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Bureau of Indian Affairs  
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United States Department of the Interior  
BUREAU OF INDIAN AFFAIRS  
Rocky Mountain Regional Office  
2021 Fourth Avenue North  
Billings, Montana 59101

In Reply Refer To:  
DOI-BIA-2023-004556

June 1, 2023

VIA ELECTRONIC EMAIL

The Bureau of Indian Affairs, Rocky Mountain Region FOIA office received your Freedom of Information Act (FOIA) request DOI- BIA-2023-004556, on May 23, 2023. In your request you seek:

*“A copy of the Drought Guidebook, produced for BIA (and BIE) by Hidden Water, Inc., Owasso, Oklahoma, in 2022 and 2023, under contract action 140A0422P0042.”*

We are writing today to respond to your request on behalf of the Bureau of Indian Affairs. We have enclosed one PDF containing The Crow Drought Guidebook, consisting of 24 pages, which is being released to you in its entirety.

We do not bill requesters for FOIA processing fees when their fees are less than \$50.00, because the cost of collection would be greater than the fee collected. See 43 C.F.R. § 2.37(g). Therefore, there is no billable fee for the processing of this request.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of FOIA. See 5 U.S.C. 552(c). This response is limited to those records that are subject to the requirements of FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

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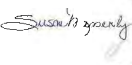
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If you have any questions about your request, you may email us at: [FOIA\\_RockyMtnRegion@bia.gov](mailto:FOIA_RockyMtnRegion@bia.gov) or call Geraldine Riddle, Regional FOIA Coordinator at (406) 247-7860 or Kayla Spang, Alternate Regional FOIA Coordinator at (406) 247-7907. You may also write to us at: DOI, Bureau of Indian Affairs, Rocky Mountain Regional Office FOIA, 2021 Fourth Avenue North, Billings, Montana 59101.

Sincerely,

  
Digitally signed by  
SUSAN MESSERLY  
Date: 2023.06.01  
12:24:01 -06'00'  
Susan Messerly  
Regional Director

Enclosure

cc: David Hopkins, Regional Rangeland Management Specialist, Rocky Mountain Region  
([david.hopkins@bia.gov](mailto:david.hopkins@bia.gov))



# Drought Guidebook

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CROW INDIAN RESERVATION

Crow Agency  
Bureau of Indian Affairs  
Weaver Drive, BIA Bldg #2  
Crow Agency, MT 59022

