

NATIONAL WEATHER SERVICE INSTRUCTION 10-1201

NOVEMBER 7, 2023

Operations and Services

Drought Services, NWSPD 10-12

WFO/WSO DROUGHT PRODUCTS SPECIFICATION

NOTICE: This publication is available at: <http://www.nws.noaa.gov/directives/>.

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Type of Issuance: Routine

SUMMARY OF REVISIONS: This directive supersedes NWSI 10-1201, “*WFO Drought Products Specification*”, dated November 2, 2019.

This instruction has been updated for the following:

1. Updated future dates of Sample Drought Information Statement (Appendix B).
2. Added “Weather Service Office (WSO)” whenever “Weather Forecast Office (WFO)” is mentioned, to acknowledge that WSO Pago Pago can issue Drought Information Statements.

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WMO Drought Products Specification

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1 Introduction

This instruction describes issuance criteria, content and format of drought products provided by Weather Forecast Offices (WFOs) and Weather Service Offices (WSOs) in the National Oceanic and Atmospheric Administration’s (NOAA’s) National Weather Service (NWS). All WFO drought products issued through NWS-supported dissemination systems follow certain identification and dissemination standards. Basic standards for text products, including those for World Meteorological Organization (WMO) headers, Advanced Weather Interactive Processing System (AWIPS) identifiers, Universal Geographic Codes (UGCs), Mass News Dissemination (MND) header blocks and product content are contained in *NWSI 10-1701, Text Product Formats and Codes* (<https://www.nws.noaa.gov/directives/sym/pd01017001curr.pdf>). Specific standards for UGCs are contained in *NWSI 10-1702, Universal Geographic Code (UGC)* (<https://www.nws.noaa.gov/directives/sym/pd01017002curr.pdf>).

2 Drought Information Statement (DGT)

Drought information statements provide up-to-date reports on current drought situations in a WFO/WSO county warning and forecast area.

2.1 Mission Connection

Drought information statements help the NWS meet its mission by:

1. Providing a summary of current drought severity, indices, data, impacts, forecasts, and products, and
2. Providing pertinent information to partners and other users, thereby enhancing their ability to focus drought mitigation efforts on areas of greatest need.

As a result, drought information statements help protect property and support the national economy.

2.2 Issuance Guidelines

2.2.1 Creation Software

Drought information statements are generated using a text editor or other applications as appropriate (e.g., Graphical Forecast Editor (GFE), AWIPS text workstation). Drought information statements will use mixed-case lettering, unless otherwise stated (e.g., for section headings).

2.2.2 Issuance Criteria

Drought intensity, as indicated by the U.S. Drought Monitor (<http://droughtmonitor.unl.edu>), is the primary criterion used in determining when an initial drought information statement is issued. An initial drought information statement will be issued when the U.S. Drought Monitor indicates a drought intensity at the D3 level or greater in any portion of the WFO/WSO county warning and forecast area. An initial drought information statement should be issued when the U.S. Drought Monitor indicates a drought intensity at the D1 or D2 level and/or if local drought impacts have been reported.

Alternate criteria for issuance of initial drought information statements may be specified in regional supplements.

WFOs/WSOs will routinely check the weekly U.S. Drought Monitor to assess drought conditions in the county warning and forecast area. The U.S. Drought Monitor depiction of drought intensity represents a consensus of drought indicators (e.g., precipitation, streamflow, groundwater, soil moisture) as defined by prescribed percentile ranges (D4: 0-2 percentile, etc.). WFOs/WSOs are encouraged to provide input to the U.S. Drought Monitor (see Appendix A).

Once an initial drought information statement has been issued, follow-up drought information statements will be issued at least once a month. More frequent issuance of the drought information statement will be issued under the following circumstances:

1. When drought conditions change, or
2. When a local or regional criterion warrants an update.

2.2.3 Issuance Time

Drought information statements are non-scheduled, event-driven products. Consideration should be given to the operational schedules and related needs of NWS partners and other users in determining the issuance time for a particular product.

