

Flash Flood Threat Mitigation Efforts in Bangor, Maine¹

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Abstract:

The National Weather Service Forecast Office in Caribou, Maine is responsible for forecasting high impact weather scenarios over its area of responsibility. One of the most difficult of these high impact weather scenarios to forecast is flash flooding during reverse tidal surge events along the Penobscot River. Reverse tidal flooding (RTF) manifests itself when a strong coastal storm moves inland from Penobscot Bay parallel to the Penobscot River. When these storms occur in conjunction with elevated river levels and/or high tide, flooding can occur as water is pushed inland and up the river basin. RTF events in Bangor are a grave threat to life and property and have caused millions of dollars of damage in the past. Unfortunately, there is no way to prevent reverse tidal flooding from occurring. However, early prediction of these catastrophes would allow local officials, citizens, and business interests to take preemptive action, ensuring the safety of area residents and security of property.

This poster will define the problems of reverse tidal flooding, examine historical events and outline steps taken to mitigate the threat to life and property under RTF scenarios. In addition, best practices and lessons learned will be presented.