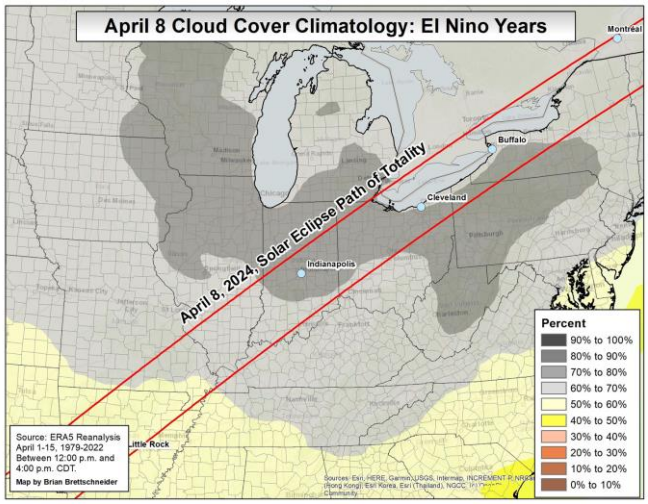
Total Solar Eclipse
April 8, 2024

What is a Solar Eclipse?

A total solar eclipse happens when the Moon passes between the Sun and Earth, completely blocking the face of the sun. The sky will darken as if it were dawn or dusk. This April 8th, a total solar eclipse will cross North America, passing over Mexico, the United States, and Canada. Portions of Ohio and Northwest Pennsylvania will be in "totality" meaning the moon will completely block the visible surface of the sun. Totality will last for just under 4 minutes in Cleveland!



Viewing the Eclipse

The eclipse will span roughly two and a half hours on April 8th, consisting of a partial eclipse for the majority of the time with a four minute window of totality in the middle. Persons wanting to view the eclipse need to wear special eclipse glasses except during the period of totality to avoid damaging their eyes.

Location	Begin Totality	End Totality
Findlay, OH	3:10 PM EDT	3:14 PM EDT
Cleveland, OH	3:13 PM EDT	3:17 PM EDT
Erie, PA	3:16 PM EDT	3:20 PM EDT
Buffalo, NY	3:18 PM EDT	3:22 PM EDT

Climate Information for April 8th

	Akron, OH	Cleveland, OH	Mansfield, OH	Toledo, OH	Youngstown, OH	Erie, PA
Normal High	59°F	57°F	57°F	58°F	57°F	54°F
Warmest High	83°F (2021)	83°F (2021)	81°F (2021)	79°F (2021)	83°F (2021)	87°F (2021)
Coldest High	28°F (1972)	27°F (1972)	30°F (1972)	33°F (1982)	25°F (1972)	26°F (1972)
Highs above 70	11 days	13 days	10 days	12 days	11 days	9 days
Highs below 50	30 days	36 days	31 days	29 days	39 days	62 days
Normal Low	37°F	38°F	36°F	38°F	35°F	35°F
Years with measurable precipitation	51%	47%	46%	46%	45%	49%
Wettest	0.85" (1980)	0.86" (1995)	1.48" (2015)	0.99" (1991)	1.05" (2000)	1.14" (1938)
Snowiest	2.7" (1985)	5.3" (1957)	2.1" (1974)	6.5" (1957)	4.7" (1957)	7.5" (1957)

Total Solar Eclipse FAQs
April 8, 2024

What can people expect during the eclipse?
During the eclipse, the sky will get dark as if it were dawn or dusk. Even if skies are cloudy, people will still notice a darkening of the sky. Nocturnal wildlife may awaken while non-nocturnal wildlife may think it's time for bed.

Historically, what are my chances of seeing the eclipse?
The chart to the right shows the distribution of historical cloud cover for April 8th in Cleveland between 1 PM and 5 PM. Visit our eclipse web page to view sky cover for other locations.

What safety precautions should be taken to view the eclipse?
When watching the partial phases of the solar eclipse, which happens before and after totality, you must look through safe solar viewing glasses ("eclipse glasses") or a safe handheld solar viewer.

It is not safe to look at the partially eclipsed sun through a camera lens, telescope, binoculars, sunglasses, or any other optical device ***even*** while wearing eclipse glasses, as the concentrated solar rays will burn through the filter and cause serious eye injury. **Only** during the brief total phase of a total solar eclipse, when the Moon completely blocks the Sun's bright face, is it safe to view without specialized eye protection.

What effects might the eclipse have on the weather?
Research has shown that temperatures can drop between 4-10 degrees Fahrenheit during the eclipse. In addition, some reduction in wind speed and low level clouds are possible.

How might Lake Erie impact the weather conditions on the day of the event?
Proximity to Lake Erie can have an effect on the weather depending on the weather patterns on the expected day. During the spring, Lake Erie tends to warm slower than the surrounding land areas. On a warm spring day, a phenomena called a **lake shadow** can sometimes develop downwind of Lake Erie. This feature allows for cooler temperatures and lower amounts of cloud cover near the lakeshore. On a cold spring day, higher amounts of **lake effect** clouds or precipitation could occur near Lake Erie.

When was the last total eclipse in Ohio or Pennsylvania?
Portions of northern Pennsylvania experienced a total eclipse on January 24, 1925. The last time Ohio experienced a total eclipse was June 16, 1806.

When will the next total solar eclipse occur in the contiguous United States?
The next total solar eclipse will occur on August 23, 2044 but will only be visible in Montana, North Dakota, and South Dakota. Another total eclipse will occur on August 12, 2045 and impact areas from northern California to Florida.