Drought Incident Annex

Incident Annex Approval and Implementation

Wisconsin Emergency Management has coordinated an update of this incident specific annex. This annex will be reviewed periodically in accordance with the timeline outlined in the state's Integrated Preparedness Plan.

DocuSigned by:
Greg Engle
C25970AA863F435...

Greg Engle, Administrator
Wisconsin Emergency Management

Date: 12/17/2024 | 2:17 PM CST

This incident annex is hereby adopted as written and supersedes all previous versions.

Signed by:
Brig Gen David May
8FBC546B20CF4AA...

DAVID W. MAY, Brigadier General
Interim Adjutant General of Wisconsin

Date: 1/14/2025 | 1:28 PM CST

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Wisconsin Governmental Support Agencies	Department of Administration (DOA) Department of Agriculture, Trade and Consumer Protection (DATCP) Department of Health Services (WI DHS) Department of Natural Resources (DNR) Department of Transportation (WisDOT) Public Service Commission (PSC) Wisconsin State Climatology Office
Federal ESF Coordinating Agencies	Drought Monitor Project National Drought Mitigation Center National Oceanic and Atmospheric Administration (NOAA) National Weather Service (NWS) U.S. Army Corps of Engineers (USACE) U.S. Coast Guard (USCG) U.S. Department of Agriculture (USDA) U.S. Department of Commerce (US DOC) U.S. Department of the Interior (DOI)

1. Introduction

1.1. Purpose

1.1.1. Wisconsin is subject to droughts, which can cause severe, even catastrophic, damage. A prolonged or extreme drought can impact:

1.1.1.1 Wisconsin's economy by reducing industrial, commercial, and agricultural productivity.

1.1.1.2 Quality of life by the direct effects of reduction of available water resources and by the indirect effects of loss of jobs, livestock, and crops.

1.1.2. This annex:

1.1.2.1 Outlines state agency roles and responsibilities related to drought response

1.1.2.2 Proposes state agency actions that can minimize environmental damage, economic losses, domestic hardships, and other drought related impacts on the state.

1.1.2.3 Describes the method state agencies use to coordinate with one another during drought responses

1.2. Scope

A drought can be described as a prolonged period of abnormally dry weather where diminished precipitation causes serious hydrologic imbalance. Drought severity depends on the degree and

duration of precipitation deficiency and the size of the affected area. A drought is a progressive and potentially unrecognized incident until it has reached a moderate to severe level. This annex:

1.2.1. Identifies indices of drought conditions and classifies drought levels.

1.2.2. Defines trigger points for activating this annex based upon the severity of drought conditions impacting the state of Wisconsin.

1.2.3. There are four main types of droughts:

1.2.3.1 Agricultural Drought

(1) Results in serious soil moisture deficiency.

(2) May reduce water availability and quality of agricultural products and goods.

(3) Potential to contribute to insect outbreaks.

(4) Increases wildfire potential and further agricultural damages

1.2.3.2 Hydrological

(1) Results in abnormally low flows in streams and lower water levels in lakes and wetlands.

(2) May influence landscape-level ecosystem transitions (conversion of woodland to more open grassland, for example)

(3) Warmer temperatures which often accompany drought conditions increase aquatic algal growth and impact water quality (decreasing dissolved oxygen which can lead to fish kills).

1.2.3.3 Meteorological

(1) Recognized when accumulated precipitation is well below what is considered normal for the region or season

1.2.3.4 Socioeconomic

(1) Results in shortage of water supply and decreased water quality that would affect human health and safety

(2) Impacts to water-based transportation such as shipping of goods and products leading to supply-chain interruptions and higher costs for shipping.

(3) Increases to wildfire potential endangering communities, structures, landscapes (such as agricultural production), and more.

2. Planning Assumptions

2.1.1. A drought can occur at any location and may be difficult to recognize in its early stages.

2.1.2. Effective drought response depends on early drought recognition through observation and reporting of local conditions across the state.

2.1.3. State-level response to a drought incident will be consistent with the National Incident Management System (NIMS) and the Wisconsin Emergency Response Plan (WERP).

