Van Buren	X	X	X	X	X	X	Council
Wade			X	X	X	X	T
Wallagrass	X		X	X	X	X	T
Washburn	X		X	X	X	X	Council
Westfield			X	X	X	X	T
Westmanland				X	X	X	T
Weston			X	X		X	T
Winterville Plt.			X	X	LUPC	LUPC	LUPC
Woodland			X	X	X	X	T

While Aroostook County EMA does not have any direct authority to implement hazard mitigation projects in the municipalities, it does oversee the preparation of the County Hazard Mitigation Plan and its updates, supports hazard mitigation training and coordination of local EMA directors and does participate in grant application development.

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C2. Participation in the National Flood Insurance Program

As shown in the table below, 52 municipalities in Aroostook County have joined the National Flood Insurance Program (NFIP) and as a condition of participation in the program, have enacted floodplain management ordinances that limit new development in floodplain areas.

All of the plantations and unorganized townships in Aroostook County are under the jurisdiction of Maine’s Land Use Planning Commission (LUPC). LUPC has agreed to administer and enforce the NFIP for all communities that are under its control and has modified its requirement to include floodplain management regulations. As shown in the table on the next page, 11 plantations are in the NFIP by virtue of the fact that they are under the jurisdiction of the LUPC.

The table below summarizes the participation of Aroostook County municipalities in the NFIP.

Abbreviations

M: No elevation determined – All Zone A, C and X

L: Original FIRM by letter - All Zone A, C and X

NSFHA: No Special Flood Hazard Area – All Zone C

Aroostook County Communities Participating in the NFIP					
Town	Init FHBM¹	Init FIRM¹	Curr Eff Map Date¹	Reg-Emer Date¹	Adoption and Enforcement²
Allagash	02/14/75	08/05/85	04/02/03	08/05/85	X
Amity	01/17/75	08/19/85	08/19/85	08/19/85	X
Ashland	07/16/76	11/15/85	11/15/85	11/15/85	X
Blaine	08/02/74	08/19/85	08/19/85	08/19/85	X
Bridgewater	01/03/75	09/18/85	09/18/85	09/18/85	X
Caribou	04/12/74	08/01/80	08/01/80	08/01/80	X
Cary Plt.	02/07/75	02/01/85	02/01/85	02/01/85	X
Castle Hill	02/07/75	08/19/85	08/19/85(M)	08/19/85	X
Caswell	02/14/74		(NSFHA)	01/29/88	X
Chapman	03/28/75	09/04/85	09/04/85(M)	09/04/85	X
Crystal	02/14/75	09/18/85	09/18/85(M)	09/18/85	X
Cyr Plt.	02/14/75	08/19/85	08/19/85(M)	08/19/85	X
Eagle Lake	06/28/74	09/18/85	08/02/06	09/18/85	X
Easton	10/18/74	09/04/85	09/04/85(M)	09/04/85	X
Fort Fairfield	08/23/74	08/01/80	08/01/80	08/01/80	X
Fort Kent	04/30/76	06/04/80	02/15/84	06/04/80	X
Frenchville	09/20/74	12/04/85	12/04/85(M)	12/04/85	X
Garfield Plt.	02/07/75	08/19/85	08/19/85(M)	08/19/85	X
Glenwood Plt.			(NSFHA)	04/30/84	X
Grand Isle	08/02/74	08/19/85	08/19/85(M)	08/19/85	X
Hamlin	02/14/75	08/05/85	08/05/85(M)	08/05/85	X
Hammond			(NSFHA)	04/09/85	X
Haynesville	01/10/75	09/18/85	09/18/85(M)	09/18/85	X

