Memorandum

Wayne Flood Vulnerability Assessment Executive Summary

Introduction

This Flood Vulnerability Assessment is a planning-level evaluation of inland flooding hazards in the Town of Wayne under extreme storm events as a result of changing climate conditions. This project was funded through a Maine Community Resilience Partnership Community Action Grant awarded by the Governor's Office of Policy Innovation and the Future. The project is being completed by VHB, with support from Ecological Instincts, LLC, Town staff and volunteers, and local stakeholders.

Its primary purpose is to identify locations where flood exposure, functional consequences, and limited adaptive capacity intersect, and to use this information to guide resilience investments, emergency preparedness, and long-term municipal planning and policy.

Wayne's flood risk is shaped by both local infrastructure conditions and the Town's lakes, ponds, streams, and outlet systems, with influence from Androscoggin Lake, Pocasset Lake, Dexter, Lovejoy, Berry and Wilson Ponds and the Dead River. Historical flood events in 1936, 1973, and 1987 demonstrate the Town's sensitivity to watershed-scale runoff and outlet/backwater constraints. These risks are expected to increase over time as storm events intensify and seasonal hydrology becomes more variable under changing climate conditions.

Approach and Methods

The project team developed a Geographic Information System (GIS)-based geospatial inventory of Town-owned assets and other critical community facilities and infrastructure. These assets were screened for flood exposure using Federal Emergency Management Agency (FEMA) flood maps, National Oceanic and Atmospheric Administration (NOAA), LiDAR-derived elevation data, and planning-level higher flood conditions designed to reflect future climate-related stress.

Exposed assets were then evaluated using a qualitative planning- level vulnerability framework based on two core factors; sensitivity to flood-related damage disruption and adaptive capacity to maintain or restore function during and after flood events. The scoring and ratings were informed by the local expertise of a project Steering Committee created specifically for this assessment, historical flood experience in Wayne, and stakeholder input collected during a February 26, 2026 vulnerability assessment workshop. The resulting ratings are comparative and planning-level in nature. They are intended to help the Town prioritize corridors, assets, and project concepts rather than to provide detailed site-specific engineering analyses or damage projections.

Priority Results

The assessment finds that Wayne's highest flood vulnerabilities are concentrated in a relatively small number of critical corridors and assets where flooding can isolate residents, disrupt emergency response, and damage essential infrastructure including.

Transportation-related Vulnerabilities Include Single-access and Near-single-access Roads Such as:

Coolidge Road, Gott Road, Leadbetter Road, segments of North Wayne Road, Old Winthrop Road, and Pond Road

Key school, Commuter, Emergency Facilities and Emergency Travel Routes with Elevated Flood Risk Include:

Mount Pisgah Road, Walton Road, Main Street, The Ladd Recreation Center, and Leeds Road/Route 219

High-priority Culvert and Drainage Crossings are Located on:

Lord Road, North Wayne Road, Walton Road, Mount Pisgah Road, and Coolidge Road.

Important bridge crossings include:

Tempy Bridge (Mt. Pisgah Rd Culvert), the state-owned North Wayne (Walton Road) Bridge and Main Street (Route 133) Bridge.

***Water-control and shoreline infrast*ructure**

The Wayne Village Dam and Lovejoy Pond Dam, as well as shoreline and access areas around Androscoggin Lake, Pocasset Lake, Lovejoy Pond, Wilson Pond, Dexter Pond, and Berry Pond, are all influenced by lake-related flood dynamics and backwater effects.

Key Recommendations

- Maintain and regularly update the Town's GIS-based asset inventory to keep flood-related data current and useful
- Systematically document flood events and asset performance to build a local record that supports future project design and prioritization.
- Enhance routine inspection and maintenance of culverts, crossings, and other flood-prone infrastructure to reduce the likelihood of failure during storms.
- Strengthen emergency access and detour planning, with particular focus on single-access and near-single-access roads and other critical travel corridors.
- Develop concept-level project scopes and preliminary cost estimates for top-priority resilience projects to position the Town for grants and capital funding.
- Implement targeted capital improvements to vulnerable roads, culverts, bridges, dams, and lake-adjacent infrastructure based on the assessment's priority findings.
- Coordinate closely with MaineDOT and watershed partners to align projects, leverage external expertise, and pursue funding opportunities.
- Support shoreline stabilization and water quality protection initiatives to reduce erosion, nutrient loading, and septic-related impacts in flood-prone areas.
- Integrate flood resilience goals into capital improvement planning, hazard mitigation planning, and updates to land use and floodplain management tools.
- Use the assessment to inform upcoming Comprehensive Plan revisions and long-term municipal decisions so that future flooding is less likely to isolate residents, damage infrastructure, disrupt services, or degrade natural resources.