2.1.4. Drought conditions cause many adverse effects on the state including, but not limited to:

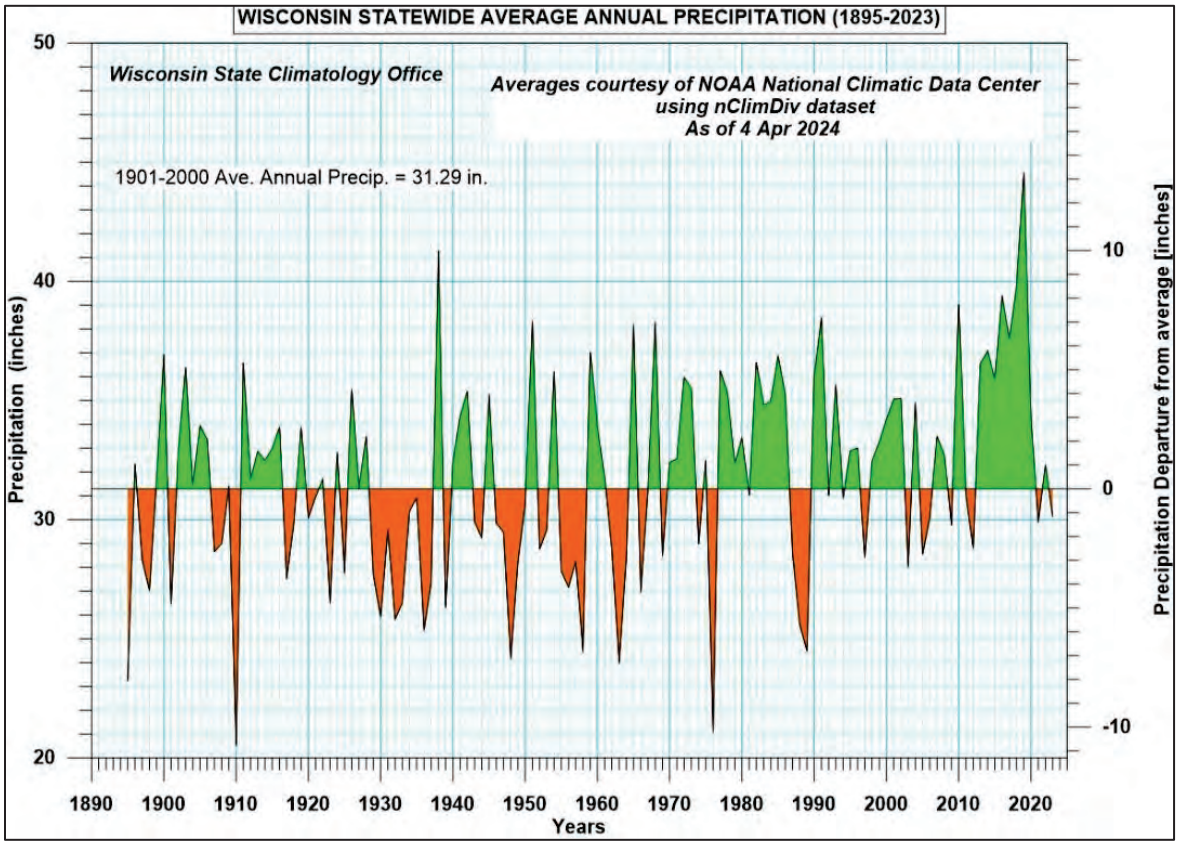
- 2.1.4.1 Agriculture, agriculture-based business, recreation, and the tourist industry
- 2.1.4.2 Upward pressure on retail food prices due to shortages of crops, dairy products, meat, and other foodstuffs
- 2.1.4.3 Agricultural crop loss, lack of grazing opportunities, etc.
- 2.1.4.4 Increased possibility of rapidly spreading wildland fires due to reduced soil and vegetation moisture levels
- 2.1.4.5 Water shortages that may result in voluntary or mandatory limitations on water use
- 2.1.4.6 Reduced availability of drinking water
- 2.1.4.7 Reductions in river, lake, and stream levels and flows causing harm to water-dependent natural resources and public interests/uses.
- 2.1.4.8 Increased probability of hot weather

3. Situation Overview

3.1. Historical Analysis

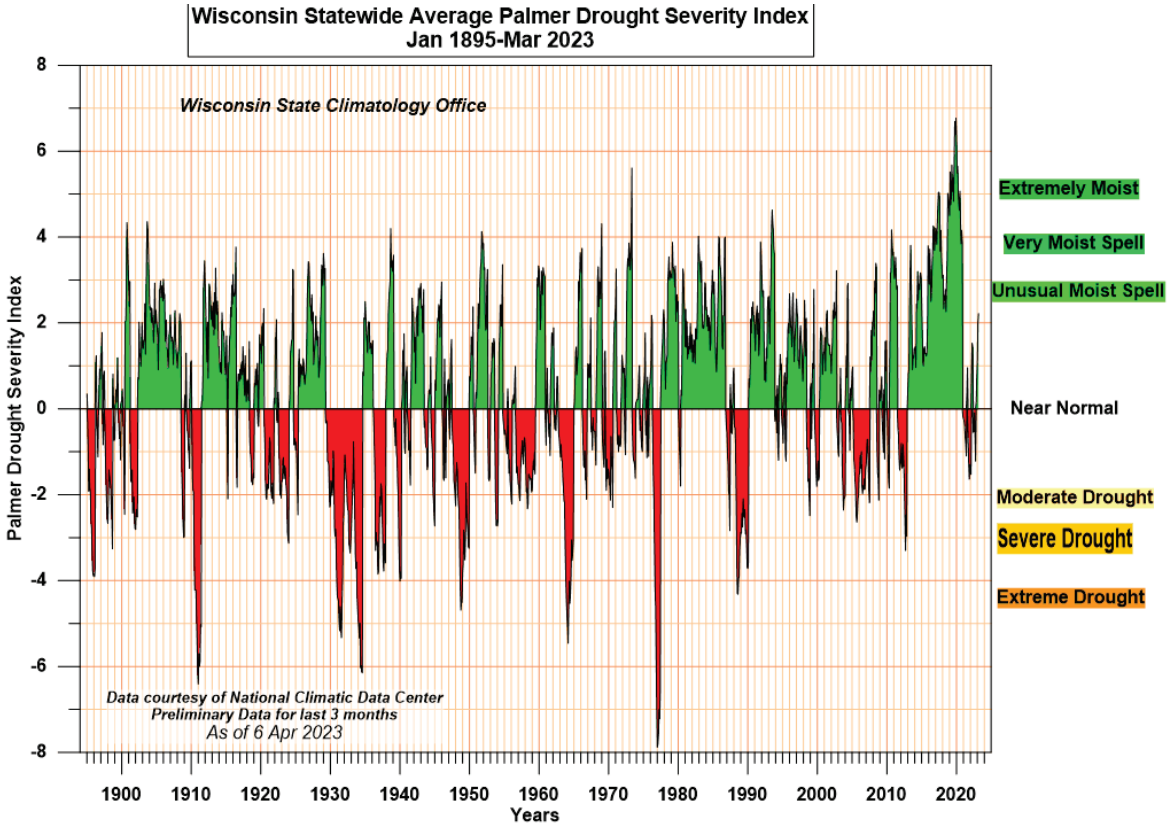
3.1.1. The following graphs depict statewide average annual precipitation (Figure 2-1) and monthly drought severity (Figure 2-2) from 1895 to 2023. Green areas on the graph identify times with above average precipitation and lower drought severity and red areas identify times with below average precipitation and higher drought severity.