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Aroostook County Communities Participating in the NFIP					
Town	Init FHBM¹	Init FIRM¹	Curr Eff Map Date¹	Reg-Emer Date¹	Adoption and Enforcement²
Hodgdon	12/20/74	09/04/85	09/04/85(M)	09/04/85	X
Houlton	05/31/74	08/19/91	08/19/91	08/19/91	X
Island Falls	02/21/75	05/02/91	05/02/91	05/02/91	X
Limestone	06/07/74	09/27/85	09/85(M)	09/27/85	X
Linneus	02/21/75	09/18/85	09/18/85(M)	09/18/85	X
Littleton	03/21/75	08/01/08	08/01/08(L)	08/01/08	X
Ludlow	02/21/75	04/01/09	04/01/09(L)	04/01/09	X
Macwahoc Plt.	02/14/75	09/18/85	09/18/85(M)	09/18/85	X
Madawaska	08/09/74	08/19/85	08/19/85(M)	08/19/85	X
Mapleton	03/22/74	09/18/85	12/18/07	09/18/85	X
Mars Hill	06/21/74	10/24/78	10/24/78(M)	10/24/78	X
Masardis	01/31/75	05/04/88	05/04/88	05/04/88	X
Merrill	02/21/75	09/04/85	09/04/85(M)	09/04/85	X
Monticello	02/07/75	08/19/85	08/19/85(M)	08/19/85	X
Moro Plt.			(NSFHA)	04/30/84	X
Nashville Plt.			(NSFHA)	04/30/84	X
New Canada	02/07/75	08/19/85	08/19/85(M)	08/19/85	X
New Limerick	02/21/75	09/04/85	09/04/85(M)	09/04/85	X
New Sweden	02/21/75	10/24/78	10/24/78(M)	10/24/78	X
Oakfield	09/06/74	09/18/85	09/18/85(M)	09/18/85	X
Orient		09/07/79	08/19/85(M)	08/19/85	X
Oxbow Plt.			(NSFHA)	04/30/84	X
Perham	04/18/75	04/01/09	04/01/09(L)	04/01/09	X
Portage Lake	01/24/75	12/04/85	12/04/85(M)	12/04/85	X
Presque Isle	02/22/74	10/15/80	10/15/80	10/15/80	X
Reed Plt.			(NSFHA)	04/30/84	X
Sherman	08/02/74	08/19/85	08/19/85(M)	08/19/85	X
Smyrna	01/31/75	08/19/85	08/19/85(M)	08/19/85	X
St. Agatha	02/21/75	12/04/85	12/04/85(M)	12/04/85	X
St. Francis	12/20/74	12/04/85	12/04/85(M)	12/04/85	X
St. John Plt.	02/07/75	09/27/85	09/27/85(M)	09/27/85	X
Stockholm	01/10/75	04/01/11	04/01/11	04/01/11	X
Van Buren	06/14/74	03/18/66	01/16/08	03/18/86	X
Wade	02/14/75	09/04/85	09/04/85(M)	09/04/85	X
Wallagrass	02/07/75	09/04/85	09/04/85(M)	09/04/85	X
Washburn	08/20/76	10/15/80	10/15/80	10/15/80	X
Westfield	06/21/74	09/04/85	09/04/85(M)	09/04/85	X
Westmanland			(NSFHA)	04/09/85	X
Winterville Plt.	02/07/75	11/01/85	11/01/85(M)	11/01/85	X
Woodland	06/21/74	12/04/85	12/04/85(M)	12/04/85	X

¹ Source: FEMA Community Status Book Report as of July, 2015

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² Based on all available information, this community has adopted and continues to enforce a floodplain management ordinance, including regulating new construction in Special Flood Hazard Areas. Aroostook EMA is not aware of any new construction in Special Flood Hazard Areas.

The towns that are not participating in the NFIP, including Dyer Brook, Hersey, and Weston, have determined that participation in the NFIP is not feasible at this time.

The Town of Fort Fairfield is the only CRS Community in Aroostook County that is considered a Class 8.

Community assistance activities include EMA meetings that have kept local officials informed of hazard mitigation issues and have periodically included presentations by experts and officials on various mitigation topics. Examples include:

- October 17, 2014: River Ice Training – Fort Kent
- October 20, 2014: River Ice Training – Fort Fairfield
- October 21, 2014: River Ice Training – Island Falls

C3. Goals

The Hazard Mitigation Planning Team reviewed the goals contained in the 2011 Hazard Mitigation Plan and determined that these goals should continue to guide this 2016 Hazard Mitigation Plan. The goals relate to the hazards profiled in this plan and include the following:

Flooding: Reduce potential loss of life, injury and property damage in Aroostook County caused by flooding.

