

This is a model for a generic flood incident plan from the Two Rivers - Ottauquechee Regional Commission (TRORC). While not mandatory for every LEMP, municipalities with a high risk of flooding should have a flooding incident annex and may use this document (or any other format that suits their planning requirements) as a base. Incident plans should be tailored for local conditions, resources, and processes, but are often not used as-is - they are frameworks that can be quickly adjusted during an emergency to provide a usable incident action plan for the actual situation. Delete this paragraph in the final version of this document!

A flood will generally be an anticipated event, unlike many other incidents that have little advance warning. A flood may be a minor event that merely creates minor road damage, up to a major event that destroys roads and bridges and imperils homes and people.

### **Assumptions**

Flood can occur in any season.

Floods will have some advance warning, as they are almost always associated with weather. Advance warning of a flood will generally be given by Vermont Emergency Management and/or the National Weather Service.

**Activation of local emergency management to monitor the situation prior to actual flooding occurring is vital.**

Weather alerts will be classified by the National Weather Service (NWS) as follows:

#### **FLOOD ADVISORY**

Expected inundation of some low lying and poor drainage areas and resulting in a nuisance to the public but not a threat to life and property if caution is exercised. Less serious than a warning,

#### **FLOOD POTENTIAL OUTLOOK**

Issued to alert the public of potentially heavy rainfall that could send area rivers and streams into flood or aggravate an existing flood.

#### **FLASH FLOOD WATCH**

Issued to indicate current or developing hydrologic conditions that are favorable for flash flooding in and close to the watch area, but the occurrence is neither certain or imminent.

#### **FLASH FLOOD WARNING**

Rapid and extreme flow of high water into a normally dry area, or a rapid water level rise in a stream or creek is in progress, imminent, or highly likely.

#### **FLOOD WATCH**

Issued to inform the public and cooperating agencies that current and developing hydrometeorological conditions are such that there is a threat of flooding, but the occurrence is neither certain nor imminent.

**FLOOD WARNING** Expected overflow or inundation by water in which there is a serious threat to life or property. A flood warning will usually contain river stage (level) forecasts.

The expected severity of flooding covered by NWS alerts will be given as one of the four flood categories:

**Minor Flooding** = minimal or no property damage, but possibly some public threat.

**Moderate Flooding** = some inundation of structures and roads near stream. Some evacuations of people and/or transfer of property to higher elevations may be required.

**Major Flooding** = extensive inundation of structures and roads. Significant evacuations of people and/or transfer of property to higher elevations may be required.

**Record Flooding** = flooding which equals or exceeds the highest stage or discharge at a given site during the period of record keeping.

Advance protective actions, such as sandbagging, evacuation of low-lying buildings, and issuing local warnings may be required. In rare cases, actions may be required to begin days in advance, especially if special populations such as elderly are involved.

Flood conditions will damage roads. The most common damage from floods is erosion of road edges and ditches, with culverts failing and roads being overtopped in more serious floods. Extreme floods will overtop bridges and destroy roads and buildings near drainages as stream channels move. Flooding that destroys roads and bridges have the capacity to hinder any other emergency operations needed. Record flooding, such as a widespread 100-year event, will render outside aid difficult as all towns and state forces would be dealing with their own problems.

Flash flood warnings have more compressed response times than flood warnings and may require different responses.

## **Concept of Operations**

Local emergency management will stay abreast of watches and warnings (National Weather Service and the Northeast River Forecast Center, etc.)

Road crews and emergency services will work in a coordinated fashion under incident command.

Protection of lives is the paramount mission, followed by protection of property.

Flash flood warnings require fast attention as these floods can happen within minutes. This condition may occur from heavy rains and/or ice jams.

### **Alert Levels**

Individual weather events vary, but the following presents a good initial outline of preparedness and response tasks at escalating levels of weather alerts.

#### **Flood Advisory/Flood Potential Outlook**

Whenever a Flood Advisory/Flood Potential Outlook is issued areas within the town:

The Road Commissioner/Foreman shall:

- follow procedures for ensuring adequate staff and equipment is ready to respond, and
- check drainage systems to ensure culverts and ditch turnouts are clear.