Figure 3-1: Wisconsin Statewide Average Annual Precipitation (1895-2022)



Source: Wisconsin State Climatology Office

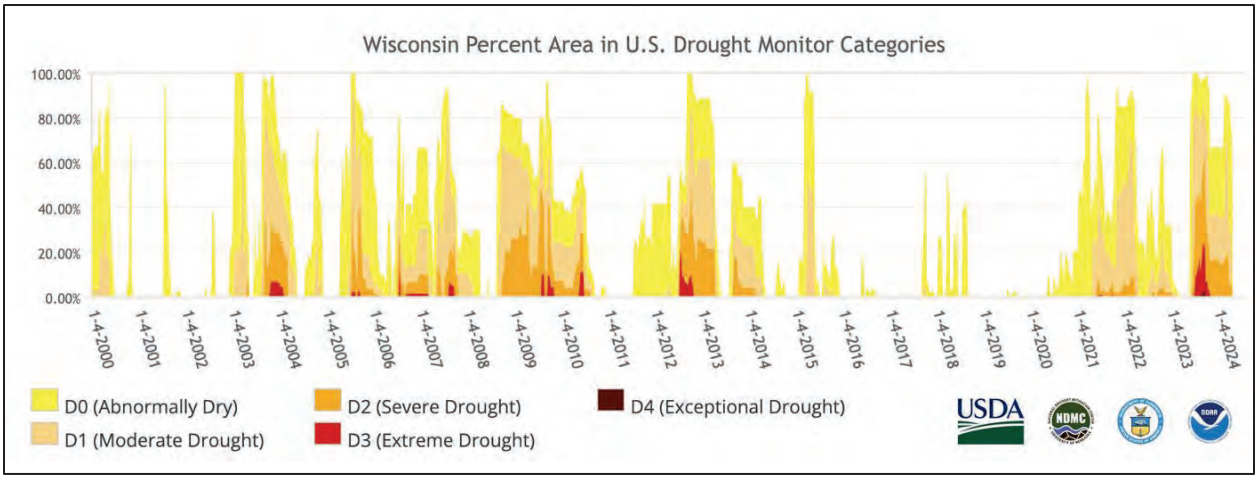
Figure 3-2: Wisconsin Statewide Average Palmer Drought Severity Index (1895-2023)



Source: Wisconsin State Climatology Office

3.1.2. The following graph (Figure 2-3) depicts the drought severity coverage index for Wisconsin between the 2000 and 2024.

Figure 3-3: Percent Area of Drought Monitor Categories for Wisconsin (2000-2024)



Source: Wisconsin State Climatology Office

3.2. U.S. Drought Monitor Classification Scheme

The U.S. Drought Monitor is produced through a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. The Drought Monitor map, which contains five categories based upon physical indicators and judgement from local experts, is released weekly and shows the location and intensity of the drought across the nation. Wisconsin utilizes the Drought Monitor Classification system to identify the potential need for various response measures. The U.S. Drought Monitor uses the following Drought Severity Classification:

:

3.2.1. Category D0

3.2.1.1 Description: Abnormally Dry

3.2.1.2 Possible Impacts:

(1) Going into a drought

(A) Short-term dryness slowing planting, growth of crops or pastures

(2) Coming out of a drought

(A) Some lingering water deficits

(B) Pastures or crops not fully recovered

3.2.2. Category D1

3.2.2.1 Description: Moderate Drought

3.2.2.2 Possible Impacts:

(1) Some damage to crops, pastures

(2) Streams, reservoirs, or wells low, some water shortages developing or imminent

(3) Voluntary water use restrictions requested

3.2.3. Category D2

3.2.3.1 Description: Severe Drought

3.2.3.2 Possible Impacts:

(1) Crop or pasture losses likely

(2) Water shortages common

(3) Water restrictions imposed

3.2.4. Category D3

3.2.4.1 Description: Extreme Drought

3.2.4.2 Possible Impacts:

(1) Major crop or pasture losses

(2) Widespread water shortages or restrictions

3.2.5. Category D4

3.2.5.1 Description: Exceptional Drought

3.2.5.2 Possible Impacts:

(1) Exceptional and widespread crop or pasture losses

(2) Shortages of water in reservoirs, streams, and wells creating water emergencies

3.2.5.3 Additional Drought Severity Classification information is included in Attachment 1.

4. Concept of Operations

State-level response to a drought incident will be consistent with the National Incident Management System (NIMS) and the Wisconsin Emergency Response Plan (WERP).

4.1. Mobilization Triggers

This non-inclusive list demonstrates some of the triggers for activating this annex:

4.1.1. The governor, individually or in consultation with the adjutant general and WEM Administrator, determines that conditions in the state warrant activation.

4.1.2. WEM, in consultation with the National Weather Service or State Climatology Office, determines that more than 50% of the state is in Category D1 (Moderate Drought) condition.

4.1.3. WEM, in consultation with the National Weather Service or State Climatology Office, determines that more than 25% of the state is in a Category D2 (Severe Drought), or any portion of the state is in Category D3 (Extreme Drought), or Category D4 (Exceptional Drought) condition.

4.2. Drought Taskforce

4.2.1. Purpose: The Drought Taskforce is a group of state agency representatives who meet to assess the severity of a drought, coordinate response activities, and share information to enable effective response to drought conditions.

