



Signs of Spring in the North

Traditional Signs of Spring

Figure 1. Maple Tapping



Source: <https://www.publicdomainpictures.net/en/view-image.php?image=20543&picture=maple-syrup-season>

People in the northeastern United States look forward to signs that Winter is ending and Spring is coming. There are also some signs they do not look forward to—and those signs have an impact on moving wood. Maple syrup season Figure 1 begins in late January/early February and can continue into early April, depending on weather conditions.

Figure 3. March 20



Figure 2. American Robin



Source: <https://www.publicdomainpictures.net/en/view-image.php?image=290536&picture=american-robin-in-grass>

Many northern New Englanders look forward to the arrival of American robins (*Turdus migratorius*) as a sure sign of Spring (Figure 2). The first robin of 2020 appeared outside the Forest Research Group office on March 20. That bird may have jumped the gun, however, because this is what is looked like outside on March 24 (Figure 4). (20 more appeared outside the office as this Note was being written.)

Figure 4. March 24



Figure 5. Frost Heave Warning Signs

Road Signs of Spring

New Englanders are less excited about seasonal road signs that appear about the time the maple sap starts running and remain about as long as the sap runs (Figure 5).

The **Frost Heave** sign is used in much of New England. It is usually posted by the town or city road department. The sign indicated indicates a sharp bump (frost heave) in the road.¹ It is a bright orange color and large enough (about 12” tall and 24” wide) to be seen from a distance and even in vehicle headlights at night. They are usually posted very close to the frost heave so that it is easy to tell where the frost heave is.

The **Bump** sign is used in central and northern Maine to indicate frost heaves in the road ahead. Drivers on Maine roads must remain vigilant at all times because this sign can be difficult to see in spite of its bright color. It is about a foot tall and quite narrow. It is often hung from a tree branch or on a stick stuck into a snow bank. Signs that are hung by rope (baling twine) often spin in the wind which may result in the orange side facing away from the road. And the sign may be posted several hundred feet before the frost heave. As Maine roads tend to be bumpy at any time of the year, a

¹ I have not been in Vermont in the late winter for many years, but learned long ago that when a Vermont town puts up a Frost Heave sign, you’d better come to a complete stop before hitting the bump, then slowly ease over it. In other parts of the country, that sign would say “Speed Bump”.

driver unfamiliar with the custom might assume they have gone over the frost heave, accelerate and reach full speed just as they arrive at the actual frost heave.

The frost heave season runs with the maple syrup season because the causes for both are related—the thawing and refreezing that comes as winter wanes. Many of the back roads in New England were built before automobiles were invented. While they have been upgraded over time, most are not able to support heavy loads when they are being subjected to the thaw/freeze cycle in late Winter and early Spring.

As the Frost Heave and Bump signs appear along the side of the road, most side roads are “posted” with another sign (Figure 6). These signs usually/never appear on Interstate or US highways and some heavy-duty state highways.

While frost heaves are not such a big problem in the North Central states, roads do get posted there. Minnesota sets a Spring limit of 5 tons per axle on an unpaved road and 10 tons per axle on a paved road. The Spring weight limit varies by state. The sign in Figure 6 is posted on a road near the Forest Research Group office and prohibits loads over 23,000 pounds (11.5 tons or 10.4 metric tonnes), which is about the weight of an empty log truck and trailer.

Figure 6. Load Limit Sign



Road posting starts in the southern part of each state and moves north as temperatures rise above freezing during the day. The Wisconsin Department of Transportation notes that posting usually begins in the southern half of that state during the first week of March and in the northern half of the state two weeks later. The posting season lasts until the last week of April in the south and the middle of May in the north. Roads were posted in Hermon, ME on Sunday, February 26 this year. Roads in next-door Bangor were not posted until the following Sunday, when roads in Milo (35 miles north of Hermon and Bangor, see below) were also posted. Roads in Millinocket, about 60 miles north of Bangor, were posted by March 18.

Spring Breakup

The period of road postings and a week or two after are known as *spring breakup* or *mud season*. The inability to haul logs from the woods to the mill for 6-8 weeks in the late Winter and early Spring creates logistical challenges for loggers and mills.

Mills prepare for the spring breakup by amassing a log inventory that can carry them through 6-8 weeks when logs are not moving. Figure 7 shows part of the log yard at Lumbra Hardwoods in Milo, ME the day after the roads were posted on March 1. This inventory should last until the roads are “unposted”.

Figure 7. Mill Log Yard in Maine at the Start of Spring Breakup



Figure 8. Roadside Log Piles in Michigan

Once the roads are posted, logs get piled in the woods. The pictures in Figure 8 were taken in the Kenton Ranger District on the Ottawa National Forest on Michigan's Upper Peninsula in mid-March 1978, shortly after the roads were posted there. The logs are piled next to a National Forest road over which they will be hauled when normal load limits return in a few weeks. Loggers continue to harvest timber and skid it out to the roadside. They can continue to operate because the snow cover insulates the ground and prevents it from thawing.

4-6 weeks after the roads are posted, conditions improve enough to allow logs to be hauled on them again and those orange signs will be removed. The mills hope that logs from the roadside piles begin to arrive before their log yards are empty.

By the time logs can be hauled over the road again, conditions have begun to deteriorate in the woods. The snow melts and the ground thaws. It is impossible to log under those conditions, so logging operations stop until the soil stabilizes. Loggers and mills hope that operations can resume before those roadside piles are depleted.

Exactly when spring breakup begins and ends is determined by weather, not the calendar. Colder-than-average winters can push the starting time later into the Spring because the roads and the woods stay frozen. Drier Winters and Springs can shorten the season. Wetter ones can prolong it. There may be a week or two when roads are posted and logging operations are shut down.

Figure 9. Part of the Gang of 20 on 3/24

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