

W S I

WSI

The Winter Severity Index



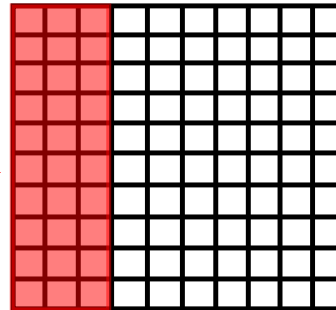
Deer have both physiological and behavioral adaptations that allow them to endure Wisconsin winters-provided the deep snow and extremely cold temperatures do not persist too long.



In very severe winters, losses of deer in northern Wisconsin can be dramatic

(as much as 30% of the herd). →

Even in mild winters, some animals will die.



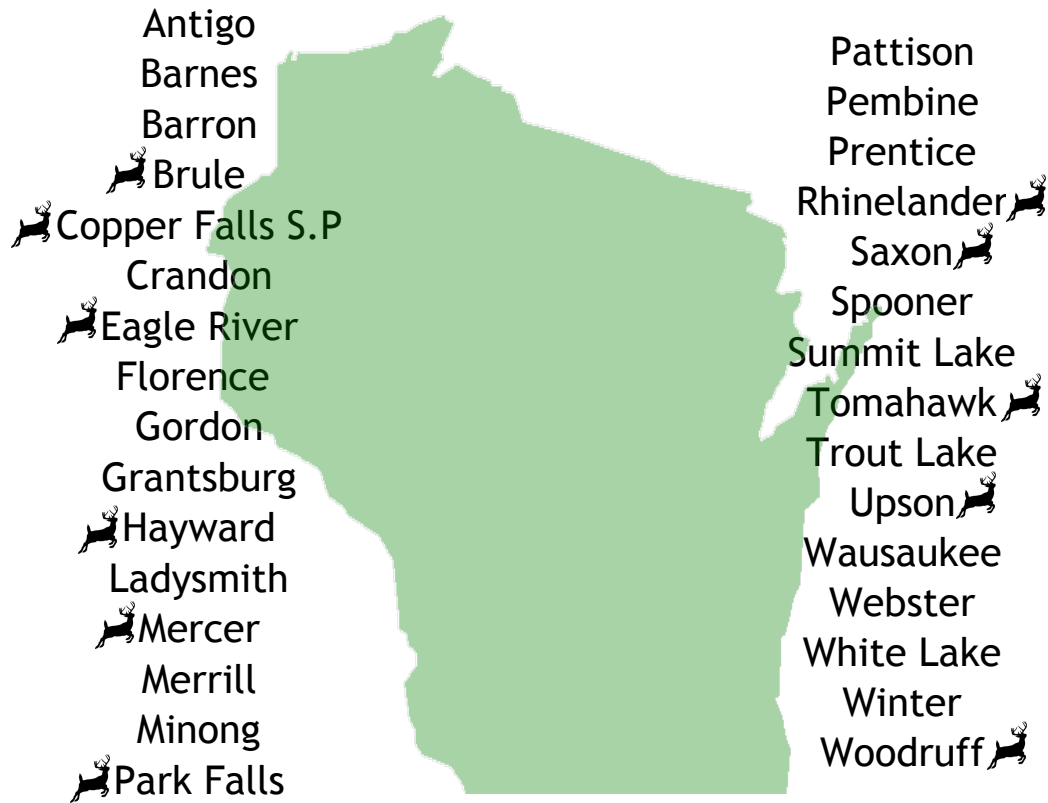
*N. Wisconsin
Deer population*

In the south, winter weather rarely impacts deer survival.

To keep tabs on winter weather conditions, the DNR maintains a **Winter Severity Index (WSI)** at about 31 locations throughout northern Wisconsin.

Deer





The WSI was developed in the early 1970's.

$$\begin{aligned} \text{WSI} = & \\ & \text{Number of Day with 18in or more} \\ & \text{of snow on the ground} \\ & + \\ & \text{Number of days when the} \\ & \text{minimum temperatures were } 0^{\circ}\text{F} \end{aligned}$$

Calculated between December 1 and April 30.

If you think of it as adding up points, a day when both conditions occurred would get two points.

At the end of the winter all the points are added up, resulting in the WSI number for the whole winter.

