



Ice Storm 1998

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USDA Forest Service, Durham, NH



Using NED/Stand Inventory, Processor, and Simulator To Cruise Ice-Damaged Stands

The severe ice storm of January 1998 caused damage on an estimated 17 million acres of forestland across Maine, New Hampshire, Vermont, and New York. Some trees suffered broken branches and tops, others were bent over, and in some cases trees were uprooted.

Generally, three classes of ice damage are recognized for standing trees: less than 50% crown loss, 50-75% crown loss, and over 75% crown loss. Trees with less than 50% crown loss have a good chance of fully recovering. Trees with 50-75% crown loss can be retained, but may develop stain and decay, and as such should be reevaluated in 3 to 5 years. Trees with over 75% crown loss are at risk of dying or heavy infestation of insects and diseases, and should be considered for harvest within the next year.

It is important that forest landowners get an accurate estimate of the damage to their stands. This can best be done by a professional forester. It is usually necessary to take some sort of inventory plots to estimate the severity of damage. Although damage along roads, field boundaries, and other edges may have been quite severe, a stand that looks devastated around the edges may be surprisingly intact on the inside.

The NED Stand Inventory, Processor, and Simulator (NED/SIPS) can be used to quickly compute the volume and value in each damage class. This computer program is one module of NED, a computerized system designed to provide site-specific recommendations that integrate the multiple values of a stand. The following instructions assume

that the user is familiar with NED/SIPS. To obtain a free copy of NED/SIPS, contact Neil Lamson at (603) 868-7699.

1. If sample plots are taken, enter stand size, cruise type, plot size, and number of plots in the usual manner. If a 100% tally is taken, enter a stand size = 1 acre, cruise type = 4 (fixed area cruise, plots not separated), number of plots = 1, and plot size = 1.
2. Record species and dbh in the usual manner. Record 1 in the **COUNT** column.
3. Use the **TIM** column to record undamaged trees, trees with less than 50% crown loss, and trees with 50-75% crown loss. Use **TIM** = 1 for undamaged trees, **TIM** = 2 for less than 50% crown loss, and **TIM** = 3 for 50-75% crown loss. In the **STAT** column, record 0 for these trees.
4. For trees with more than 75% crown loss, record 2 in the **STAT** column (code for a standing dead tree). Record 0 in the **TIM** column.
5. To obtain an accurate estimate of volume, record the sawlog and pulpwood heights of damaged trees.
6. Save the stand data file in the normal manner after all the tree data are recorded.

(over)

7. To analyze the data, first edit the USER DATA FILE and set **Trees to Include** = 1 (live trees only). Save this User Data File as Live.def. Edit the User Data File again and set **Trees to Include** = 2 (dead trees). Save this User Data File as Dead.def. Edit the User Data File a third time and set **Trees to Include** = 3 (live and dead trees). Save this User Data File as Both.def.

8. To compute the statistics for the entire stand, including damaged and undamaged trees, Retrieve the user data file named Both.def, as well as the stand data file that contains the ice-damaged cruise. Enter the ANALYSIS module and compute the desired statistics. These will be for the entire stand, both damaged and undamaged trees. If a 100% tally was made, and plot size and number of plots were set equal to 1, then the values will be for the entire cruise, even though the headings will read “per acre”.

9. Next compute the statistics for trees with no damage, less than 50% crown loss, and 50-75% crown loss.

* Enter the Data Module and Retrieve the User Data File named Live.def and the stand data file.

* Enter the PRESCRIBE module, Select the **Build-Your-Own** option.

* To compute statistics for the trees with 50-75% crown loss, under **Cutting Specifications** enter 0 for Minimum Residual Relative Density and 100 for Maximum Relative Density To Be

Removed. Under **Define Cutting Priorities**, enter 999 for Species, 6 for Min Dia, 50 for Max Dia, 3 for Min Qual, 3 for Max Qual, 100 for RD Cut, and 1 for Priority. Submit the prescription by pressing F10. After the computations have been made, select REPORTS and view the Species x Diameter Tables For Trees Cut for the desired statistics. The trees cut tables will be for TIM code = 3, which is trees with 50-75% crown loss. CAUTION: the Cut Comparison Table contains data for all trees, including the dead trees. This is a program error. Do not use the Cut Comparison Table with stand data files that contain both live and dead trees.

* To view the statistics for trees with less than 50% crown loss (TIM code = 2), follow the above procedure, except set Max Qual = 2 and Min Qual = 2. Similarly, statistics for undamaged trees (TIM code = 1) can be viewed by setting Max Qual 1 and In Qual 1.

10. Finally, to view the statistics for trees with over 75% crown loss, enter the Data Module and Retrieve the User Data File named Dead.def and the stand data file. Enter the ANALYSIS module and select the Species*Diameter Tables for the desired statistics. CAUTION: the Overstory Summary Table contains data for both live and dead trees. This is a program error. Do not use the Overstory Summary Table with stand data files that contain both live and dead trees.



Don't Panic! Stop, Think and Be Patient.

Safety First and Foremost.

Get Professional Advice.



For More Information or a Free Copy of NED/SIPS Program, Contact:

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