4.2.2. Activation

Activation of the Drought Taskforce may occur in response to, or in anticipation of, drought conditions that may necessitate state support or assistance.

4.2.3. Notification

WEM will establish a virtual or in-person meeting of the Drought Taskforce by inviting staff from each agency listed below to participate. If the situation warrants, WEM may also send a RAVE alert to the agencies listed below requesting their participation in the meeting.

4.2.4. Composition

The taskforce is anticipated to include, but is not limited to, representatives from:

- The Governor's Office
- WI DHS
- DNR
- DATCP
- WisDOT
- DMA
- WEM
- PSC
- DOA
- Wisconsin State Climatology Office
- National Weather Service
- Other organizations may be invited as necessary

4.2.5. Task Force Structure:

4.2.5.1 The Department of Military Affairs serves as the lead coordinating agency for the Drought Task Force. DMA will establish a meeting schedule, invite participants, collect information and produce a situation report, which is sent to state leadership to keep them apprised of the situation.

4.2.6. Roles and Responsibilities

4.2.6.1 Meets on a regular basis during periods of drought.

4.2.6.2 Submits weekly reports to the governor for their situational awareness and action during periods of drought.

4.2.6.3 Provide input regarding state drought response measures included in this incident annex

4.2.6.4 Serves as the technical advisory body for state and local decision makers

4.2.6.5 Develops, with the advice of focus area subgroups, short- and long-term drought response recommendations for protection of the public

4.2.6.6 May provide, with the advice of focus area subgroups, specific information on:

(1) Drought trends

(2) Establishing water use priorities

(3) Recommendations to local water utilities for creating or updating water shortage plans

(4) Water availability including observed and expected precipitation, stream flow, reservoirs, and groundwater levels

(5) Dry or impacted wells and other groundwater supply sources

(6) Recommendations relating to proposed state actions

(7) Potential impacts on Wisconsin's agriculture, economy, and environment

(8) Impacts to and regulatory sideboards for navigable waterways including Great Lakes ports and the Mississippi River

(9) Improvements to the capability to provide accurate and timely assessments of water availability or agricultural deficiencies

(10) Recommendations to the governor and other partners concerning state level responses

4.2.7. Focus area subgroups

In addition to the Drought Taskforce, additional subgroups, when created, provide input on various focus areas including, but not limited to:

- Agriculture
- Wildfire
- Natural resource and public interest impacts (such as fish and wildlife, aquatic habitat, recreational uses, navigational impacts, etc.) and regulatory framework.
- Recreation and tourism
- Public water supplies

- Economic impacts

4.3. Annex Activities

The WERP Basic Plan defines standardized tasks that constitute the response responsibilities of any agency that serves a role in emergency management. This section defines activities unique to this annex, intended for use in conjunction with the common tasks outlined in the WERP Basic Plan.

4.3.1. As drought conditions worsen, decisions on reducing water consumption and water use restrictions may become necessary.

4.3.1.1 Numerous factors influence these decisions including location and other factors specific to the incident at hand.

4.3.1.2 The following prioritized, non-inclusive list of water uses/consumption is for guidance purposes only:

(1) Human health

(2) Firefighting

(3) Livestock watering

(4) Crop irrigation

(5) Industrial and commercial process uses

(6) Hydroelectric production

(7) Recreational uses (i.e., water parks, golf course irrigation)

(8) Quality of life use (landscape watering, car washing)

4.3.2. Other measures to mitigate drought conditions may include adjustments to commercial, industrial, and municipal effluent discharged into lakes, rivers, and streams.

4.3.3. The following tables outline agency responsibilities at the various drought classification levels.

Table 4-1: Annex Activities for Drought Category D0

Phase	Action Item	Agency
Category D0 (Abnormally Dry)	▪ Conduct heat awareness and severe weather awareness campaigns to make the public aware of potentially hazardous conditions. ▪ Ensure online preparedness information is available and accessible to all audiences.	WI DHS DMA/WEM
	▪ Monitor precipitation, temperature, streamflow, and soil dryness trends and report abnormalities to WEM. ▪ Actively participate in the weekly development of the U.S. Drought Monitor Map.	NWS WI State Climatology Office
	▪ Promote water conservation with all consumers. ▪ If necessary, evaluate quantity and quality of new public water sources.	DNR PSC

Phase	Action Item	Agency
	▪ Monitor public water supplies currently identified as vulnerable. ▪ Notify WEM of significant identified vulnerabilities.	DNR Local Water Utilities

Table 4-2: Annex Activities for Drought Category D1

Phase	Action Item	Agency
Moderate Drought (Category D1)	▪ Monitor for increases in diseases, including West Nile Virus, related to drought. ▪ Monitor for increases in nuisance animals invading populated areas seeking water from decorative water features, swimming pools, etc.	WI DHS
	▪ Monitor and report on current and forecast precipitation, temperature, streamflow and soil dryness conditions and trends.	NWS WI Climatology Office
	▪ Recommend that public water utilities request their customers conserve water by curtailing non-critical uses such as landscape watering, vehicle washing, and similar uses. ▪ Monitor for changes in private and public well water quality due to reductions in the water table. ▪ Encourage homeowners with private wells to check well water quality. Wisconsin State Laboratory of Hygiene provides well water test kits. ▪ Monitor for changes in private and public well water quality due to reductions in the water table. ▪ Identify and evaluate the quantity and quality of new sources for public water if problems exist. ▪ Initiate the emergency process for temporary withdrawals from waterways ▪ Initiate the emergency high capacity well review process with priority set in the following order: o Human health o Animal health o Crop irrigation ▪ If the Governor has provided an Executive Order declaring a state of "drought", there may be regulatory restrictions and/or streamlining of regulatory permit process steps for permitting certain drought-related activities (such as water level management, water diversions or withdrawals, etc.)	DNR
	▪ Recommend that public water utilities request their customers conserve water by curtailing non-critical uses such as landscape watering, vehicle washing, and similar uses.	PSC
	▪ Monitor public water supplies currently identified as vulnerable. ▪ Notify WEM of significant vulnerabilities identified. ▪ Implement emergency response plans, as necessary.	DNR Local Water Utilities
	▪ If activated, provide current information on drought related topics to the governor's office.	Drought Taskforce
	▪ Consider activating the Drought Taskforce to monitor drought conditions more closely.	DMA/WEM