<u>WSI Points</u>	
0 - 50	mild winter
50 - 79	moderate winter
80 - 99	severe winter
100 and up	very severe



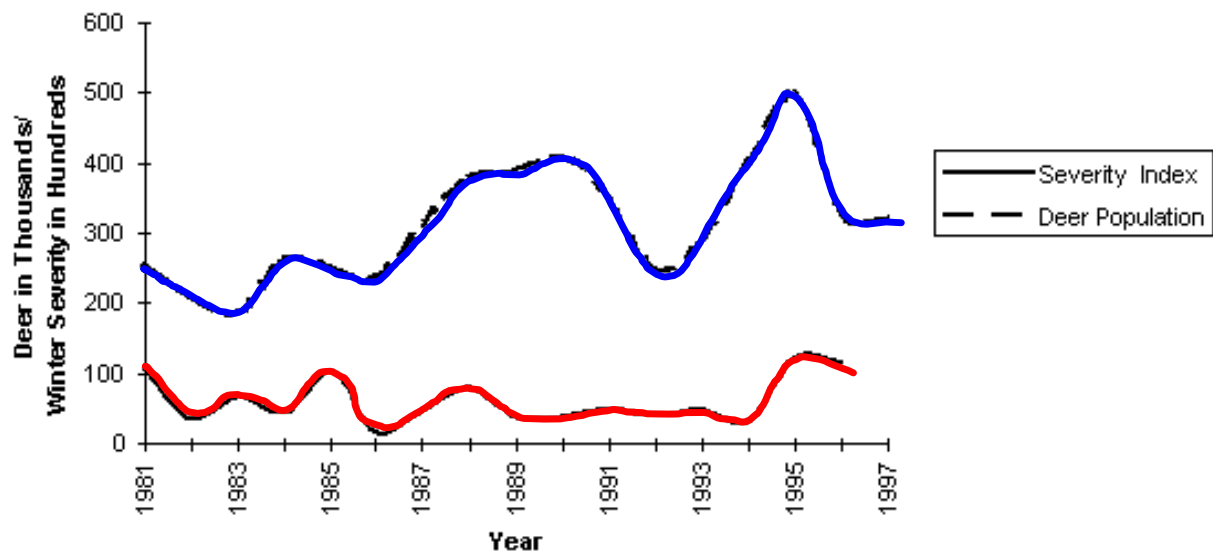
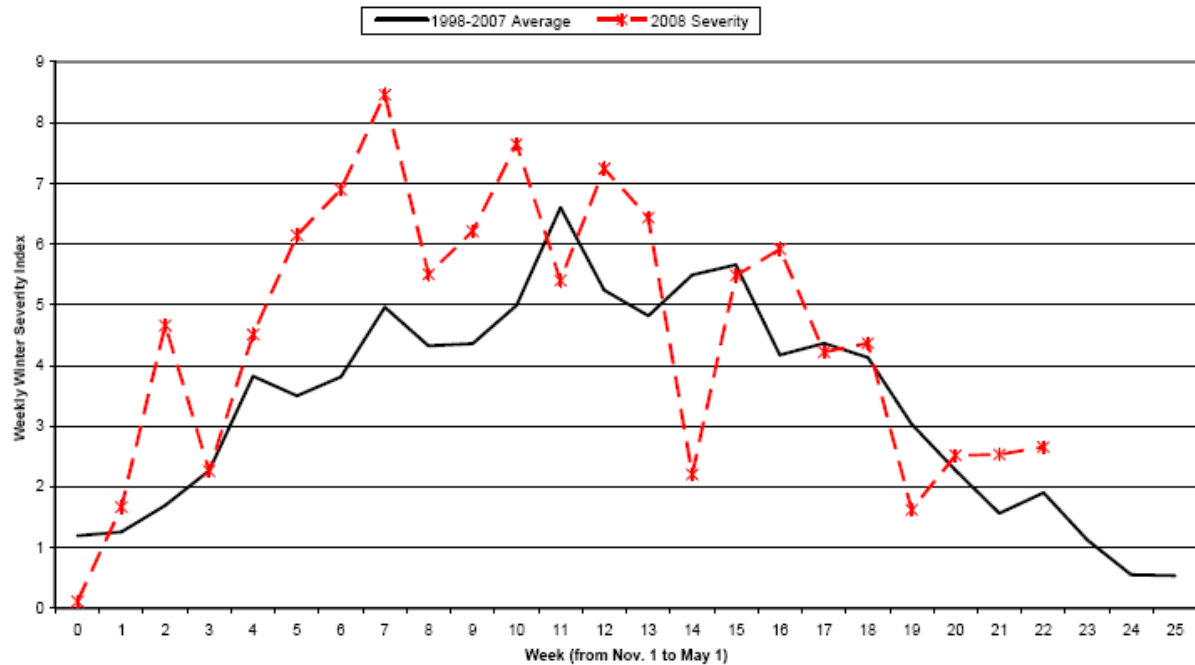