Winter and summer storms: Reduce potential loss of life, injury and property damage in Aroostook County caused by winter and summer storms, water runoff and erosion.

Wildfires: Reduce potential loss of life, injury and property damage in Aroostook County caused by wildfires.

C4. Comprehensive Range of Specific Actions and Projects

C5. Action plan

COUNTY ACTIONS

GOALS, MITIGATION ACTIONS

Note:

- A new column, Timeframe, has been added in accordance with FEMA guidelines.
- The designation “2016-2021” in the timeframe column indicates that the action does not have a specific beginning and end date (such as a construction project), but is rather a recurring action that cannot be pinpointed to a specific date or dates. In it an action that will depend on circumstances which cannot be predicted in advance, such as a flooding threat posed by ice jams, rapid snowmelt, or thunderstorm activity. The recurring action can occur at any time during the 5-year period covered by this plan.
- Actions over which the County has no control or authority have been deleted.
- Actions which are very broad and apply over multiple jurisdictions have been deleted.
- Other actions have been modified to emphasize a County action.
- The responsibility column has been modified, where applicable, by limiting the responsibility to the County. Aroostook County does not have control or authority over the responsible parties now shown as deletions.
- FEMA elements C4 and C5 are both addressed in the format of the County Actions table below and in the table of projects by municipality.
- **Costs.** The following mitigation actions are supported or will be supported by county taxes and when available, by EMPG grants and hazard mitigation grants.

FLOODING

In Aroostook County, flooding is most often associated with the effects of severe summer storms, ice and snow build-up in the mountains and rivers, ice dams, and spring run-off. The County contains two major rivers (the St. John and the Aroostook), several smaller rivers including the Allagash, St. Croix and Fish Rivers, as well as many streams and lakes. The most likely damages resulting from flooding are the destruction of roads caused by washouts and undercutting. Most communities that have flooding issues have joined the National Flood Insurance Program and are controlling future development through the enforcement of a local flood hazard ordinance.

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Goal/Mission Statement: Reduce loss of life, injury and property damage in Aroostook County caused by flooding.

Mitigation Actions	Responsibility	Timeframe	Status
<p>A. 406 Funding. Maximize the use of 406 funds through the Public Assistance (PA) Program.</p> <p>Analysis: This is an important aspect of the PA program for several reasons. Because it is written into the PA scope of work and budget, the work can be completed more quickly than by going through the 404 grant program. Because the State pays 15% of the local share, the community only pays 10%, lessening the financial burden after a disaster for infrastructure protection and improvement.</p>	County EMA Director	2016-2021 As 406 funds become available	New
<p>B. HMA Grant Availability. Notify municipalities when HMA grants become available.</p>	County EMA Director	2016-2021 As HMA grants become available	New
<p>C. River monitoring. In the springtime, continue to monitor the Aroostook and St. John Rivers to assess ice conditions and river flows. Continue to use volunteers for on-site monitoring of ice jams, river flows and flooding.</p> <p>Analysis: Provides time sensitive public safety data that keeps local officials and residents informed about flooding potential near roads, businesses and homes.</p>	County EMA Director	2016-2021 During or following severe winter conditions	County monitors conditions as needed

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Mitigation Actions	Responsibility	Timeframe	Status
<p>D. Dam Exercises. Continue to participate in dam safety exercises.</p> <p>Analysis: Because High hazard potential dams can cause loss of life and property damage in the event of a failure, these exercises promote greater awareness of the risk and the need to keep the emergency plans current.</p>	County EMA Director	2016-2021 As exercises are scheduled	New ”
<p>E. NFIP Participation. Promote continued participation in the National Flood Insurance Program, as well as actions needed to ensure municipal compliance with flood insurance requirements, by providing specific information on the EMA website and at county meetings and training exercises related to hazard mitigation.</p> <p>Analysis: After the 2008 floods in the St. John Valley, many families benefited from having flood insurance and were able to recover more quickly than those who didn't. This can be an important point to make during meetings of local EMA Directors and during workshops sponsored by MEMA.</p>	County EMA Director, MEMA	2016-2021 As needed	Addressed in EMA Directors' meetings. The number of towns in the NFIP has increased from 47 to 52