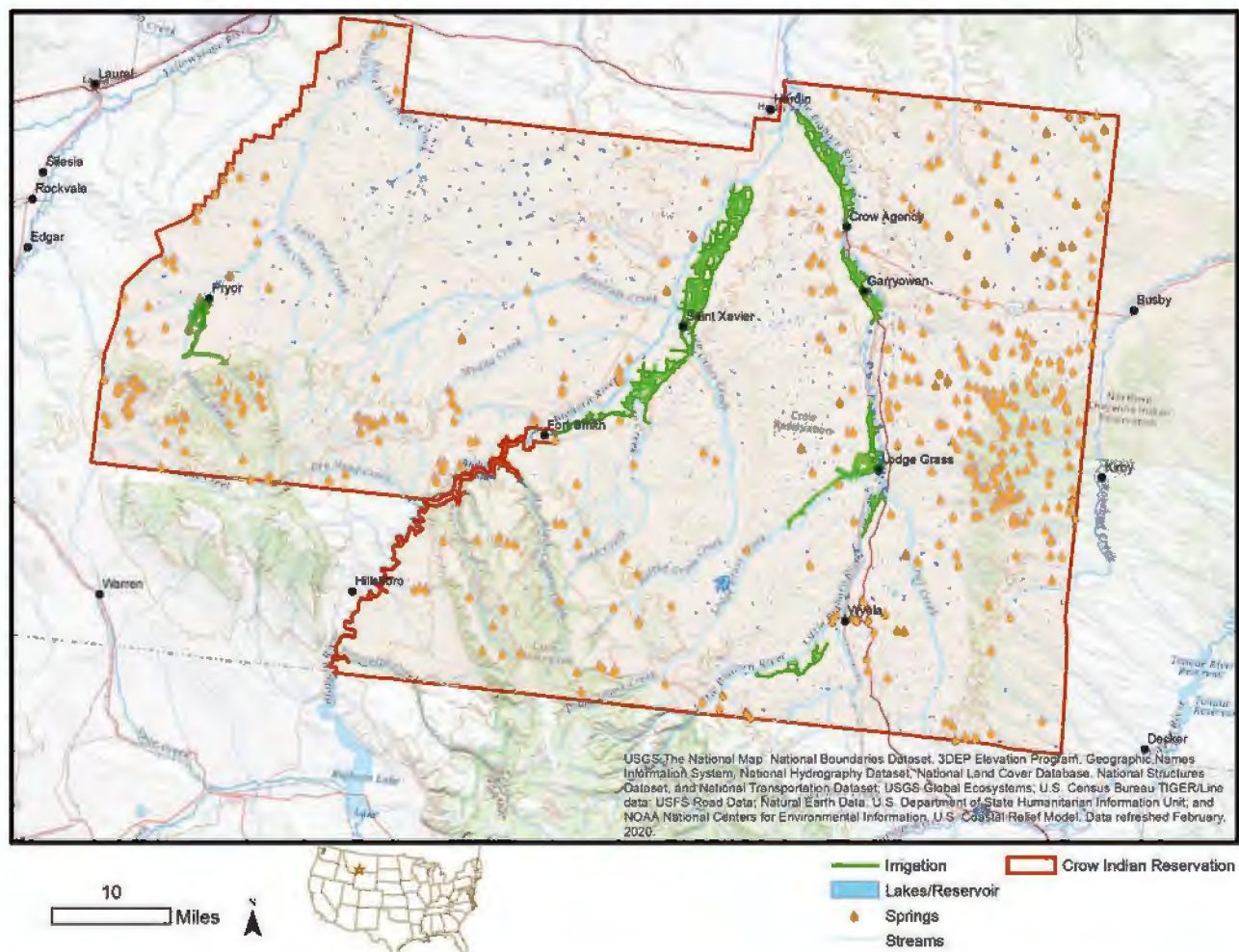
November 2022

# INTRODUCTION TO THE DROUGHT GUIDEBOOK

The United States (U.S.) Bureau of Indian Affairs (BIA) Rocky Mountain Regional Office has developed a Drought Guidebook to assist and provide guidance to the BIA Crow Agency and Crow Tribe (Tribe) in addressing drought conditions. The following Drought Guidebook provides relevant steps, tools, and information for representatives with the BIA Crow Agency (including the superintendent) and the Tribe to consider before, during, and after various levels of drought.

## CROW INDIAN RESERVATION

The Crow Indian Reservation (Crow Reservation) is located in southeastern Montana, just south of Billings, Montana. The Crow Reservation is home to over 14,000 Crow enrolled tribal members and contains about 2,282,000 acres of land within its exterior boundary. There are about 1,511,975 acres of tribal and allotted surface trust acreage. Figure 1 shows the location of the Crow Reservation with many resources highlighted that would be impacted by drought, including but not limited to lakes, streams, reservoirs, springs, and irrigated areas.



**Figure 1.** Location of Crow Reservation and many resources that would be impacted by drought.

# DROUGHT TERMINOLOGY

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**CLIMATE** - day-to-day weather over a longer period of time. Climate is determined by the long-term pattern of weather conditions at a location. Typically over two weeks out to 30 or more years. Climatology is the study of climate.

**DROUGHT** - There is no single definition for drought; research in the early 1980s uncovered more than 150 published definitions of drought. Drought is a naturally occurring phenomenon that exists when an area receives less precipitation than is expected over an extended period of time, usually several months or longer. Or, more formally, it is a deficiency of precipitation over a period of time, resulting in a water shortage for some activity, group, or environmental sector. Or, drought is a protracted period of deficient precipitation resulting in extensive damage to crops, and a consequential loss of yield. Another way to look at drought, and likely the most basic, and eloquent definition, is: "lack of water to meet needs" (Redmond 2002).

