

**NEW MARKET TOWNSHIP  
SCOTT COUNTY  
STATE OF MINNESOTA**

**FROST BOIL POLICY FOR GRAVEL ROADS**

**WHEREAS**, the Town Board of New Market Township is the statutory road authority and provides maintenance for over 36 miles of gravel road right-of-way within the Town;

**WHEREAS**, the Board, as the road authority, provides for safe and passible roadways on its Township roads;

**WHEREAS**, during the spring, the ground is subjected to repeated freeze-thaw cycles, frost boils (also known as mud boils, frost scars and mud circles) are upwellings of mud that occur through the gravel road;

**WHEREAS**, a frost boil can occur anytime, but typically in the spring of the year;

**WHEREAS**, the Board, has advised residents that several things can be done by Township residents in dealing with spring frost boils:

- Spring frost boils are inevitable and common
- Without proactive actions taken, a typical frost boil will heal on its own with time, sun, wind and warmer temperatures
- Patience is requested of residents when frost boils occur and the repair process
- The Township is committed to maintaining the roads in a safe, passible and economically responsible manner.
- Residents can and should report observed frost boils to the Road Supervisor or Township Engineer

**WHEREAS**, the Board determines it is in the best interest of the Township to clarify the policy to set out in more detail how frost boil repair activities will be conducted on town roads considering the limited maintenance budget, personnel, and equipment available in the town;

**NOW, THEREFORE, BE IT RESOLVED**, the Board hereby adopts the following as the Frost Boil policy for the Town:

**BE IT FURTHER RESOLVED**, that any Contractor performing frost boil services for the Town shall follow this policy.

**1. POLICY CONSIDERATIONS:**

In developing this policy for how to best undertake frost boil repair activities in the Township, the Board has had to balance a number of factors including, but not limited to, the following: public safety; the amount of funds available for these activities; the wish to maintain an efficient transportation system; enable the delivery of emergency services; avoid damage to personal property; and the cost

effective allocation of resources. A further explanation of some of these policy considerations follows:

- a. **Budgetary:** The funds the Township has available for spring frost boils are derived from two sources.
  - i. The first is the Township Road and Bridge tax levy that is set by the Township electors at the annual Township meeting held in March.
  - ii. The second source of funds comes from the gas tax imposed and collected by the state, a small portion of which is distributed to towns to help maintain their roads. The Board has no direct control over either source of funding. A proposed levy is submitted to the Township electors at the annual Township meeting, but the actual amount of the Township's road & bridge levy is determined solely by a vote of the electors.
- b. **Personnel & Equipment:** The Township has no full-time and no part-time employees available to carry out spring frost boil repair activities. The Town Board relies on the Road Supervisor and Township Engineer with individual responsibility to carry out, implement and enforce this Resolution. The Board contracts with independent contractors on a regular basis for frost boil repair services and equipment.
- c. **Safety, Equipment Damage, & Effectiveness:** Once repairs are initiated, operations will be suspended if conditions deteriorate to the point that operations become unsafe for operators because of factors including, but not limited to, severe cold, significant winds, limited visibility, accumulation of ice, or rapid accumulation of snow. Operations will also be delayed or suspended if existing or anticipated conditions indicate the operations will not be effective.

## 2. THE FROST BOILS ARE TO BE REPAIRED AS FOLLOWS:

- a. The location of the frost boils will be either discovered by, or brought to the attention of the Road Supervisor and Township Engineer.
- b. The Road Supervisor and Township Engineer will determine the relative severity of each frost boil
  - i. Determine if it is an immediate safe and passible need, or a simple nuisance
  - ii. If possible, frost boils will be done in a methodical, geographically responsible manner.
  - iii. Instruct contractor of which frost boils to be repaired at the Township discretion.

- c. Once a frost boil has been identified, it will be repaired in the following manner:
  - i. The mud protruding above the normal driving surface will be skimmed off. No excavation beyond the normal driving surface will be done.
  - ii. The contractor will place 3 inch clear angular rock (rock that is a uniformly 3 inch size, nothing larger, nothing smaller) onto the frost boil
  - iii. The dump truck, loader or grader will drive over the placed rock to push it into the soft mud
  - iv. 3 inch clear rock will be added until the frost boil stiffens to allow safe passage of a vehicle, and bladed to establish the 4% crown.
  - v. Once a few weeks have passed and the Road Supervisor and Engineer determined the frost boils have substantially stabilized, Class 5 Aggregate Base, to match the existing gravel on the roadways, will be placed on top of the 3 inch clear rock to re-establish a typical gravel road driving surface.
- d. The Road Supervisor and/or Township Engineer reserve the right to modify this policy on a case-by-case basis should they determine an alternative method is better suited to the particular situation.