Figure 2. Winter severity index for the Upper Peninsula, 2008-2009 season. The graph shows the weekly regional WSI value for the current season (dashed line) and the average weekly regional WSI value for the 1996 through 2007 seasons (solid black line).



WSI

2016-2017 report

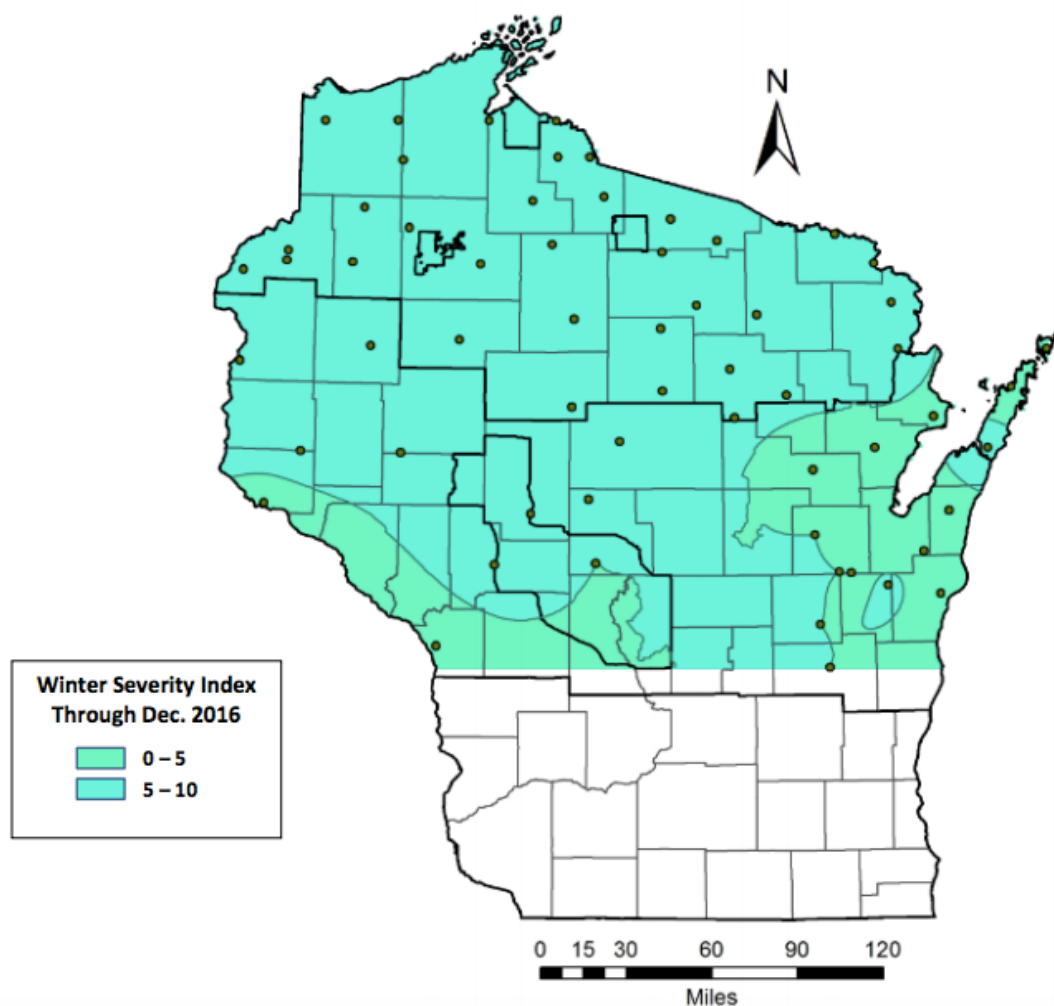
Wisconsin Dept. of Natural Resources



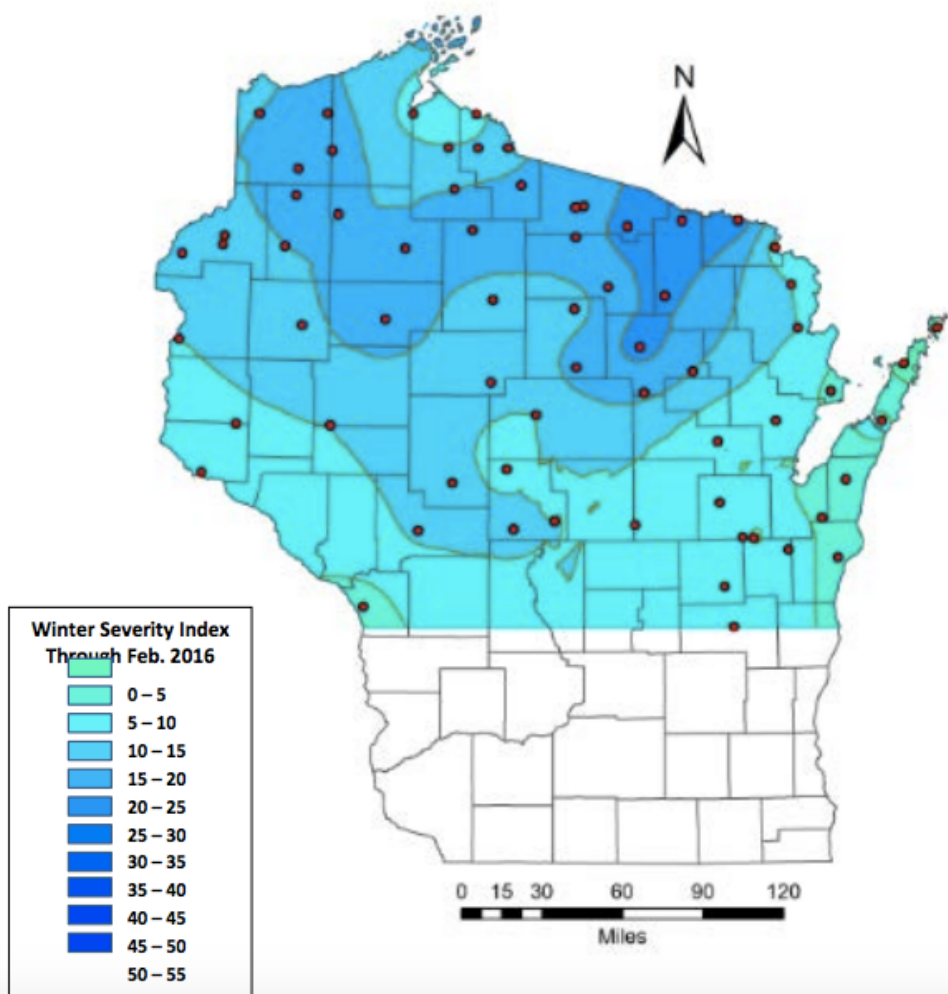
2016 – 2017 Winter Severity Index

STATION	DECEMBER		JANUARY		FEBRUARY		MARCH		APRIL		Total		WSI
	TEMP	SNOW	TEMP	SNOW	TEMP	SNOW	TEMP	SNOW	TEMP	SNOW	TEMP	SNOW	
Alvin	No Report		No Report		No Report		No Report				0	0	0
Antigo	6	0	12	3	6	0	1	0			25	3	28
Barnes	9	0	14	0	5	0	7	0			35	0	35
Barron	7	0	12	0	4	0	0	0			23	0	23
Brule	9	0	13	0	5	0	No Report				27	0	27
Copper Falls SP	No Report		No Report		No Report		No Report				0	0	0
Crandon	9	0	11	6	5	0	4	0			29	6	35
Eagle River	9	0	11	7	6	0	5	0			31	7	38