Phase	Action Item	Agency
	▪ Consider establishment of an incident site on WebEOC to provide enhanced situational awareness for all involved agencies, counties, tribes, municipalities, NGOs, and private sector partners. **Public Information Officer (PIO)** ▪ Conduct public information campaigns to heighten awareness of the actual and potential effects of current and potential future drought conditions. ▪ Consider issuing drought alerts to heighten public situational awareness of the current situation.	

Table 4-3: Annex Activities for Drought Categories D2 and D3

Phase	Action Items	Agency
Severe or Extreme Drought, (Category D2 & D3)	▪ Monitor the safety of: o The food supply for humans o Animal feed supplies ▪ Provide information on public health issues relating to the mental and behavioral health impacts on farmers.	DATCP
	▪ In coordination with the WEM PIO: o Conduct heat awareness and severe weather awareness campaigns to make the public aware of potentially hazardous conditions. o Ensure online preparedness information is available and accessible to all audiences. ▪ Monitor and report on increases in diseases, including vector-borne diseases related to drought and severe weather, such as West Nile virus. ▪ Track and report on surface water harmful algae blooms and other surface water degradations that can directly affect human health. ▪ Monitor for changes in private and public well water quality due to reductions in the water table. ▪ Encourage homeowners with private wells to check well water quality. Wisconsin State Laboratory of Hygiene provides well water test kits. ▪ Provide information on public health issues relating to the mental and behavioral health impacts on farmers. ▪ Provide information on public health issues relating to: o Coordination of drought response activities with key public health stakeholders and partners. o Monitoring and assessments of drought-related public health impacts, including: ▪ *Mental and behavioral health impacts.* ▪ *Changes in human disease and mortality incidence associated with drought conditions (infectious, chronic, and vector-borne/zoonotic diseases, and heat-related fatalities).* o Public health implications of compromised quality in surface water and potable drinking water. ▪ *Public health implications of compromised quality in groundwater quality and private drinking water wells.*	WI DHS

Phase	Action Items	Agency
	▪ Monitor and report current and forecast precipitation, temperature, streamflow and soil dryness conditions and trends to WEM.	NWS WI State Climatology Office
Severe or Extreme Drought, (Category D2 & D3)	▪ Communicate with local public water utilities to: o Gather information on the status of their system supply and demand. o Encourage utilities to review and revalidate drought emergency contingency plans. ▪ Recommend that public water utilities request that customers conserve water by curtailing non-critical uses. ▪ Help identify and evaluate the quantity and quality of new sources of public water if problems exist. ▪ Be available to assist public water utilities with implementation of emergency response plans. ▪ Initiate or continue the emergency process for temporary withdrawals from waterways ▪ Initiate or continue the emergency high capacity well review process with priority set in the following order: o Human health o Animal health o Crop irrigation ▪ Provide current information to local public water utilities regarding the status of groundwater and public drinking water aquifers. ▪ If applicable, map the location of private well failures across the state.	DNR
	▪ As part of the emergency process for temporary withdrawals from waterways, support the DNR's review of these permits for adverse effects on hydroelectric production. ▪ Communicate with local public water utilities to: ▪ Gather information on the status of their system supply and demand. ▪ Recommend that public water utilities request that customers conserve water by curtailing non-critical uses. ▪ Review drought-related emergency interconnections between utilities and curtailment plans or other tariffs for a drought-related water supply shortage. ▪ Support public information campaigns to heighten awareness of the actual and potential effects of current and potential future drought conditions. ▪ Facilitate utility construction or emergency interconnections to alleviate water shortages per Wisconsin Administrative Code PSC Chapter 184. ▪ Review and provide information on water supply shortage curtailment plans under Wisconsin Administrative Code PSC Chapter 185.90; provide approval of service curtailment to customers that provide essential public health, welfare, or safety functions.	PSC
	▪ Monitor public water supplies currently identified as vulnerable. ▪ Notify WEM of significant vulnerabilities identified.	DNR

Phase	Action Items	Agency
	▪ Implement water utility emergency response plans, as necessary.	Local Water Utilities
	▪ Provide current information on drought related topics to WEM.	Drought Taskforce
	▪ If activated, provide comprehensive information relating to their target subject area.	Focus Area Subgroups
Severe or Extreme Drought, (Category D2 & D3)	▪ Activate the Drought Taskforce, if not already activated. ▪ Consider activating subgroups to study target areas of the drought. ▪ Establish an incident site on WebEOC to enhance situational awareness for all involved agencies, counties, tribes, municipalities, non-government organizations, and private sector partners. ▪ Monitor water shortage conditions throughout the affected area. Be prepared to provide emergency water supplies, when and where necessary. ▪ Locate supplies of pumps, pipes, and other hardware to move large volumes of water for critical uses, if necessary. ▪ Determine whether to recommend that the governor declare a state of emergency in areas of the state affected by the drought including recommended drought mediation measures provided by the Drought Taskforce. **Legal Counsel** ▪ Research statutes relating to public water supplies and shortages. Develop legal and legislative strategies for possible implementation, if needed. **PIO** ▪ Continue public information campaigns to heighten awareness of the actual and potential effects of current and potential future drought conditions. ▪ Consider issuing 'drought alerts' to heighten public situational awareness of the current situation.	DMA/WEM
	▪ Facilitate utility construction or emergency interconnections to alleviate water shortages per PSC 184.	PSC

