

QUEENSTOWN NUISANCE FLOODING PLAN

Adopted March 27, 2024



Background

Maryland House Bill (HB) 1427 states that “on or before October 1, 2020, a local jurisdiction that experiences nuisance flooding shall develop a plan to address nuisance flooding.” The legislation further specifies that the plan must be submitted to the Maryland Department of Planning, published on the local jurisdiction’s website, and updated at least every five years.

Introduction

The National Oceanic and Atmospheric Administration (NOAA) defines nuisance flooding, or high tide flooding, as “flooding that leads to public inconveniences such as road closures. It is increasingly common as coastal sea levels rise.” The language of HB 1427 refers to nuisance flooding as: “high-tide flooding that causes public inconvenience.” Nuisance flooding is typically unrelated to particular storm events, though it may be exacerbated by long-duration wind events of passing storm systems. As such, it is frequently referred to as “sunny day flooding.”

Nuisance flooding is capable of disrupting daily activities through a variety of mechanisms, such as the closure of roads due to high water, the inundation of yards and parks, and the impairment of engineered and natural drainage systems. Currently, these disruptions typically occur for a period of several hours and then abate. However, as a changing climate drives sea levels higher and precipitation events to greater severity, these repeated “nuisance” impacts will become significant stressors on the infrastructure, emergency response, public health, and fabric of the community.

In the Town of Queenstown, nuisance flooding, meeting the definition of HB 1427, occurs at MD Rt. 18 (Main St.), between Melvin Ave. and Thompson, and including entrance to Skipjack Cove Lane. Typically, flooding in these areas can last for hours and sometimes require the closure of the road. What these areas all have in common is a direct connection to Queenstown Creek with very little topographic relief. Tidal fluctuations and the resulting tailwater conditions have a direct impact on the storm drain capacity throughout the entire area of interest. Furthermore, some high tide events can cause flooding in some areas, even without any associated rainfall. Nuisance flooding is also experienced as debris washes into ditches and causes them to overflow. Culverts in low-lying areas may have difficulty conveying water adequately, causing ponding on low-lying roadways. All of the aforementioned areas are significantly developed, where most of the development occurred prior to any floodplain regulations.

Preparing for Nuisance Flooding

As part of the nuisance flood planning process for the Town of Queenstown, staff interviewed the Town’s Public Works Department to create an inventory of known nuisance flood areas. There is one area within town where there are instances of nuisance flooding.

Accurate flood forecasting and warning is critical to the safety and preparedness of a community. Weather forecast data is received from the National Weather Service (NWS) forecasting office at Philadelphia, PA. Critical tide information is received from the NOAA tide gauge stationed at Cambridge, Maryland, as well as additional gauges elsewhere throughout the Chesapeake Bay. These gauges allow the Town to be aware of and prepare for possible nuisance flooding impacts.

Responding to Nuisance Flooding Emergency Response

Thresholds are maintained for the Town of Queenstown which direct a set of actions based on a particular inundation level or frequency of flooding. These thresholds are meant to supplement actions directed by the Town of Queenstown Public Works Department.

Threshold	Response Level	Required Action
Forecast data from NWS or NOAA tide gauge indicates likely nuisance flooding impacts	Level I – Public Warning	Make the public aware of nuisance flooding threat via mass notification, social media, etc.
Flood waters are present at nuisance levels	Level II – Monitor Inundation	Deploy high water signs, reposition public safety assets, coordinate with relevant departments, and document nuisance flooding
Flood waters exceed nuisance levels and present a threat to life, safety, or property	Level III – Moderate to Severe Flood Response	Close roads and reroute traffic; place Department of Public Works Staff personnel on standby

When flooding reaches such a severity that life safety, critical infrastructure, and key resources are threatened, “nuisance” flooding levels have been exceeded. Below are response concepts consistent with the Queen Anne’s County Emergency Operations Plan which may become necessary as flood waters rise beyond nuisance levels.

- Response
 - Lifesaving activities
 - Incident containment
 - Public health concerns
 - Maintenance of transportation routes
 - Maintenance of critical facilities
 - Public warning mechanisms
 - Responder health & safety
 - Media & VIP management
 - Control & Coordination of operations
 - Provision of transport, shelter and documentation of displaced persons
 - Restoration of normality
- Recovery
 - Facilitate the restoration of systems to normality
 - Assess damage and return vital life support systems to minimum operating standards
 - Collate financial cost of the event
 - Legal implications, claim investigation
 - Debrief & compilation of final report
 - Community & restoration of services

Documentation

Documenting the extent and impacts of nuisance flooding is critical to public safety and the long-term resilience of the town. This information will be documented and updated on a regular basis. The following factors will be recorded by the Town of Queenstown Public Works for tracking and archived by Town staff.

- Date, time, and location of nuisance flooding.
- Impacts (e.g. “x amount of water on the roadway,” “ditch overflow,” “docks underwater,” etc.);
- Action taken by Public Works staff.

Mitigating Nuisance Flooding Impacts

The Town’s Comprehensive Plan does not currently address nuisance flooding. The Town will consider addressing this issue during its next Comprehensive Plan update. No new development is anticipated in the area identified as experiencing nuisance flooding. The Town adopted the 2019-2024 Queen Anne’s County Multijurisdictional Hazard Mitigation Plan as the Town’s 2019-2024 Hazard Mitigation Plan (HMP). The Queen Anne’s County HMP does address nuisance flooding by including it as Mitigation Strategy #2: Nuisance Flooding Plan requiring Towns to develop a nuisance flood plan.

Projections for Future Impacts

The areas impacted by nuisance flooding will increase gradually in the coming years as changing climate elevates water levels and drives precipitation patterns to new extremes. This shift, however, is likely to accelerate gradually over time. New areas may become impacted, leading to an increased risk.