



For many years, Freshwater has partnered with the Hennepin County Sheriff's Water Patrol to call ice-out on Lake Minnetonka each spring. They travel in a sheriff's patrol boat to check lake conditions. Ice-out is declared when the boat can navigate through the lake's bays and channels without impediment. With ice leaving, the redhead is one of the first birds to return to Minnesota lakes.

FRESHWATER

There really isn't a best way to determine ice-out on lakes; methods vary from lake to lake so researchers and agencies such as the Department of Natural Resources look for consistency from its citizen observers. This chart shows ice-out statistics for 20 Minnesota lakes from around the state.

Lake Name	County	Median Ice-out	Earliest Ice-out	Latest Ice-out	Yrs of Data
Bemidji	Beltrami	April 26	4/9/2017	5/22/1950	81
Big Sandy	Aitkin	April 21	3/26/2012	5/12/2013	64
Big Stone	Big Stone	April 10	3/16/2016	5/8/2013	66
Clear	Waseca	April 4	3/7/1931	4/29/2018	108
Green	Kandiyohi	April 16	3/20/2012	5/8/2013	88
Gull	Crow Wing	April 21	3/26/2012	5/18/1950	58
Itasca	Clearwater	April 23	3/26/2012	5/18/1950	76
Leech	Cass	April 28	4/2/2012	5/23/1950	82
Lake of the Woods	Lake of the Woods	May 3	4/8/2012	5/21/2014	33
Mille Lacs	Mille Lacs	April 25	3/26/2012	5/16/2013	62
Minnetonka	Hennepin	April 13	3/11/1878	5/5/2018	141
Minnewaska	Pope	April 15	3/21/2016	5/11/2013	112
Osakis	Todd	April 19	3/13/1878	5/14/1950	149
Pepin	Goodhue/Wabasha	March 31	2/19/2000	5/20/1843	93
Rainy	Koochiching	May 4	4/5/2017	5/22/1950	87
Shetek	Murray	April 4	3/8/2000	4/30/2018	51
Tetonka	LeSueur	April 3	3/14/1987	4/29/2018	42
Vermilion	St. Louis	April 30	3/28/2012	5/23/1950	98
Waconia	Carver	April 10	3/7/2017	5/4/2018	68
White Bear	Ramsey	April 13	3/16/2016	5/4/2018	90

Historical lake ice-out median dates and extremes for Minnesota lakes

MARCH PHENOLOGY

Jim Gilbert's Nature Notes

First week of March

Now is the time to tap maple trees. Maple sap flow is triggered by thawing days reaching into the 40s. Be on the lookout for the first migrating flocks of Canada geese returning to the Twin Cities area. These geese move northward at the edge of the 32 degree isotherm. Their travels often come to standstills because of snowfalls and blizzards. We begin looking for the first migrating American robins and male red-winged blackbirds to return but cold temperatures and strong northerly winds can hold them in Iowa for another week.

March 3, 2017: At Somerskogen Sugarbush in Minnetrista they had produced 100 gallons of maple syrup by this date; in years past they didn't start syruping until about the second week in March.

March 7, 2017: Earliest ice-out on record for Lake Waconia.

March 1, 2001: At Leech Lake the snow was two feet deep, ice about 30 inches thick, and yellow perch and tullibees were biting. Close to 45 inches of snow covered the ground at Finland, 30 inches in Roseau, 28 inches in Duluth, and 19 inches in Chanhassen.

Second week of March

It's time to get the wood duck and bluebird nesting boxes up. The first migrant eastern bluebirds have returned, and the first wood ducks usually arrive about March 12. The sunlight is powerful now and we notice snow and ice melting in streets and on rooftops even when the air temperature is well below freezing. Short-tailed weasels are turning from their white winter coats to brown summer ones. Woodchucks that went into hibernation in October are now above ground. Pussy willow twigs could be ready to cut and bring indoors for a touch of spring.

March 11, 1878: Over 140 years ago after the warmest winter on record, the ice was out of Lake Minnetonka, still the earliest ice-out date for this lake on record.

Third week of March

Many flocks of male red-winged blackbirds are arriving and we hear their trilled songs coming from wetland territories. More male American robins are returning; watch for them eating crabapples, buckthorn, and hackberry fruit, and hunting on lawn areas free of snow. March 17 is the average date for the shipping season to begin on the Mississippi River at Saint Paul. This could also be time for some of the best dog sledding and cross-country skiing in northern Minnesota.

March 17, 2018: On this first 50 degree day of the year the sugar maples woke up enough for sap flows to begin.

March 17, 2012: Record high temperature of 80 degrees, the earliest recorded in the Twin Cities. Some golf courses opened, honey bees visited common snowdrop flowers in gardens, ice covers left many southern Minnesota lakes, western chorus frogs called, maple sap flowed, and grasses began greening on south-facing slopes.