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SEVERE WINTER AND SEVERE SUMMER STORMS

Severe winter and severe summer storms are the major contributors to flooding in Aroostook County. Severe winter storms do not ordinarily have an immediate impact on flooding. They add to the snow pack, which in the “January thaw” or springtime can lead to rapid snowmelt, runoff and flooding. Ice jams can exacerbate flooding by temporarily blocking, then releasing large volumes of water, often with disastrous downstream impacts. Severe summer storms and hurricanes, on the other hand, can have an immediate impact on flooding, primarily as a result of heavy downpours. Since 1998, there have been four federally-declared disasters in Aroostook County. The worst storm in the past decade was the Allagash flood of 1991, which caused \$1.9 million in damage.

In addition to flooding, the most likely damages caused by a severe winter or summer storm event are the loss of electrical power from downed power transmission lines, and the blockage of roadways from tree debris or winter snow or ice. There has also been loss of life caused by delayed responses from emergency services, the improper use of backup heat sources, freezing conditions, debris falling on an individual, or from storm-related accidents.

Goal/Mission Statement: Reduce loss of life, injury and property damage in Aroostook County caused by winter and summer storms, water runoff and erosion.

Mitigation Actions	Responsibility	Timeframe	Status
<p>A. Generators. Assist interested municipalities in applying for fire or mitigation grant funds for generators at all critical facilities that are not in flood hazard areas.</p> <p>Analysis: As of a FEMA policy change in 2012, generators for critical facilities are eligible for mitigation funding. Generators can ensure the proper functioning of critical facilities during emergencies, thus making the whole community more resilient. Municipalities that expressed interest in generators for critical facilities in survey #2 include Bridgewater, Sherman, Portage Lake, Fort Kent, Linneus. Limestone, Van Buren, Grand Isle, Caribou.</p>	<p>County EMA Director</p>	<p>2016-2021</p>	<p>New</p>

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Mitigation Actions	Responsibility	Timeframe	Status
<p>B. 406 Funding. Maximize the use of 406 funds through the Public Assistance (PA) Program.</p> <p>Analysis: This is an important aspect of the PA program for several reasons. Because it is written into the PA scope of work and budget, the work can be completed more quickly than by going through the 404 grant program. Because the State pays 15% of the local share, the community only pays 10%, lessening the financial burden after a disaster for infrastructure protection and improvement.</p>	County EMA Director	2016-2021 As 406 funds become available	New
<p>C. HMA Grant Availability. Notify municipalities when HMA grants become available.</p>	County EMA Director	2016-2021 As HMA grants become available	New
<p>D. Public Education. Work with the media on public service announcements on hazard mitigation topics, and include hazard mitigation information on the EMA website. In addition, help develop public service announcements to:</p> <p>1) Advise the public to check on the safety of elderly or infirm neighbors and relatives who may be adversely affected by power outages;</p> <p>Analysis: The most concerned and effective people will often be neighbors, friends and family. Local officials, many of whom have full time jobs outside their community, may not have the time or resources to check frequently on vulnerable populations.</p> <p>2) Inform the public when warming/cooling centers are staffed and open.</p>	County EMA Director	2016-2021 As needed	New

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Mitigation Actions	Responsibility	Timeframe	Status
<p>Analysis: This is important during extended power outages, especially during very cold / hot weather when either the lack of heat or too much heat can stress the human body.</p> <p>3) Educate the public about :</p> <ul style="list-style-type: none"> ▪ Carbon monoxide poisoning from alternate heating sources and improper use of generators ▪ The importance of being self-supporting for up to 72 hours ▪ The dangers of lightning, high winds, and flooding; ▪ How to keep warm / or cool; ▪ The dangers of over exertion during dangerous weather conditions, and the dangers of hypothermia. ▪ <p>Analysis: While many of these are not mitigation, but responses to an emergency, an impending storm gets everyone’s attention and provides a better “learning environment” for critical public safety announcements.</p>			
<p>E. Infrastructure Protection. Inform local officials of training exercises, technical assistance and potential funding opportunities aimed at infrastructure protection.</p> <p>Analysis: Since there is constant turnover in public officials, and funding resources constantly ebb and flow, information flow is critical to keeping current officials up to date. .</p>	County EMA Director	2016-2021 as opportunities arise	New

