



1/21/2004

Index of Winter Severity for January 1, 2004 Grand Teton National Park

Winter Range	For Winter of 2004 up through			
	Jan 1	Feb 1	Mar 1	Apr 1
<u>Elk</u>				
Buffalo Fork/Spread Creek		-1.7		
Gros Ventre/Blacktail		-1.0		
<u>Bison</u>				
Buffalo Fork/Spread Creek		-3.2		
Gros Ventre/Blacktail		-3.0		

Season Summary

While temperature conditions are milder than average throughout the region, the season's snowpack is well above average. Forage production indices for last summer are at or near the lowest values on record.

About the IWS

The Index of Winter Severity (IWS) is obtained by combining snow water equivalent, critical temperature, and forage availability components to reflect conditions on the winter range. The IWS has a scale from +4 to -4, with +4 representing the mildest conditions and -4 indicating the most severe conditions. The IWS is calculated for each winter range and each species to represent the variation from the norm. It is intended to provide a spatially and temporally standardized indication of climatic conditions on the winter range. The response of individual animals, or groups of animals will vary depending on a variety of factors.

The IWS procedure is described in detail in our report Snowpack Distribution Across Grand Teton National Park, Wyoming. This report, along with daily weather data for the area are available online at <http://nrin.nbio.gov/climate/>.

Snowpack conditions

	Snow Water Equivalent, Inches		
	Avg*		Percent of Average
	Jan 1	Jan 1	
Base Camp pillow	11.2	8.2	137%
Darwin Ranch CLIM	NA	--	--
Elbo Ranch	5.2	--	--
Four Mile Meadow	NM	--	--
Jackson CLIM	2.8	1.9	147%
Moose CLIM	6.3	4.1	154%
Moran snow course	7.0	5.7	123%
Turpin Meadows	NM	--	--

-4.0 Worst Winter 0.0 About Average Winter +4.0 Mildest Winter

Index for elk uses 45% snow variable, 35% temperature variable (0°F) and 20% forage variable.
Index for bison uses 70% snow variable and 30% forage variable.

* 1971-2000 Base Period

NM – not scheduled for measurement

CLIM SWE is estimated from the weather data. The procedure is described in detail in our report
Snowpack Distribution Across Grand Teton National Park, Wyoming.

Note: see <http://www.mt.nrcs.usda.gov/swcs/index.html> or http://www.wcc.nrcs.usda.gov/water/w_data.html for a complete list of snow measurements in the area.

The Index of Winter Severity program is a cooperative effort of the USGS Northern Rocky Mountain Science Center's Greater Yellowstone Initiative and Snowcap Hydrology, Bozeman, MT