Escanaba Lake	7	0	13	2	6	0	5	0			31	2	33
Florence East	8	0	10	11	6	0	3	0			27	11	38
Gile	8	0	9	0	4	1	4	0			25	1	26
Gordon	8	0	14	0	5	0	8	0			35	0	35
Grantsburg	7	0	12	0	6	0	3	0			28	0	28
Hayward	8	0	12	0	4	0	5	0			29	0	29
Ladysmith	8	0	15	0	5	0	7	0			35	0	35
Mercer	10	0	12	0	7	0	7	0			36	0	36
Merrill	7	0	11	4	6	0	7	0			31	4	35
Minong	9	0	14	0	5	0	6	0			34	0	34
Park Falls	10	0	15	0	6	0	4	0			35	0	35
Pattison	6	0	10	0	4	0	5	0			25	0	25
Pembine	6	0	9	0	3	0	2	0			20	0	20
Prentice	6	0	11	0	4	0	6	0			27	0	27
Rhinelanders	9	0	12	1	6	0	6	0			33	1	34
Saxon	5	0	8	0	3	0	2	0			18	0	18
Spooner	8	0	12	0	5	0	4	0			29	0	29
Summit Lake	7	0	12	8	6	0	1	0			26	8	34
Tomahawk	7	0	11	0	5	0	7	0			30	0	30
Trout Lake	9	0	12	0	7	0	7	0			35	0	35
Upson	8	0	8	0	3	0	1	0			20	0	20
Wausaukee	7	0	8	0	4	0	1	0			20	0	20
Webster	7	0	10	0	4	0	4	0			25	0	25
White Lake	6	0	12	2	6	0	1	0			25	2	27

