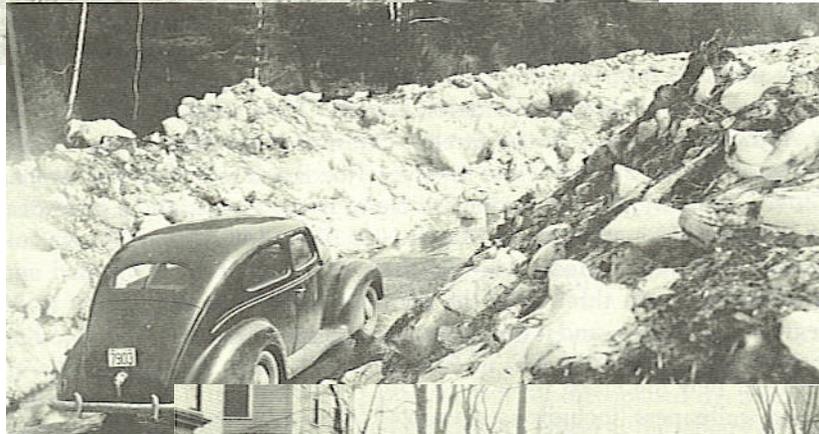
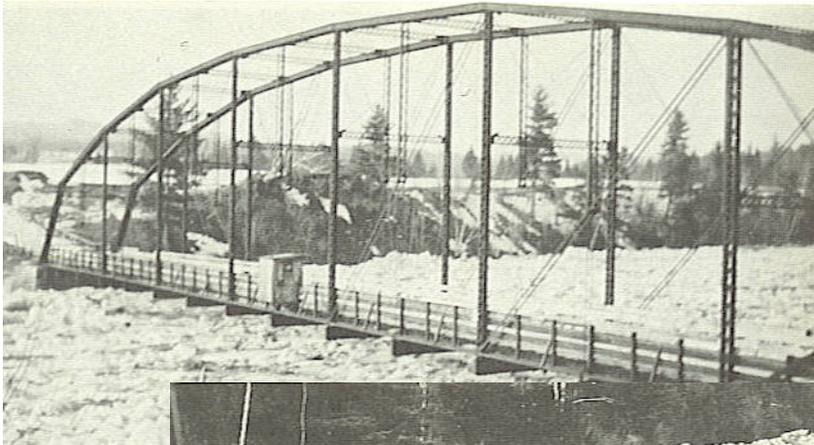


Chapter 4

Natural Hazards and Emergency Management



Chapter 4

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1.0 NATURAL HAZARDS

Littleton has a relatively low risk from natural hazards. The most likely natural hazards within the town and region are, in order of priority, flooding (riverine, ice jam, dam breach), snow and ice storms, tornados, earthquakes, and hurricanes. Of these tornados, earthquakes and hurricanes are relatively infrequent. Flooding events and snow and ice storms are the most common natural hazards in Littleton.



The largest floodplain area within Littleton is along the Ammonoosuc River which passes through downtown and flows parallel to Meadow Street. According to the Flood Insurance Rate Map for Littleton, completed by the Federal Emergency Management Agency in 1986, a few additional areas of Littleton are also within the 100-year floodplain. Flood Insurance Rate Maps are available at the Town Office. Historically, flooding events along the Ammonoosuc, and its tributaries, caused severe damage in 1927, 1936, 1938 and 1973.

Two of the dams within Littleton have been rated by the NH Department of Environmental Services as a potential risk to life or property. Reynolds Pond Dam is rated class “A” meaning that failure could cause minor damage to property. Moore Dam is rated class “C” meaning dam failure could result in the loss of life. Evacuation plans have been prepared for each area in case of an emergency and are available through the Littleton Emergency Management Director.

Littleton is a participant in the National Flood Insurance Program. Currently there are 17 flood insurance policy holders in Littleton. Since 1978, there have been seven claims of flood damage totaling about \$39,000. Thus, property damage from flooding has not been significant in the past 25 years. However, as development increases on the floodplain, particularly commercial development in the Meadows area, damage from flood events will increase. Flood Insurance Rate Maps for Littleton are also available at the Town Offices. This is a requirement of participation in the National Flood Insurance Program.

1.1 Land Use Implications and Potential Actions

Land Use Implications

If Littleton desires to reduce the impact of natural hazards on the landscape there are several items to consider.

- 1) Floodplain areas are critical to floodwater storage during a storm. Inappropriate development of these areas can greatly reduce their ability to handle extra volumes of water and result in serious implications locally and downstream.
- 2) The amount and location of impervious surfaces developed in Littleton alter runoff rates and prevent infiltration of water. When runoff is increased in volume or speed, it results in increased erosion rates and non-point source pollution, and places extra pressure on flood storage areas downstream.
- 3) Appropriate location of land uses and site design for stormwater can greatly reduce the impact from a major storm event in areas that have been developed. Allowing for infiltration and flood storage on site helps reduce the burden on areas downstream. This also increases the filtering and retention of water for local use.
- 4) Storing hazardous materials within the floodplain areas can greatly increase the possibility of contamination during a flood event. Floodwaters are extremely powerful and can easily damage facilities, releasing pollutants into the environment.

Potential Actions

There are an array of possible actions the Town may want to consider pursuing as it evaluates the potential natural hazards in Littleton and their land use implications. This section will be used to identify the specific actions for Littleton to take upon completion of the master plan.