Note: There are no actions related to new structures because winter/summer related hazards such as roof collapses are adequately covered by the State’s new building code which became effective on December 15, 2010 (the building code addresses snow loads). While small towns are not required to enforce the code, the code still applies in these communities and builders are required to retain third party inspectors to certify compliance with the new code.

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WILDFIRES

In Aroostook County, the most likely immediate damages caused by a wildfire are injuries, possible loss of life, loss of prime timberland and the destruction of personal and real property, especially homes. Subsequent damages might include flooding if the land has been cleared of vegetation by fire. The loss of electricity is also possible, since many high voltage transmission lines pass through heavily wooded areas. Major wildfires may close commerce, resulting in major losses of income to local businesses and individuals.

Goal/Mission Statement: Reduce loss of life, injury and property damage in Aroostook County caused by wildfires.

Mitigation Actions	Responsibility	Timeframe	Status
<p>A. Public Education. Notify local officials of fire prevention activities offered by the Maine Forest Service (MFS). Include “fire-wise” information on the EMA website.</p> <p>Analysis: The MFS has a wide variety of resources that can be accessed by the communities and businesses. These range from website information to individual consultations on methods for reducing potential damages from wildfires.</p>	County EMA Director	2016-2021	As needed
<p>B. Mutual Aid. Evaluate status of current mutual aid agreements. Update as necessary.</p> <p>Analysis: 90 percent of all fire fighters in Maine are volunteers. These volunteers must first leave their regular jobs to access the fire trucks and equipment <i>before</i> going to fight fires. Because few communities could support a fully staffed fire department, Mutual aid is both a life-saver, and, cost effective. There is wholehearted support for mutual aid and therefore a great deal of cooperation and support among municipal fire departments. This has bolstered the fire-fighting capabilities of all communities. Aroostook EMA is actively involved with municipal emergency response capabilities.</p>	County EMA Director	2016-2021	As needed with EMA Directors and fire departments

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Mitigation Actions	Responsibility	Timeframe	Status
<p>C. Grant Applications. Notify municipalities of available grants to improve local firefighting capabilities (for example: Fire Grants and Homeland Security grants).</p>	<p>County EMA Director</p>	<p>2016-2021 as opportunities arise</p>	<p>As funds are available</p>

AROOSTOOK COUNTY HAZARD MITIGATION PLAN – 2016 Update

Rating of Actions and Establishment of Priorities

The Aroostook County Hazard Mitigation Planning Team established priorities by hazard for the general mitigation actions set forth on the previous pages. The Team used the following criteria to rank each of the actions:

1. Life safety
2. Population benefited
3. Probability of community acceptance
4. Probability of funding
5. Feasibility of implementation

Each strategy was rated high (3 points), medium (2 points) or low (1 point) for each of the criteria, with the result that priorities were established by total score (the higher the points, the higher the priority).

Rating of Flood Mitigation Actions						
	Life Safety	Population Benefited	Probability Community Acceptance	Probability Funding	Feasibility of Implementation	Total Score
A. EAP Plans	3	3	2	1	3	12
B. Improved Maps	3	2	2	1	3	11
A. 406 Funding	3	2	3	3	3	14
B. HMA Grant Availability	3	3	3	3	3	15
C. River Monitoring	3	3	3	3	3	15
D. Dam Exercises	3	3	3	3	3	15
E. NFIP Participation	3	3	3	3	3	15