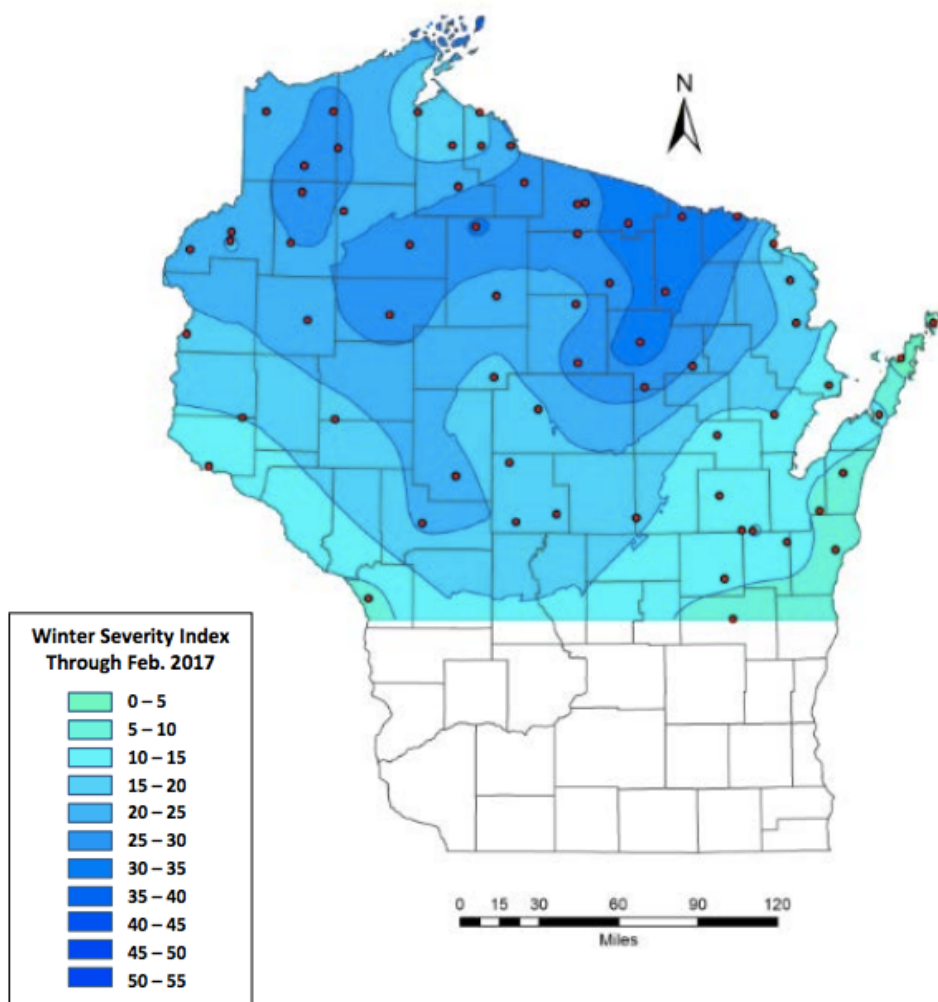
Winter Severity Index - December 2016



Winter Severity Index through January 2017



Winter Severity Index through February 2017



Winter Severity Index through March 2017