#### **Flood/Flash Flood Watch**

Whenever a Flood or Flash Flood Watch is issued for areas within the town:

The Road Commissioner/Foreman shall, in addition to steps above:

- ensure sufficient supplies are on hand for road closures,
- and communicate the watch information to the Selectboard and designated emergency coordinator/director who may call for an assessment meeting to review the situation.

The Selectboard or designated emergency coordinator/director shall:

- notify emergency services of the watch and begin monitoring the situation.

Emergency Services will:

- communicate the watch information to members, and
- ensure response equipment is ready.

Incident Command will:

- be established if severity dictates.

#### Flood Warning

Any forecast of *moderate* flooding in town is cause for concern and heightened activities in advance of the actual flood.

Any forecast of *major or record* flooding is cause for alarm and activation of an incident command structure in advance of damage. Major and record flood levels have the potential to destroy bridges. Flood maps should be reviewed to identify likely areas that will be inundated.

#### **Whenever a flood warning is issued for areas within Town the:**

The Selectboard, Road Commissioner/Foreman and Emergency Coordinator/Director shall hold an assessment meeting to determine potential actions.

The Road Commissioner/Foreman shall, in addition to the above, also:

- order any additional resources if needed,
- closely monitor the situation,
- assist in sandbagging if needed,
- assist in evacuation or warning operations,
- review chronic trouble spots with incident command, and
- prestage equipment/supplies if the warning is serious enough to think that roads may be destroyed.

The Selectboard or designated emergency coordinator/director shall:

- coordinate with incident command,
- request state assistance if needed in advance, and
- authorize response actions as needed.

Emergency Services will:

- communicate the warning to members,
- establish availability of members,
- assist in evacuations and closures, and
- prestage equipment if areas may become isolated.

Incident Command will:

- be established, with at least an operations section chief, and
- make command decisions.

### **Response During a Flood**

Road Commissioner/Foreman shall:

- continue to coordinate with the IC/Selectboard on ordering any additional resources, including traffic control, mutual aid public works, materials, etc.,
- closely monitor the situation, checking chronic trouble spots, dams, ponds, erosion sites, etc.,
- assist in sandbagging/diking if needed,
- assist in evacuation operations,
- relay road status to be reported to VEM, and
- document any damage.

The Selectboard or designated emergency coordinator/director shall:

- request a declaration of state of emergency, if needed, by contacting the Vermont Emergency Management Duty Officer, who is available 24/7 by calling 800-347-0488 or 802-244-8721, or through state police dispatch, and faxing the form as soon as practical to 802-241-5556.
- coordinate with incident command, report severe rainfall to VEM or the National Weather Service in Burlington, and
- authorize response actions as needed.

Emergency Services will:

- provide emergency response,
- assist in evacuations and closures, and
- assist in radio communication and ICS roles as needed.

Incident Command will:

- manage the incident, ensuring span of control, safety, sufficient resources, and financial accounting.

### **Post-Flood Recovery**

Road Commissioner/Foreman shall:

- continue to coordinate with the IC/Selectboard on ordering any additional resources, including traffic control, mutual aid public works, materials, etc., in order to reestablish roads where needed,
- relay road damage status to be VEM or VTTrans, and
- document any damage and all repair costs.

The Selectboard or designated emergency coordinator/director shall:

- request a declaration or termination of state of emergency from the Governor, if needed, by contacting the Vermont Emergency Management Duty Officer, who is available 24/7 by calling 800-347-0488 or 802-244-8721, or through state police dispatch,
- coordinate with incident command on demobilization if required,
- authorize recovery actions as needed (see Guide to Road Damage Response and Recovery for Road Crews).

Emergency Services will:

- provide emergency response and search and rescue, and
- assist in radio communication and ICS roles as needed.

Incident Command will:

- manage the incident, ensuring span of control, safety, sufficient resources and financial accounting until emergency conditions are no longer occurring and then terminate incident command (informing the Selectboard).