



*Below is an informative DYK article from our resident DNR officer Lee Wiesner (retired). We hope you will enjoy learning about the Winter Severity Index and the effects a difficult winter (such as our most recent!) can have on our White-tailed deer population.*

*Fortunately, my little friend in the photo below made it through just fine!*

*Anne Torrey*

## Did You Know? *Winter Severity Index*

Lee Wiesner

This time of year many outdoor enthusiasts are wondering how the wildlife survived the winter in their area with much focus put on White-tailed Deer survival. Wisconsin wildlife biologists use a tool called the Winter Severity Index (WSI) to predict the potential winter mortality and spring fawn production. The WSI is calculated between December 1 and April 30 with a point added for each day with snow depths greater than 18 inches and a point for each day with minimum temperatures below 0 degrees F.

Deep snow depths cause deer to expend more energy plowing through snow in search of browse which is less available. Temperatures below zero require more calories to maintain body temperatures. The first deer to succumb to harsh winters are fawns and then older bucks which used up much of their fat reserves chasing does during the fall rut.



Photo credit: Anne Torrey April 19, 2023

A WSI less than 50 is considered mild with a resulting buck harvest usually up approximately 30%. A WSI of 50 to 79 is considered moderate with a winter mortality of around 10% and a relatively stable buck harvest. A WSI of 80 to 100 is considered severe with a winter mortality of 10 to 15%. A WSI greater than 100 is considered very severe with approximately 20% or greater winter mortality and a buck harvest reduced by as much as 25% or more. The summer fawn to doe ratio following a very severe winter can be reduced by as much as 20% when compared to a mild winter.

As of April 17, 2023 the WSI for Douglas County was 127 and 117 for Bayfield County. This would put the WSI well into the very severe category. Wildlife biologists and the casual observer have found the deer in better shape than the high WSI would suggest. The heavy snow in mid December, mixed with rain, bent over many types of young trees and shrubs providing food throughout the winter. The heavy wet snow froze and deer were able to walk on top of the snow in many places allowing them to reach up higher for available browse.

If you are interested in helping the Wisconsin DNR biologists in determining the impact of this past winter on fawn recruitment you can take part in Operation Deer Watch. Basically you report the deer you see in August and September, including number of does with fawns, does without fawns, lone fawns, bucks, unknown deer, date and location. There is an App making it very easy to report your observations. Just search [Operation Deer Watch](#) to get started. Another fun activity to assist the wildlife biologists is [Snapshot Wisconsin](#). A trail camera is supplied to the volunteer who sets up the trail camera on public or private land to record all species of wildlife captured by the camera. Just search Snapshot Wisconsin to see how it works and if you are interested in a very fun project.

Hope you all get out into the great outdoors and observe the wonders of nature.