**DROUGHT INDEX** - a numerical scale that scientists use to describe the severity of a drought. Scientists take many kinds of data (like streamflow, rainfall, temperature, and snowpack) and "blend" it into a single number, called a drought index value, to make it easier to understand the drought conditions of a particular area.

**MITIGATION** - actions to take before, or at the beginning of, drought to help reduce the impacts of drought

**RESPONSE** - actions to take during drought to help reduce the impacts of drought

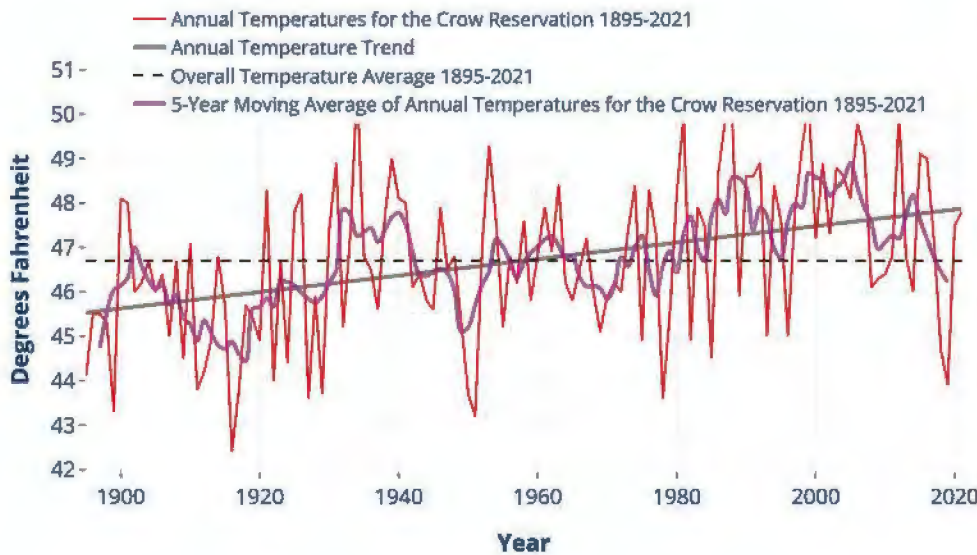
**U.S. DROUGHT MONITOR (USDM)** - is released every Thursday and is a weekly drought assessment for the U.S. Several authors from the National Drought Mitigation Center at the University of Nebraska-Lincoln, the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Department of Agriculture (USDA) create the map (Svoboda et al. 2002). The map uses five classifications:

- **D0 - Abnormally Dry**, used for areas showing dryness but not yet in drought or for areas recovering from drought. Going into drought impacts can be short-term dryness slowing planting, growth of crops or pastures; while coming out of drought there could be some lingering water deficits, and pastures or crops may not have fully recovered.
- **D1 - Moderate Drought**, occurs approximately every two years for a given period of time. Potential impacts at D1 could include damage to crops, pastures, streams, reservoirs, or low wells, some water shortages developing or imminent. Sometimes, voluntary water-use restrictions are requested.
- **D2 - Severe Drought**, approximately every 10 years for a given period of time. Potential impacts can include crop or pasture losses, water shortages, and mandatory water restrictions.
- **D3 - Extreme Drought**, approximately every 20 years for a given period of time. Potential impacts could be major crop/pasture losses and widespread water shortages and/or restrictions.
- **D4 - Exceptional Drought**, approximately every 50 years for a given period. Potential impacts can include exceptional and widespread crop/pasture losses, shortages of water in reservoirs, streams, and wells creating water emergencies.