2.2.4 Valid Time

A drought information statement will be valid until the time/date specified in the product UGC. If the product is not the last one in a sequence for a drought, the date/time for the next scheduled update will be provided at the end of the product.

2.2.5 Product Expiration Time

The product expiration time (at the end of the UGC) may be as long as 31 days after product issuance.

2.3 Technical Description

2.3.1 UGC Type

County codes will be used, except Zone codes will be used for Alaska and parts of Pacific Region.

2.3.2 MND Product Type Line

“DROUGHT INFORMATION STATEMENT”.

2.3.3 Content

Drought information statements will be consistent with the U.S. Drought Monitor. The drought information statement uses a free-form, paragraph format. Supporting tables may be provided where needed. The drought information statement will include the following in the product header blocks in ALL CAPS, as shown in Figure 1:

1. WMO heading, AWIPS identifier, and UGC line, and
2. MND product type line, issuing office line, and issuance date/type line.

The main body of a drought information statement will include the following sections:

1. **Headline** – A single sentence worded to attract the reader’s attention and accurately summarize the current drought situation. The headline will start and end with three dots (ellipses) and will use ALL CAPS.
2. **Synopsis** – A concise description of the current drought situation. This section starts with “.SYNOPSIS:” and will include:
 - a. “Drought intensity and extent:” sub-section, detailing the U.S. Drought Monitor intensity(ies) and extent within the county warning and forecast area.
 - b. A description of the current state of the drought from a climate perspective, including: recent precipitation and temperature, comparisons

of precipitation to long-term averages and comparisons to all-time records. Other hydrometeorological data (e.g., evaporation, winds, dew points) may be included where relevant and/or available. Sub-section headings for “.Precipitation:” and “.Temperature:” may be included when the description extends beyond two sentences.

- c. “Hydrologic conditions:” sub-section, detailing the following hydrologic variables, where relevant and/or available: reservoir storage, streamflow, lake levels, groundwater and soil moisture.
3. Summary of impacts – One or more concise paragraphs describing reported drought impacts within the county warning and forecast area. The section starts with “.SUMMARY OF IMPACTS:”. Where relevant, paragraphs describing drought impacts to a specific sector or type of stakeholder will be preceded by sub-section headings (e.g., “.Agricultural impacts:”). Drought impact descriptions may include:
 - a. Agricultural impacts.
 - b. Hydrologic impacts (e.g., water supply, groundwater).
 - c. Fire hazards.
 - d. Other impacts (e.g., navigation, environmental).
 4. Summary of reported state and local drought mitigation actions (e.g., water restrictions). The section starts with “.DROUGHT MITIGATION ACTIONS:”. If no actions have been reported, this should be stated as “None reported”.
 5. A discussion of weather, climate and hydrologic outlooks for the county warning and forecast area. The section starts with “.LOCAL DROUGHT OUTLOOK:”. This section may include the following:
 - a. Summary of expected weather for the next 7 days, including the chances for precipitation and expected temperatures, highlighting current/future events involving significant departures from average (e.g., heat waves).
 - b. Information of local interest contained in the Climate Prediction Center’s (CPC) extended range forecasts, as well as monthly and seasonal climate and drought outlooks.
 - c. Where relevant and/or available, the hydrologic forecast trends for the next 3 to 7 days and extended outlooks.
 6. Next Issuance Date – The anticipated date for issuance of the next drought information statement. The section starts with “.NEXT ISSUANCE DATE:”. The next issuance could occur either in one month or prior to one month, as per Section 2.2.2. If the drought has ended and no further statements are planned at the current time, this should be stated here.
 7. Related Websites – A section providing links to websites where drought-related information from other sources can be found. The section starts with “.RELATED WEBSITES:”. These websites may include one or more of the following: the U.S. Drought Monitor, partner agency webpages at the state or federal government level (e.g., U.S. Dept. of Agriculture (USDA), U.S. Bureau of Reclamation (USBR), U.S. Army Corps of Engineers (USACE), the Office of Water Prediction (OWP) webpage, the NWS

Advanced Hydrologic Prediction Service (AHPS) webpage, the National Integrated Drought Information System (NIDIS) drought portal (drought.gov), and the NWS’s weather.gov webpage). A link may also be provided to a drought website developed by the local WFO/WSO or NWS regional headquarters. Related websites may be separated thematically into sub-sections.