Table 4-4: Annex Activities for Drought Categories D4

Phase	Action Items	Agency
Exceptional Drought (Category D4)	▪ Monitor and report current and forecast precipitation, temperature, streamflow and soil dryness conditions and trends to WEM.	NWS Wisconsin State Climatology Office

Phase	Action Items	Agency
	▪ Communicate with local public water utilities to update information on the status of their system supply and demand. ▪ Recommend that public water utilities request their customers conserve water by curtailing non-critical uses. ▪ Identify and evaluate the quantity and quality of new sources for public water, if problems exist. ▪ Assist public water utilities with implementation of emergency response plans, as requested. ▪ Continue the emergency process for temporary withdrawals from waterways. ▪ Continue the emergency high capacity well review process with priority set in the following order: o Human Health o Animal Health o Crop irrigation ▪ Take such measures that allow farmers to harvest hay from or allow their livestock to feed on state owned land. ▪ If applicable, map the location of private well failures across the state.	DNR
	▪ As part of the emergency process for temporary withdrawals from waterways, support the DNR's review of these permits for adverse effects on hydroelectric production. ▪ Recommend that public water utilities request their customers conserve water by curtailing non-critical uses. ▪ Review drought-related emergency interconnections between utilities and curtailment plans or other tariffs for a drought-related water supply shortage. ▪ Support public information campaigns to heighten awareness of the actual and potential effects of current and potential future drought conditions. ▪ Facilitate utility construction or emergency interconnections to alleviate water shortages per Wisconsin Administrative Code PSC Chapter 184. ▪ Review and provide information on water supply shortage curtailment plans under Wisconsin Administrative Code PSC Chapter 185.90; provide approval of service curtailment to customers that provide essential public health, welfare, or safety functions	PSC
	▪ Monitor public water supplies currently identified as vulnerable and notify WEM of significant vulnerabilities identified. ▪ Implement water utility emergency response plans, as necessary.	DNR Local Water Utilities

Phase	Action Items	Agency
Exceptional Drought (Category D4)	▪ In coordination with the WEM PIO: o Conduct Heat Awareness and Severe Weather Awareness campaigns to make the public aware of potentially hazardous conditions. o Ensure online preparedness information is available and accessible to all audiences. ▪ Monitor and report on increases in diseases, including vector-borne diseases related to drought and severe weather, such as West Nile Virus. ▪ Track and report on surface water harmful algae blooms and other surface water degradations that can directly affect human health. ▪ Monitor for changes in private and public well water quality due to reductions in the water table. ▪ Encourage homeowners with private wells to check well water quality. Wisconsin State Laboratory of Hygiene provides well water test kits. ▪ Provide information on public health issues relating to the mental and behavioral health impacts on farmers. ▪ Coordination of drought response activities with key public health stakeholders and partners. ▪ Monitoring and assessments of drought-related public health impacts, including: o Mental and behavioral health impacts. o Changes in human disease and mortality incidence associated with drought conditions (infectious, chronic, and vector-borne/zoonotic diseases, and heat-related fatalities). o Public health implications of compromised quality in surface water and potable drinking water. o Public health implications of compromised quality in groundwater quality and private drinking water wells.	WI DHS Wisconsin State Laboratory of Hygiene
	▪ Provide current information on drought related topics to the Governor's office.	Drought Taskforce
	▪ If activated, provide comprehensive information relating to their target subject area.	Targeted Drought Subgroups
	▪ Where the potential for a state declaration of emergency exists, consider imposing water restrictions.	Governor's office
Exceptional Drought (Category D4)	▪ Adjutant General Recommend implementation of legal and legislative measures to reduce the impact of drought on impacted populations. ▪ Recommend that the Governor declare a state of emergency in areas of the state affected by the drought. ▪ Consider recommending that the governor request a presidential disaster declaration. ▪ Monitor water shortage conditions throughout the area affected by the drought. Be prepared to provide emergency water supplies, when and where necessary. ▪ Consider activating WING resources to: o Transport water to areas where water shortages are critically low. ▪ Transport pumps, pipes, and other hardware to assist local water utilities, farmers, and critical commercial and industrial entities with processes dependent on water for operation.	DMA
	Administrator	DMA/WEM

Phase	Action Items	Agency
	▪ Activate the Drought Taskforce if not already activated. ▪ Consider activating targeted subgroups to study target areas of the drought. **PIO** ▪ Continue public information campaigns to heighten awareness of the actual and potential effects of current and potential future drought conditions. ▪ Issue "drought alerts" to heighten public situational awareness of the current situation.	

5. Agency Responsibilities

5.1. Lead Coordinating Agency – Department of Military Affairs

Table 5-1: Lead Coordinating Agency Functions

Agency	Functions
Department of Military Affairs/Wisconsin Emergency Management	**Administrator** ▪ Monitor water shortage conditions throughout the drought affected area. Be prepared to provide emergency water supplies, when and where necessary. ▪ Establish an incident site on WebEOC to provide enhanced situational awareness for all involved agencies, counties, municipalities, NGOs, and private sector partners, as necessary. • Activate and direct the Drought Taskforce to monitor drought conditions more closely, as needed. • Along with the TAG, make recommendations to the governor's office regarding: o Declaring a state of emergency. o Issuing orders to restrict water usage to all or portions of the state. o Requesting a presidential disaster declaration. • When applicable, request activation of WING assets to transport potable water to stricken areas of the state, as necessary.
	Public Information Officer ▪ Conduct heat awareness and severe weather awareness campaigns to make the public aware of potentially hazardous conditions. ▪ Ensure online preparedness information is available and accessible to all audiences. ▪ Conduct public information campaigns to heighten awareness of the actual and potential effects of current and potential future drought conditions. ▪ Issue "drought alerts" to heighten public situational awareness of the current situation.