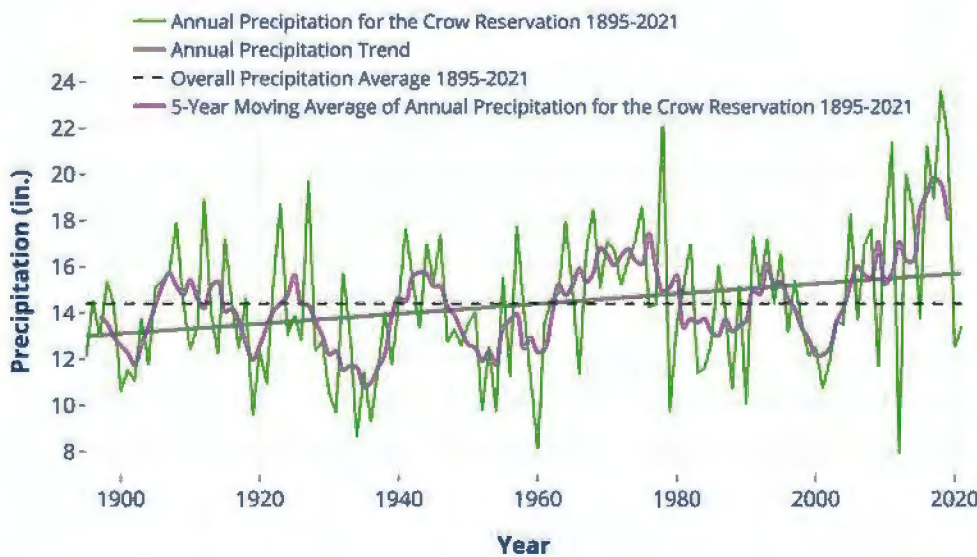
# Drought on the Crow Reservation

## TEMPERATURE AND PRECIPITATION TRENDS

Generally, annual temperature has been trending up (Figure 2) over the last 120 years for the area encompassed by the Crow Reservation. Increasing annual temperatures, in particular, have accelerated over the last 40 years. Annual precipitation has also been trending upward (Figure 3) but less so than the trend observed for temperature. The last 16-17 years of precipitation have been much above normal.



**Figure 2.** Annual average temperatures for the Crow Reservation from 1895-2021 (red line), annual temperature trend (grey line), annual temperature averaged over the 1895-2021 record (dashed line), and the 5-year moving average temperature (purple line). Data taken from PRISM Climate Group, Oregon State University, <https://prism.oregonstate.edu>, data accessed 22 June 2022.



**Figure 3.** Annual average precipitation for the Crow Reservation from 1895-2021 (green line), precipitation trend (grey line), annual precipitation averaged over the 1895-2021 record (dashed line), and the 5-year moving average precipitation (purple line). Data taken from PRISM Climate Group, Oregon State University, <https://prism.oregonstate.edu>, data accessed 22 June 2022.

# TOP 10 HOTTEST AND DRIEST YEARS

The tables below show the top 10 hottest (Table 1) and driest years (Table 2) on record for the Crow Reservation. Eight out of the hottest 10 years have been observed since 1981, while the driest years have been more evenly spaced across the observed record.

**Table 1.** Top 10 hottest years, and the departure from average temperature for the Crow Reservation from 1895-2021. Data taken from PRISM Climate Group, Oregon State University, <https://prism.oregonstate.edu>, data accessed 22 June 2022.

10 Hottest Years for the Crow Reservation 1895-2021			
Year	Annual Temperature (0F)	Difference from Average	Rank
1934	50.6	3.9	1
1999	50.3	3.6	2
2012	50	3.3	3
1981	50	3.3	4
1987	49.9	3.2	5
1988	49.8	3.1	6
2006	49.8	3.1	7
1953	49.3	2.6	8
1998	49.2	2.5	9
2007	49.2	2.5	10

