

Road Weight Limits and Commercial Transport

Workshops Clarify New Law and Provide Load Restriction Guidelines

Many municipalities have set road weight limits and have had local commercial transporters recognize the need for them. Some municipalities have not done so successfully. In many instances, road agents and public works directors have set weight limits based on sound technical knowledge and experience, but a few local commercial truckers and equipment operators have ignored them. In other instances, town officials have set road weight limits in ways which seem unreasonable and even arbitrary.

Last spring the Legislature addressed the latter situation. It found that "important sectors of commerce of this state depend, in part, on the efficient vehicle transport of unprocessed natural resources, manufactured goods and other commercial products across class IV, V, and VI municipal roads." In New Hampshire timberland owners and loggers are among the more important "sectors of commerce."

In an amendment to RSA 231 the Legislature authorized municipalities to "establish maximum weight limits, seasonal and otherwise,...when the highway agent determines that such highway requires postings to prevent unreasonable damage or extraordinary municipal maintenance expense." This amendment potentially impacts road agents who have not had problems posting their roads, as well those who have. It also impacts many commercial transporters.

The UNH T² Center recently arranged two workshops to clarify the new law and to draw upon the experiences of road agents and loggers who have successfully dealt with setting and accommodating road weight limits. The workshops were conducted in partnership with the NH Timberland Owners Association and with assistance from Bernie Waugh of the NH Municipal Association and David Rand, a recently retired engineer from the ME DOT.

The laws governing weight restrictions were openly discussed, first through formal presentations and then during lengthy question and answer sessions. The remainder of the program centered on why it was necessary

- To set road weight limits based on sound judgment,
- To comply with road postings, and
- To communicate with others.

Panels of road managers and timber industry professionals told how they successfully communicated in their respective communities. In these municipalities the road manager's weight restrictions were accepted as reasonable. To help road managers whose restrictions might be questioned, speakers provided guidelines for when to establish weight limits and when to remove them.

These guidelines, based on practices in Maine and other northern states, use daily high and low temperatures to determine the extent of freezing and the onset of significant thawing. The process involves the calculation of degree days, the number of degrees between some reference temperature, and the average temperature for a particular day. The reference temperature for Freezing Degree Days is 32°F and for Melting Degree Days is 29°F. (A reference temperature of 29°F is used to account for bituminous pavement surface heating effects since the pavement surface is about 32°F when the air temperature is 29°F.) Cumulative Freezing Degree Days (CFDD) and Cumulative Melting Degree Days (CMDD) are the summations over time of the respective degree days.

A Degree Days Log, with column headings as shown below, makes calculation of CFDD and CMDD a matter of simple arithmetic. Local high and low temperature for each day can be obtained from newspapers, government weather stations, private meteorologists, or businesses such as heating oil companies. These are entered into Columns C and D of the Log. Their sum divided by "2" is entered in Column E. The remaining calculations are as indicated by the headings.

The calculations and their application are described in a booklet prepared by the UNH T² Center. It contains tables and describes the background of the guidelines. It also contains a sample form for preparing a Degree Days Log.

For a copy of Guidelines for Spring Road Use Restrictions, call or write the UNH T² Center. Telephone numbers are 862-2826 or 800-423-0060.

Degree Days Log

A	B	C	D	E	F	G	H	I	J
Month	Day	High Temp	Low Temp	Avg. Temp (C+D)/2	FDD 32-Avg.	Cumulative FDD	MDD Avg.-29	Cumulative MDD	Notes