8. Acknowledgements – List all local, state and Federal agencies that provided information used in the drought information statement. The section starts with “.ACKNOWLEDGEMENTS:”.
9. Contact information – The WFO/WSO name, WFO/WSO address, telephone, and email address. The section starts with “.CONTACT INFORMATION:”.

2.3.4 Format

The generic format for the drought information statement is shown in Figure 1.

2.4 Updates, Amendments, and Corrections

Provide updates by issuing a new product. Amendments are not applicable to this product. Follow standard NWS practices for corrections.

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AXA1A27i cccc ddhmm (BBB) DGTxxx
stC001-003-ddhmm-

DROUGHT INFORMATION STATEMENT
NATIONAL WEATHER SERVICE <city, state>
hhmm am/pm time—zone day mon dd yyyy

...<HEADLINE>...

.SYNOPSIS:

<text>

.SUMMARY OF IMPACTS:

<text>

.DROUGHT MITIGATION ACTIONS:

<text>

.LOCAL DROUGHT OUTLOOK:

<text>

.NEXT ISSUANCE DATE:

<text>

.RELATED WEBSITES:

<text>

.ACKNOWLEDGEMENTS:

<text>

.CONTACT INFORMATION:

<text>

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Figure 1. Generic format for a drought information statement (DGT).

APPENDIX A - Recommended Best Practices for WFOs/WSOs

- Issue drought information statements in a timely manner coincident with, or shortly after, the weekly U.S. Drought Monitor. Use drought intensity categories and language consistent with the U.S. Drought Monitor.
- Develop a drought plan for the office and make it part of the station duty manual. Create a local drought team and/or appoint a focal point for drought.
- When conditions warrant, use the contents of drought information statements to develop a press release addressing local drought impacts.
- Identify and work closely with local, state and federal agencies concerned with drought impacts by delivering timely information and forecasts.
- Attend or hold meetings with local, state and federal drought task forces and offer help in the form of information regarding drought impacts and forecasts.
- Develop a drought web page for the WFO/WSO area with pertinent information. Where possible, integrate local drought information into regional and/or national webpages.
- Work closely with surrounding WFOs/WSOs (and/or WFOs/WSOs within the same state) to use consistent language and messaging on drought. Where relatively small areas of drought involve multiple WFOs/WSOs, those WFOs/WSOs should work together to issue one drought information statement.
- Prepare situation reports (e.g., a hard copy or web-based newsletter with graphics).
- Use social media to broadcast shortened versions of drought products (see NWSI 10-1704).
- Join the U.S. Drought Monitor mailing list. It is a great tool to understand what others across the nation are doing to depict drought in your local area. It is also very useful to provide input to the authors of the U.S. Drought Monitor. For more information, contact: DroughtMonitor@unl.edu.

APPENDIX B - Sample Drought Information Statement

AXUS73 KARX 280921

DGTARX

IAC005-037-043-065-067-089-131-191-MNC039-045-055-099-109-157-169-WIC001-011-019-023-043-053-057-063-081-103-119-121-123-280900-

DROUGHT INFORMATION STATEMENT

NATIONAL WEATHER SERVICE LA CROSSE WI

421 AM CDT FRI OCT 26 2029

...DROUGHT PERSISTS IN PARTS OF THE AREA...