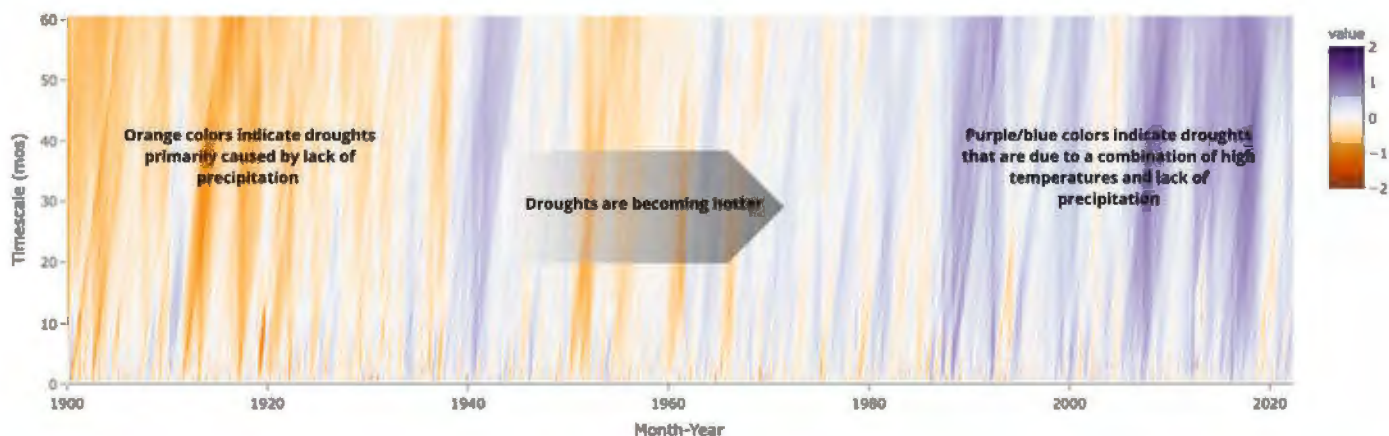
**Table 2.** Top 10 driest years, and the difference from average precipitation for the Crow Reservation from 1895-2021. Data taken from PRISM Climate Group, Oregon State University, <https://prism.oregonstate.edu>, data accessed 22 June 2022.

10 Driest Years for the Crow Reservation 1895-2021			
Year	Annual Precipitation (Inches)	Difference from Average	Rank
2012	7.9	-6.5	1
1960	8.11	-6.29	2
1934	8.64	-5.76	3
1936	9.28	-5.12	4
1919	9.53	-4.87	5
1931	9.66	-4.74	6
1979	9.69	-4.71	7
1954	9.71	-4.69	8
1952	9.76	-4.64	9
1990	10.05	-4.35	10



# DROUGHT INDICES TRENDS

The Standard Precipitation Index (SPI) and a derivation of the SPI, the Standardized Precipitation Evapotranspiration Index (SPEI) are two prominent drought indices used to track drought across the globe. The SPI calculates precipitation anomalies (i.e., difference from average conditions) for several timescales. Positive SPI values represent wet conditions, while negative SPI values represent dry conditions; the lower the SPI, the more unusually dry a period. Temperature also plays an important role in the timing and severity of drought. In a changing climate, temperature influenced droughts, such as flash droughts, are becoming more of a concern, therefore, using the SPI alone may not capture important variables that exacerbate drought on the Crow Reservation since it only tracks precipitation. For this reason, SPEI was also evaluated since it has most of the properties associated with the SPI but also considers the impact of temperature through changes in potential evapotranspiration, which is the rate of evaporation from a surface that is not water limited. Based on the analysis, droughts have been relatively frequent, but there is no upward trend. The most prominent trend is the importance of temperature in drought. Figure 4 shows the difference between SPI and SPEI from 1895-2021. In the early part of the record, precipitation was the primary driver of drought (Figure 3, lines in orange), while later in the record, starting after 1980, the combination of high temperatures and reduced precipitation were the drivers of drought. In other words, temperature has become a more prominent driver of droughts on the Crow Reservation over the last 40 years.