- 1) Consider site plan review regulations that create maximum impervious surface limits, and encourage the use of pervious structures for areas like parking lots.

2.0 EMERGENCY MANAGEMENT

The Town of Littleton's Emergency Management Plan (EMP) was completed by the Town in January of 1998. This document is based on a model developed by the NH Department of Safety, Office of Emergency Management, and is available at the Littleton Town Office. The EMP's role in pre-disaster planning is essential to ensuring a coordinated response when a natural or man-made disaster strikes. With the emphasis on homeland security since September 11, 2001, the existing EMP should be revisited to include this element.

2.1 Littleton Emergency Management Plan (EMP) Summary

The EMP describes the preparation and emergency response required by the Town of Littleton to react to any type of emergency situation which would require the utilization of most or all of the community's resources, and could result in a request for additional assistance from State and /or Federal sources.

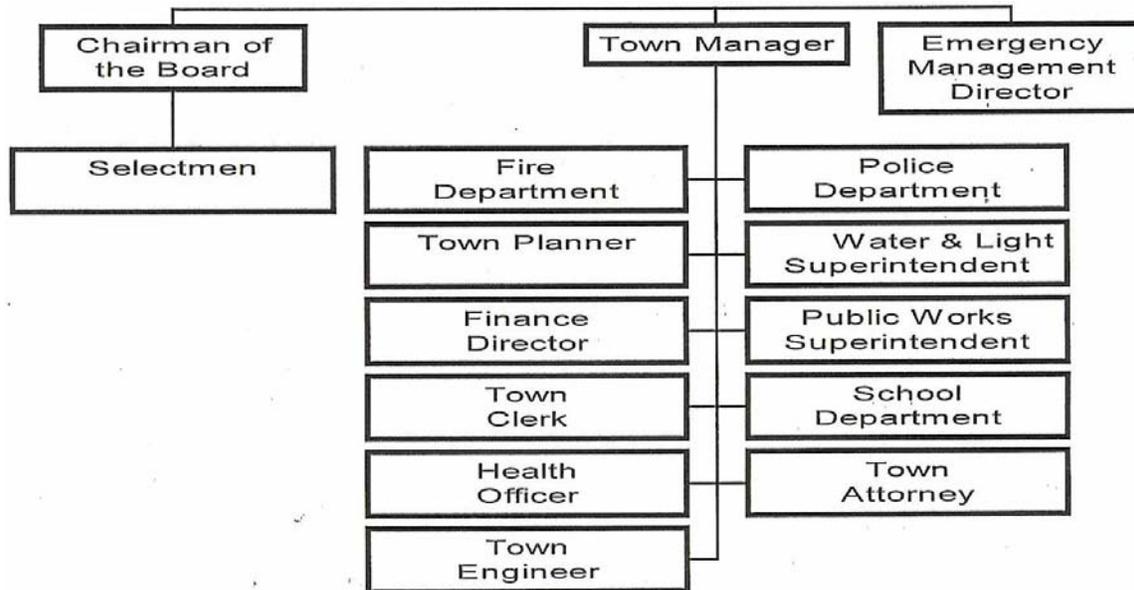
The Littleton EMP contains three components:

Part I – General background information pertinent to Littleton, its location, potential hazards, emergency response organization and responsibilities, interface with surrounding communities and with State and Federal officials to operate in a disaster.

Part II – Individual plan sections (annexes) that provide descriptions of the specific functions or actions necessary for a coordinated response by resource agencies to an emergency situation in Littleton.

Part III – This portion of the plan has not been completed, but calls for emergency plans for specific hazards that are unique in Littleton and present a high potential for property damage and/or loss of life.

By law, the Town Manager is responsible for all emergency operations in the community and has the authority to appoint an Emergency Management Director. Operations under this EMP will begin on orders of the Town Manager, or his/her designee, in the event an imminent or existing emergency situation. The Fire Chief currently serves as the Emergency Management Director for Littleton. The following Emergency Management Organizational Chart illustrates the participants and chain of command during an emergency situation:



The following natural or man-made emergencies (in order of priority) are the prime consideration of the Emergency Management Plan:

1. Hazardous Materials Accident (Transport and Storage)
2. Flooding (Riverine, Ice Jam, Dam Breach)
3. Explosion
4. Conflagration
5. Snow and Ice Storm
6. Multiple Vehicle Accident
7. Electric Outage
8. Water Outage
9. Bomb Threat
10. Tornado
11. Earthquake
12. Civil Disturbance
13. Hurricane
14. Downed Aircraft
15. Fuel Shortage
16. Railroad Accident
17. Nuclear Attack (Fallout Risk)

2.2 Land Use Implications and Potential Actions

Land Use Implications

Littleton's emergency management organizations have demonstrated their ability to respond to natural and man-made events on numerous occasions. If the Town wishes to

continue this proactive emergency management approach there are several items to consider.

- 1) The Town should recognize the lack of an assessment of potential natural and technological risks in light of the present situation nationally. An assessment could further the understanding of the risk level and geographic area of each potential hazard.
- 2) Additional analysis could serve as an update to the Emergency Management Plan.

Potential Actions

There are an array of possible actions the Town may want to consider pursuing as it evaluates the emergency management process in Littleton and its land use implications. This section will be used to identify the specific actions for Littleton to take upon completion of the master plan.

- 1) Conduct an assessment of potential natural and technological risks in light of the homeland security situation.
- 2) Continue to monitor and document all hazardous materials being stored in the community.