.SYNOPSIS:

.Drought intensity and extent:

According to the October 25th release of the U.S. Drought Monitor, moderate (D1) drought persists across parts of Grant County in southwest Wisconsin and Clayton County in northeast Iowa. Abnormally dry conditions (D0) persist across north central, central and southwest Wisconsin, and northeast Iowa. Abnormally dry (D0) conditions exist across Clark and Taylor Counties in north central Wisconsin, Adams and Juneau Counties in central Wisconsin, Crawford, Richland and Vernon Counties in southwest Wisconsin, and Allamakee, Chickasaw, Fayette, Floyd and Winneshiek Counties in northeast Iowa.

.Precipitation:

Precipitation deficits have increased across the area. From October 11th through October 25th, less than a quarter inch of precipitation fell across much of the area. The greatest precipitation amount was three tenths of an inch at the National Weather Service Forecast Office in La Crosse Wisconsin. Normally nine tenths of an inch of precipitation falls during this period.

.Hydrologic conditions:

With below normal precipitation during the past two weeks, river flows have decreased across the region. When compared with climatology, the lowest flows were reported along the Black and Wisconsin Rivers in western Wisconsin, and Bloody Run Creek and Little Cedar River in northeast Iowa.

As of October 21st, the Midwestern Regional Climate Center (MRCC) indicated soil moisture deficits up to two and a half inches across portions of southern Wisconsin, northern Illinois and northeast and southern Iowa.

Just west of Tomah Wisconsin, the current well water level is 6.97 feet below ground level as of 7 AM on October 20th. Normally, the water level should be 4.95 feet below ground level.

.SUMMARY OF IMPACTS:

.Agricultural impacts:

Recent dry weather has caused some deterioration in top and sub-soil moisture conditions. In Grant County, the soybean crop was smaller than expected.

.Fire hazards:

As of October 25th, the Department of Natural Resources reported moderate fire danger across southwest Wisconsin and low fire danger across central Wisconsin and southeast Minnesota.

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.DROUGHT MITIGATION ACTIONS:

None reported.

.LOCAL DROUGHT OUTLOOK:

From October 27th through November 2nd, temperatures will average at or above normal and precipitation will be below normal. During this time frame, the daily average temperature is normally 45 degrees and the normal precipitation is just under a half inch.

The Climate Prediction Center's (CPC) 8-14 day forecast, for the period November 3rd to November 9th, calls for above normal temperatures and below normal precipitation. During this period, the daily average temperature is around 40 degrees and the normal precipitation is just over a half inch.

The monthly and seasonal drought outlooks call for drought persistence in the local area. Both the one-month and three-month climate outlooks call for equal chance for below, above and near normal temperature and precipitation.

.NEXT ISSUANCE DATE:

This product will be updated on Friday November 2, or sooner if drought conditions change significantly.

.RELATED WEBSITES:

Additional information on current drought conditions may be found at the following web addresses:

U.S. Drought Monitor: <https://www.droughtmonitor.unl.edu/>

U.S. Drought Portal: <https://drought.gov/>

Climate Prediction Center (CPC): <https://www.cpc.ncep.noaa.gov/>

Midwestern Regional Climate Center: <https://mrcc.purdue.edu/>

Wisconsin State Climatology Office: <https://www.aos.wisc.edu/~sco/>

Minnesota Climatology Working Group: <https://climate.umn.edu/>

Iowa Climatology Bureau: <https://www.iowaagriculture.gov/climatology.asp>

Additional water and river information:

NWS: <https://water.weather.gov/>

OWP: <https://water.noaa.gov/>

U.S. Geologic Survey (USGS): <https://water.usgs.gov/>

U.S. Army Corps of Engineers (USACE): <https://www.mvr.usace.army.mil/>

.ACKNOWLEDGEMENTS:

The U.S. Drought Monitor is a multi-agency effort involving NOAA's National Weather Service and National Centers for Environmental Information, the U.S. Department of Agriculture (USDA), state and regional climatologists, and the National Drought Mitigation Center. Information for this statement was gathered from NWS and Federal Aviation Administration (FAA) observation sites, state cooperative extension services, USACE and USGS.

.CONTACT INFORMATION:

Should you have any questions or comments about this drought statement, please contact:

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