5.2. Wisconsin Governmental Support Agencies

Table 5-2: State Government Support Agencies Functions

Agency	Functions
Department of Natural Resources	**Agency as a whole** ▪ Monitor public water supplies currently identified as vulnerable and review available information in order to identify additional public water supplies that may be vulnerable. ▪ Communicate with local public water utilities to gather and report information on the status of their systems, supplies, and demand. ▪ Recommend to local public water utilities and individuals that they limit water use, as appropriate. ▪ Identify public water supply needs and communicate deficiencies through sanitary survey inspections conducted every three years: o Gather information on the status of their system supply and demand. o Encourage utilities to review and revalidate drought emergency contingency plans. ▪ Identify and evaluate the quantity and quality of new sources for public water, if problems exist. ▪ Assist public water utilities with implementation of emergency response plans. ▪ Implement the emergency process for temporary withdrawals from waterways. ▪ Implement the emergency high capacity well review process with priority set in the follow order: o Human health o Animal health o Crop irrigation ▪ Recommend to local public water utilities that they request customers limit water use, as appropriate.

5.3. Drought Taskforce

Table 5-3: Drought Task force Function

Agency	Functions
Drought Taskforce	**Taskforce as a whole** ▪ Provide short and long-term drought response recommendations to WEM and the governor's office.
	Department of Administration ▪ Provide information relating to the status of state government and the ability to provide government services.
	Department of Agriculture, Trade and Consumer Protection • Monitor potential drought impacts on: o The food supply for humans o Animal feed supplies • Provide information on the mental health and economic impacts on farmers • Provide information relating to impacts on: o Agricultural production o Livestock
	Department of Health Services ▪ Provide information on public health issues relating to: o Coordination of drought response activities with key public health stakeholders and partners. o Monitoring and assessments of drought-related public health impacts, including: ▪ Mental and behavioral health impacts. ▪ Changes in human disease and mortality incidence associated with drought conditions (infectious, chronic, and vector-borne/zoonotic diseases, and heat-related fatalities). o Public health implications of compromised quality in surface water and potable drinking water. o Public health implications of compromised quality in groundwater quality and private drinking water wells.
	Local Water Utilities ▪ Monitor vulnerable public water supplies. ▪ Incorporate drought planning into existing public water supply emergency response plans. ▪ Implement water utility emergency response plans. ▪ Water utilities may establish a curtailment plan and file it as a tariff with the PSC under Wisconsin Administrative Code PSC Chapter 185.21.
	Department of Military Affairs/Wisconsin National Guard ▪ Provide information relating to availability of WING assets to assist in response to drought-related emergencies. ▪ Assign WING personnel and equipment to assist with delivery of potable water to areas of the state as directed by the governor and the adjutant general.

Agency	Functions
	Department of Natural Resources ▪ Provide information relating to: o Water availability, stream flow, reservoirs, and groundwater levels. o Inspections of public water supplies conducted on a three-year schedule, including capacity to deliver adequate supplies of water. o Impacts on wildlife. o Wildfire prevention, vulnerability, and firefighting operations. o The availability of public lands for livestock grazing ▪ Provide current information to local public water utilities regarding the status of groundwater and drinking water aquifers. ▪ Coordinate water delivery for grazing livestock on public lands using available resources from DNR, fire departments, or DATCP licensed milk-haulers. ▪ If applicable, map the location of private well failures across the state. ▪ Prepare regulatory information in response to anticipated proposals to withdraw (pump) water from navigable waterbodies in order to irrigate, maintain water levels of a lake, etc. pursuant to Ch 30.18, Wis. Stats. May need to focus first on ordinary high-water mark (OHWM) determinations and/or public rights stage (PRS) determinations to determine if there is surplus (excess) water. One of the key requirements for withdrawal projects to be eligible for permitting is that there is surplus water available to be withdrawn since permits are not able to be issued to withdraw to below the PRS.
	Public Service Commission • Review of emergency interconnections between utilities under Wisconsin Administrative Code PSC Chapter 184. • Report drought-related effects on electrical generation, availability, and reliability. • Review and provide information related to curtailment plans or other tariffs for a drought-related water supply shortage under Wisconsin Administrative Code PSC Chapter 185.90. • Provide to local public water utilities information regarding options for implementing conservation measures.
	Wisconsin Department of Transportation • Provide information relating to impacts on state and federal highways and impairments to traffic flow.
	Wisconsin State Climatology Office ▪ Provide information on past droughts. ▪ Coordinate with the governor's press office when the governor designates a chief spokesperson. ▪ Assist local officials with disseminating information (e.g., protective action recommendations). ▪ Assist with monitoring and providing summarized information about the weather (especially temperature and precipitation), hydrological, soil, and crop conditions during a drought. ▪ Coordinate with the NWS to observe, monitor, and report drought conditions through an in-state observer network to the US Drought Monitor authors. Timing shall be as such to actively participate in the weekly development of the USDM map during the comment period prior to the release of the USDM each Thursday

5.4. Federal Agencies

Table 5-4: Federal Government Functions

Agency	Functions
U.S. Army Corps of Engineers	▪ Monitor and report, through the Drought Taskforce, impacts on navigability of the Mississippi River.
U.S. Coast Guard	▪ Monitor and report, through the Drought Taskforce, impacts on navigability of Great Lakes ports.
USDA Farm Service Agency	▪ Provide information and assistance to farmers impacted by drought

6. Supporting Documents

6.1. Attachments

6.1.1. U.S. Drought Monitor Drought Severity Classification

6.2. Other Resources

6.2.1. Farmer to Farmer (http://farmertofarmer.uwex.edu). An animal feed clearinghouse created by the University of Wisconsin Extension. Farmer to Farmer assists livestock owners who may need access to additional sources of feed for their herds in times of drought.