Rating of Severe Winter and Summer Storm Mitigation Actions						
	Life Safety	Population Benefited	Probability Community Acceptance	Probability Funding	Feasibility of Implementation	Total Score
A. Generators	3	3	3	2	3	14
B. 406 Funding	2	2	3	3	3	13
C. HMA Grant Availability	3	3	3	3	3	15

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	Life Safety	Population Benefited	Probability Community Acceptance	Probability Funding	Feasibility of Implementation	Total Score
D. Media Outreach	3	3	3	3	3	15
E. Infrastructure Protection	3	3	3	2	3	14

Rating of Wildfire Mitigation Actions						
	Life Safety	Population Benefited	Probability Community Acceptance	Probability Funding	Feasibility of Implementation	Total Score
A. Public Education	2	2	1	3	3	11
B. Mutual Aid	3	3	3	3	3	12
C. Grant Applications	2	2	3	2	2	11

LOCAL PROJECTS

Criteria for prioritization. The list of local projects was developed separately by each municipality and in consultation with the County. Local officials did not use formal, written criteria for the identification of local projects. Local officials utilized the following criteria to develop and informally prioritize the list of projects (projects are listed in priority order for each community):

- local knowledge of the frequency and extent of local damages
- local knowledge of project priorities, based on frequency and severity of damages
- local knowledge of the benefits that could result from the projects
- local knowledge of the weather, the geography and topography of the community
- technical and financial abilities of their respective communities to address hazards and mitigate the impacts of hazards.

Use of a cost-benefit analysis. Since most Aroostook County communities have tight budget constraints, in virtually all cases involving expenditure of local funds, there will be a very rigorous, line-by-line analysis of cost effectiveness during the budget review process and public discussion. This review is at least equal to a formal benefit-cost calculation because each expenditure item will be carefully scrutinized rather than simply being plugged into a formula. For purposes of grant applications, however, MEMA and the County EMA have made it clear to local officials that a formal cost benefit analysis will have to be prepared when they apply for mitigation funding.

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Participating communities drafted a list of needed mitigation projects. Prioritized mitigation projects were compiled for each community and outlined below. The first project listed under each community is the top priority project for that town. Many of the municipalities in Aroostook County are small towns that do not have the staff, resources, or funding to prepare cost benefit analyses for proposed projects. Regardless, local officials will prepare a formal cost benefit analysis in the event they apply for mitigation funding.

Project Status. Many of the projects listed in this Plan were identified a number of years ago with the first draft of the County Plan. The projects were initially included in the Plan based on an expectation that there would be federal funds to help pay for many of the projects, but this has not been the case. Many municipalities simply do not have the resources to construct these projects using only local funds, and this has been indicated by the phrase “deferred, lack of funds.”

As seen in the population table, many towns have less than 500 people. A town might have a total population of 103 people living in 42 households. The total cost of a listed project might be \$189,000. While this may not seem a large sum to an urban area, it would cost an average of \$4,500 per household which is impractical in a very small community. Moreover, the total cost (\$189,000) is merely an estimate; actual costs could be twice as much or higher.

Timeframe. Some of the projects have been completed, as indicated in the table of projects. Some are newly listed. However, the vast majority of projects are carry-overs from the last plan update, so an approximate time frame has been assigned to each project, subject to the availability of funds which, in most cases, have not been secured as of this writing. The time frames start when funding becomes available and permitting is completed:

- Short Term: 1-2 years
- Medium Term: 3-4 years
- Long Term: 5 years

Municipal inaction to date does not mean lack of interest. Most municipalities do not have the funds to implement the projects, in part because scarce municipal resources are dedicated to winter and summer road maintenance, school costs and county budgets, to name a few, and municipal finances are also being squeezed by state funding cutbacks in revenue sharing, education, county jails and other areas of government.

The time frames set forth in this plan are subject to change if funding sources become available.

Potential Funding Sources

Potential funding sources for local projects include, but are not limited to:

- Local tax money
- MaineDOT local road assistance funds
- FEMA Hazard Mitigation Assistance (HMA) grant funds
- Maine Dept. of Environmental Protection (DEP) culvert grants
- Community Development Block Grant (CDBG) funds
- Other (e.g. private benefactors, emerging grant programs)