**Figure 4.** History of Drought for Montana Climate Division 5, which incorporates the Crow Reservation as observed through the SPI and the SPEI from 1-60 months from 1895-2021. This figure shows the difference between SPI and SPEI values for each month and timescale. Orange colors indicate when SPI values are more negative than SPEI, meaning reduced precipitation was driving a given drought event. Purple colors indicate SPI values were more positive than SPEI, meaning both reduced precipitation and high temperatures were key components of the drought. For example, a difference value of 1 could indicate that the SPEI (-1) is more negative than the SPI (0) reflecting more intense drought conditions that have a strong temperature component. Data taken from the NOAA U.S. Climate Division Dataset (nClimDiv), MT-CD5.

# DROUGHT POLICY AND RESPONSE\*

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Currently, there are no formal drought plans/policies in place that the Tribe and/or BIA Crow Agency follow at the Crow Reservation. Personnel at the BIA Crow Agency know when a drought is occurring based on monitoring the local and national news, water restrictions, USDA/Farm Service Agency/Natural Resources Conservation Service (NRCS) contacts, and tribal contacts. BIA Crow Agency personnel take action to respond to drought after receiving notification and when BIA water tanks are low. When a drought occurs, the Tribe and/or BIA responds by:

- Raising awareness within BIA
- Raising awareness within the tribal government
- Encouraging water conservation practices
- Imposing fire restrictions
- Using emergency or back-up water supply for each public drinking water system
- Seeking voluntary limits on non-essential water uses
- Enforcing water restrictions
- Purchasing, transporting, helping negotiate, and/or storing bulk/emergency feed
- Rotating/resting pastures
- Using/permitting additional grazing areas

During previous droughts, the Crow Reservation has experienced the following impacts:

- Reduced pasture for grazing
- Water supply shortages
- Increased noxious weeds and/or pests (e.g., grasshoppers)
- Increased number or intensity of wildfires

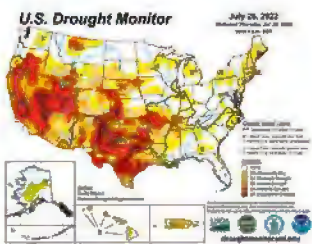

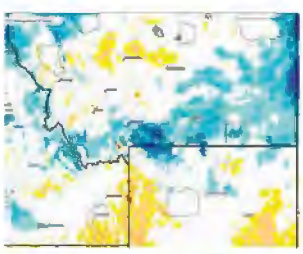

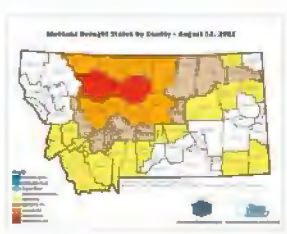



Farmers or ranchers on the Crow Reservation have applied for and received outside assistance from the following programs due to impacts from drought:

- Emergency Conservation Program (ECP)
- Emergency Assistance for Livestock
- Livestock Forage Disaster Program (LFP)
- USDA Farm Loans

\*A questionnaire was sent to BIA Rocky Mountain Region Agency Office Superintendents inquiring about drought policy and impacts on each respective reservation. The information below was developed based on two responses to the questionnaire that were received from BIA Crow Agency personnel in May 2022 (BIA 2022).

# DROUGHT MONITORING

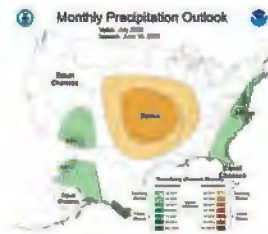
The following resources offer useful tools to understand current conditions as they relate to drought, and forecasts of future temperature and precipitation trends so that changes in moisture levels can be anticipated.