6.2.2. Hay Hauling Assistance (https://farmrescue.org/apply/hay-hauling-assistance.html)

6.2.3. US Drought Monitor (http://droughtmonitor.unl.edu)

6.2.4. Public Service Commission website, https://psc.wi.gov/Pages/ForUtilities/Water/ConservationandEfficiencyInitiative.aspx.

6.2.5. Wisconsin Department of Natural Resources website, http://dnr.wi.gov/topic/WaterUse/.

6.2.6. Wisconsin Climatology Office website, https://climatology.nelson.wisc.edu/

6.2.7. Drought Observation Reporting Tool (https://droughtimpacts.unl.edu/Tools/ConditionMonitoringObservations.aspx)

6.2.8. Condition Monitoring Observer Reports (for those interested in reporting drought conditions) Condition Monitoring Observer Reports

Table 6-1: Record of Change

#	Date	Agency/Individual	Change
1.			
2.			
3.			
4.			
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Attachment 1

US Drought Monitor Drought Severity Classification

U.S. Drought Monitor Drought Severity Classification

Category	Description	Example Percentile Range for Most Indicators	Values for Standard Precipitation Index and Standardized Precipitation-Evapotranspiration Index
None	Normal or wet conditions	30.01 or Above	-0.49 or above
D0	Abnormally Dry	20.01 to 30.00	-0.5 to -0.79
D1	Moderate Drought	10.01 to 20.00	-0.8 to -1.29
D2	Severe Drought	5.01 to 10.00	-1.3 to -1.59
D3	Extreme Drought	2.01 to 5.00	-1.6 to -1.99
D4	Exceptional Drought	0.00 to 2.00	-2.0 or less

Source: U.S. Drought Monitor Drought Classification | U.S. Drought Monitor (unl.edu)

Table 2: Drought Severity Classification

Table 1 Depicts the U.S. Drought Monitor's Drought Classification Index. Each category is based on a percentile of precipitation method of classifying droughts. For instance:

A D-4 Exceptional drought corresponds to the lowest 2 precipitation values. This is the most severe drought, with the worst conditions on record. It would only be expected to occur once or twice within a 100-year period.

A D3 Extreme drought occupies percentile positions 2.01-5.00, has conditions amongst the worst on record, and would be expected to occur once every 20 to 50 years.

A D2 Severe drought occupies percentile positions 5.01 to 10.00 and would be expected to occur once every 10 to 20 years.

A D1 Moderate Drought occupies percentile positions 10.01 to 20.00 and is expected to occur once every 5 to 10 years.

Abnormally Dry (D0) conditions ocupy percentile positions 20.01 to 30.00 and are expected to occur once every 3 to 5 years. D0 is not considered drought.

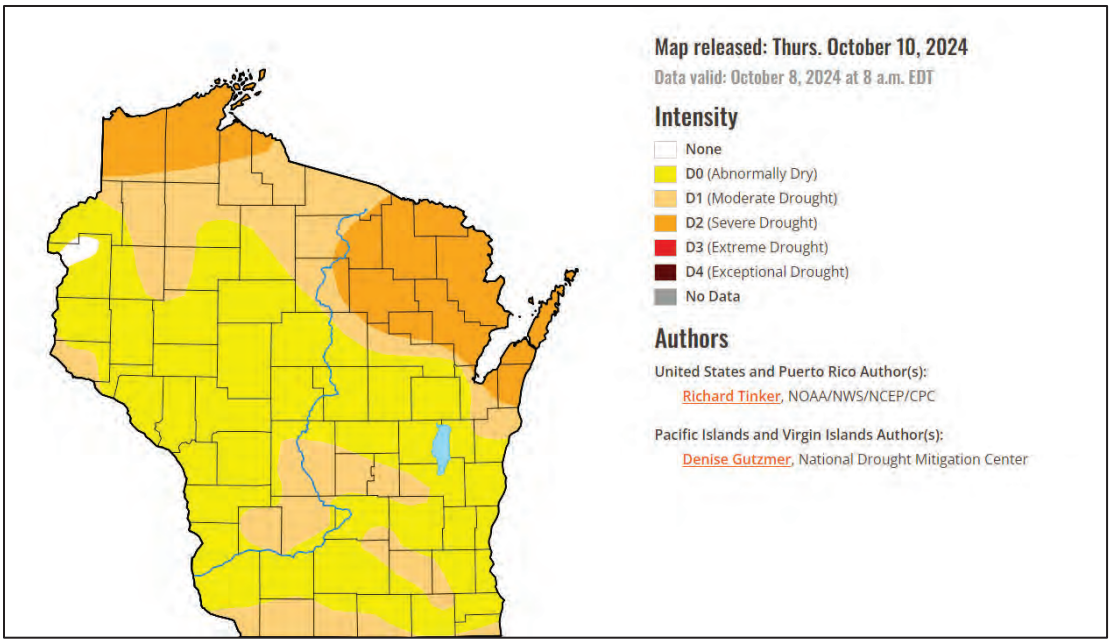

Figure 4: Sample Drought Condition Map