Fourth week of March

Pairs of America crows check out nesting sites with nesting materials in their beaks. With much honking and fanfare, pairs of Canada geese claim their wetland nesting territories; you may see them standing on the ice of still frozen-over marshes and ponds. Look for migrating tundra swans in and over southeast Minnesota. This is the time for excellent maple sap runs. Rhubarb and chives poke up in gardens. Most years, ice covers begin to leave southern Minnesota and Wisconsin lakes, while snow lies deep in northern forests.

March 24, 2012: High of 70 degrees, and the eighth time this month the Twin Cities hit 70 degrees or above. Lawn mowing began. Magnolias, forsythia shrubs, and apricot trees all had showy flowers. Snow trillium and bloodroot bloomed in woodlands.

LOOK FOR...



First migrating American robin arrives (Carver County):

2018	March 9
2017	March 15
2016	March 6
2015	March 12
2014	March 19
2013	March 15
2012	March 2
2011	March 16
2010	March 15
2009	March 14



KENT NYE | CARDINAL IN FROSTY TREE | WOODBURY, MN



In like a lion, out like a lamb, or vice versa, March is usually an epic weather whiplash month with seasons clashing! In Minnesota, winter is definitely not over yet but inevitably the sun is getting much stronger. We gain about an hour and a half of daylight and, most importantly, the sun angle increases so we're receiving much stronger sunlight midday. The average temperature really starts to increase through the month, too, with an average high ranging from 34 degrees on March 1 to nearly 50 degrees by the 31st. Of course spring starts around the 20th of March, usually marking the moment the sun's direct rays (90 degrees) cross the equator into the Northern Hemisphere for the first time since September, signaling the eventual change of the seasons.



MPRnews

"Make no big decisions in Minnesota in March."

—Dave Moore, WCCO-TV anchor

Twin Cities news legend and my former WCCO-TV colleague's words still ring true. March can tease us by opening the door to spring a crack with milder air, then slam it shut with brutal cold and snow. March is still the third snowiest month with an

average of 10.3" of snow at MSP Airport. The sun angle by March 21 is equal to late September. That means snow and ice melt much more quickly now. Four state tournaments this month (boys and girls hockey and basketball) mean that the annual "tournament hockey snowstorm" is more than likely.

MY NATURE NOTES

ASTRONOMY

Ron Schmit

Morning sky

Visiting Venus just last month, Mercury has already moved to the morning sky, reaching Greatest Western Elongation on 3/24. It's nearly 28° from the Sun yet difficult to see, as this time of year the ecliptic is low on the horizon. Thus, it is only 8° high at sunrise. Mars will appear just 0.7° from Jupiter on 3/20 and 0.9° from Saturn on 3/31. The Moon will visit this trio on 3/18, passing 1.0° north of Mars, 1.9° north of Jupiter, and 2.2° north of Saturn.

Evening sky

At sunset, Venus sits 40° above the western horizon, moving toward its Greatest Elongation on 3/24 when it will sit 46° east of the Sun. This will be the best time all year to spot it! A thin crescent Moon stops by on 3/27 and 3/28. On 3/9, Venus is $2^\circ 24'$ north of Uranus.

Highlights

A Super Moon occurs when the Full Moon is within 90% of its closest approach to Earth. Since the Moon's orbit is not a perfect circle, its distance from the Earth changes as it orbits. The closest point is called **perigee**. At this point, the Moon will look 14% bigger than at its most distant point: **apogee**. Since the Moon is all by itself in the sky, it may be difficult to notice the difference. A perfectly good reason to go to a thrill. This is the second of four Super Moons in March, April, and May.

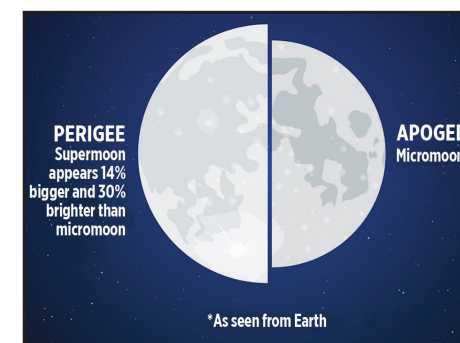
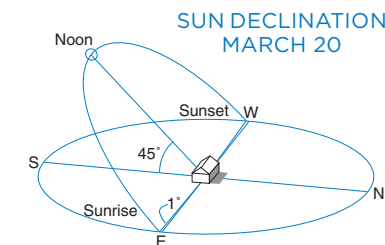


Image: NASA

SPECIES OF THE MONTH

Common merganser (*Mergus merganser*)

Like other diving ducks, mergansers must run across the water to take flight. Their long, thin, serrated bills help them catch small slippery fish and aquatic insects. Common mergansers are found throughout most of North America, while both hooded and red-breasted mergansers have a more limited range but are also numerous in Minnesota. Some common mergansers stay all winter on the open water of Lake Superior and rivers such as the Mississippi that are open in parts. These tree-cavity nesters also nest in rock crevices. They raise their families in northeastern Minnesota but are early spring migrants throughout the state, appearing as rivers and lakes begin losing ice covers.



TRAVIS BONOVSKY | COMMON MERGANSER | MINNEAPOLIS, MN