



U.S. National Ice Center
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PRESS RELEASE

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U.S National Ice Center Observes 2017 Arctic Sea Ice Minimum and Ice New Year!

October 05, 2017 SUITLAND, MD —U.S. National Ice Center (USNIC) determined the 2017 Arctic sea ice extent minimum, shown in Figure 1, was reached on September 10th, 2017.

The Interactive Multi-Sensor Snow and Ice Mapping System (IMS) desk used a threshold of 40% ice coverage at 4km resolution in its trend analysis. This year's analysis indicated a minimum 3-day average of 4.625 million square kilometers recorded on September 9th through September 11th.

USNIC uses this 3-day running mean to calculate ice extent, a method used to reduce subjectivity and variability in the determination of ice extent while providing a clear trend line.

This year's minimum is the eighth lowest recorded since the 4km analysis began in 2004, and is approximately 433,000 square kilometers more than last year (4.192M).

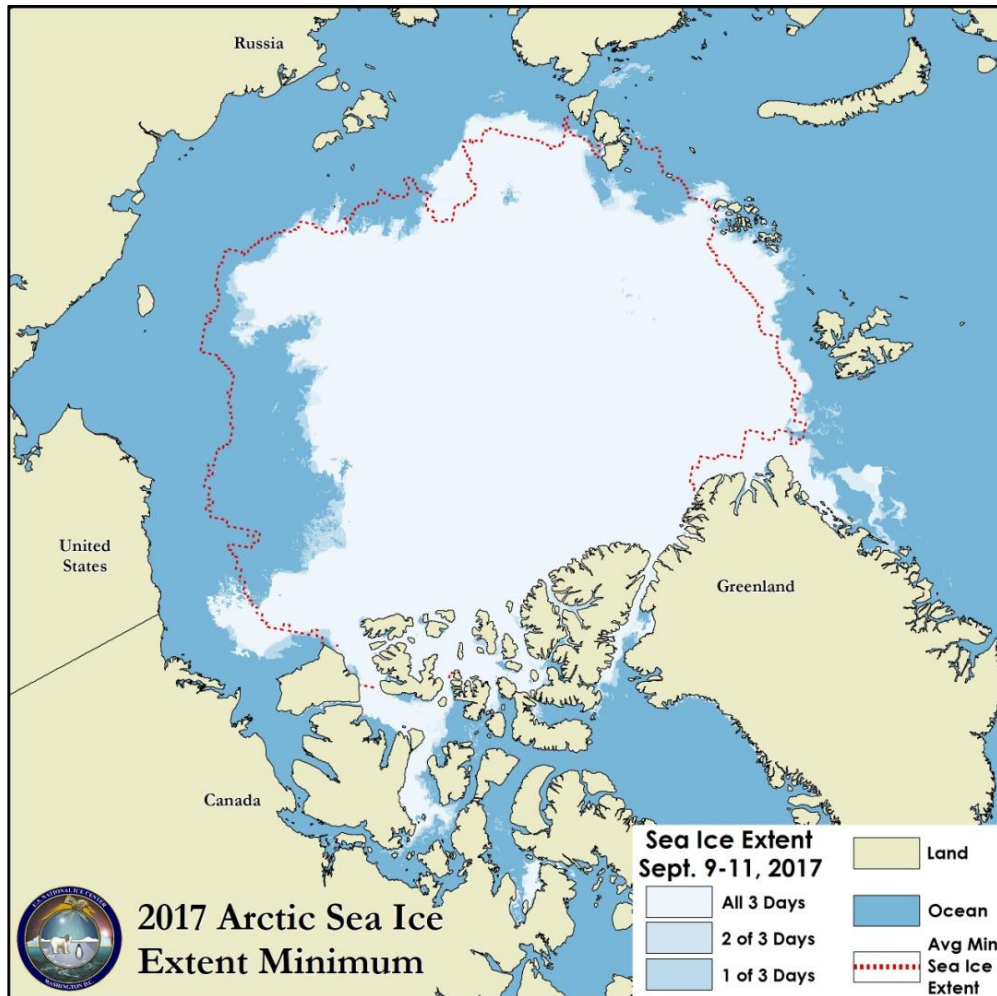


Figure 1: Transparency indicates areas that were ice free one or two of the three days used in the ice minimum calculation. The dashed red line shows the climatological minimum sea ice extent, courtesy of NSIDC (minimum 1972-2007), which was derived from USNIC’s weekly or biweekly operational ice charts.

In comparison to USNIC, the National Snow and Ice Data Center (NSIDC) in Boulder, Colorado also reported sea ice extent in their September 19, Arctic Sea Ice News and Analysis report at <https://nsidc.org/arcticseaicenews/>. NSIDC calculates sea ice extent using passive microwave data and reported 2017 sea ice minimum occurred on September 13th with an Arctic sea ice extent of 4.64 million square kilometers.

