

## Winter Severity Index

The winter severity index (WSI) is a measurement to help gauge the effects of the winter weather on deer survival. The index was developed in the early 1970's and is calculated by adding the number of days with 18 inches or more of snow on the ground to the number of days when the minimum temperatures were 0°F or below. In general, the severity of the winter is based on the total number of points accumulated over the collection period. A winter with an index of less than 50 is considered mild, 50 to 79 is moderate, 80 to 99 is severe, and over 100 is very severe.

Annual harvest plans take into account the WSI totals, as this index provides insight into the number of deer that may have been lost due to the weather conditions. Deer have both physiological and behavioral characteristics that allow them to survive Wisconsin winters, provided the harsh conditions do not persist for long periods of time. However, in very severe winters, up to 30% of the deer herd may be lost, dramatically affecting the overall populations. The WSI is calculated for 34 locations throughout northern Wisconsin. Collecting WSI information at these many locations allows biologists to manage deer populations at a localized level where differences in weather conditions between stations can be dramatic. WSI data is not collected in the southern portions of the state because the milder conditions do not impact the deer herds as significantly there.