USNIC Ice Analysts distinguish various ice types using a combination of visible and infrared satellite imagery and space-based synthetic aperture radar to analyze the daily ice edge, produce weekly hemispheric ice concentrations, stage of development analyses, and tailored products for operating units.

The first week of October traditionally marks “the old from the new” in Arctic sea ice. The determination of the annual Arctic sea ice minimum marks the end of the summer melt. This year’s minimum occurred 7 days before the IMS 10-year average minimum date of September 17th. All first year ice that survived the summer melt is declared “multi-year” ice and hence the Ice New Year as shown in Figure 2.

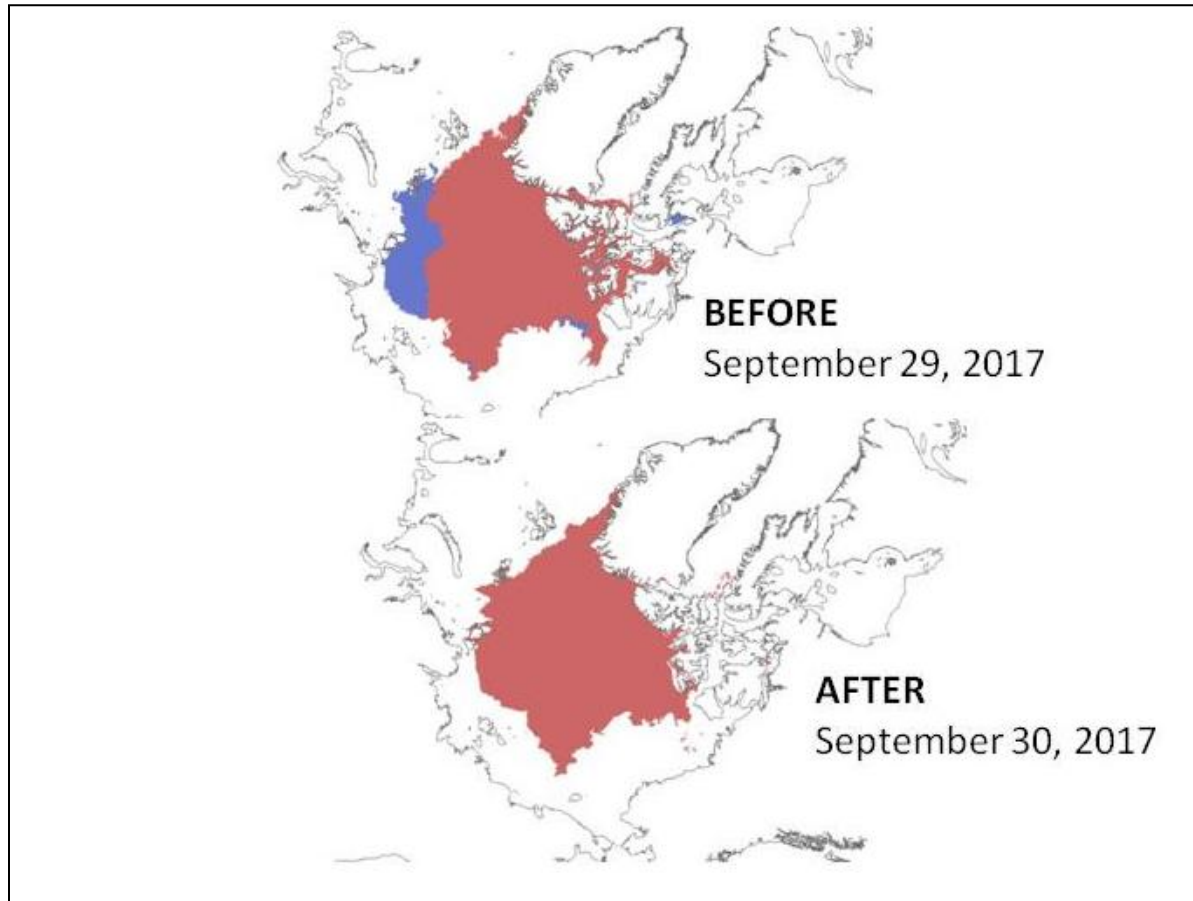


Figure 2. Representation of Multi-Year (red) and First year (blue) Ice on the National Ice Center Weekly Ice Analysis Product from before (above) and after (below) the Ice New Year.

For more information, please contact:

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The U.S. National Ice Center is a multi-agency center operated by the Navy, NOAA, and Coast Guard and provides global to tactical scale ice and snow products, ice forecasting, and related environmental intelligence services for the United States government.