Current Conditions		
<p><b>USDM</b></p> <p>Tracks drought, uses several different meteorological and climate indicators; this tool is used for many of the “triggers” in funding that are available to producers for drought response</p>		 <p>Website</p>
<p><b>Upper Missouri River Basin Drought Dashboard</b></p> <p>Tribal lands layer for tribes in Montana and Wyoming:</p> <ul style="list-style-type: none"> <li>• Drought Indicators: SPI and SPEI</li> <li>• Evaporative Demand Drought Index (EDDI)</li> <li>• Precipitation and Temperature Percentiles</li> <li>• Snowpack</li> <li>• Soil Moisture</li> <li>• Groundwater</li> <li>• Vegetation</li> </ul>		 <p>Website</p>
<p><b>Montana Current Drought Conditions</b></p> <p>The Montana Governor’s Drought and Water Supply Advisory Committee and the Montana State Library publishes monthly maps of moisture status by county. Montana also has a drought monitoring team led by the Montana Department of Natural Resources and Conservation, the Montana State Library, the National Weather Service, and the Montana Climate Office that coordinates weekly with the USDM to map current drought conditions.</p>		 <p>Website</p>
<p><b>U.S. Geological Survey (USGS) Water Watch Montana Dashboard</b></p> <p>Streamflow conditions for specific sites and areas within Montana</p>		 <p>Website</p>

# Drought/Climate and Wildfire Outlooks

## Monthly and Seasonal Temperature and Precipitation Outlooks

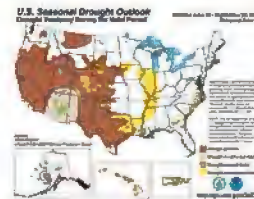
Temperature and precipitation outlooks for the coming month and season (next three months)



Website

## U.S. Monthly and Seasonal Drought Outlooks

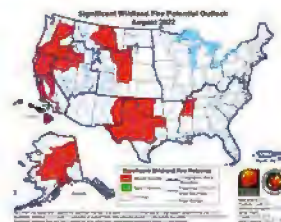
Monthly and seasonal drought outlooks maps



Website

## Wildfire Outlooks

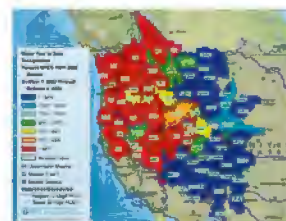
National Significant Wildland Fire Potential Outlooks by month for the next four months. The Fire Potential categories include above, below, and near normal for significant fire potential.



Website

## Snow Survey, Water Supply Forecasting, and Soil Climate Analysis Network

NRCS' National Water and Climate Center is responsible for producing and disseminating accurate and reliable water supply forecasts and other climatic data to its wide variety of users.



Website

# DROUGHT TOOLS FOR MITIGATION

Drought is a naturally occurring phenomenon that has been relatively frequent on the Crow Reservation, and will likely continue to occur, as noted above. Drought mitigation measures are generally considered actions that increase resilience to drought and thereby lessen impacts when drought does occur. Ideally, mitigation measures should be considered before drought occurs, but can be considered throughout all phases of drought. The following mitigation questions and possible actions included in the table below should be considered by the BIA Crow Agency and Tribe.

## **Drought Mitigation**

### **Sectors, Mitigation Questions, and Possible Actions**

#### **Drought Planning**

**Question: Does the Tribe have a recent Drought Mitigation and Response Plan (updated within last 10 years)?**

- If not, does the Tribe want help developing more specific actions for responding to drought and identifying funds to assist with drought?

#### **Drought Education**

**Question: Does the Tribe have a program or initiative to educate its community, tribal departments, and agricultural producers about drought?**

- If not, discuss options with the Tribe to provide drought education including water conservation (e.g., drip irrigation, rainwater harvesting, etc.)
- Encourage and assist the Tribe to educate livestock producers to develop a ranch/grazing drought plan
- Encourage and assist the Tribe to provide ongoing education to lessees on sustainable crop production
- Encourage and assist with fire prevention education

#### **Water Supply and Storage Capacity**

**Question: Does the Tribe have a plan for additional supply of domestic water in an emergency and what if any additional storage capacity is being considered?**

- If no plan currently exists for an emergency supply for each public water system, encourage the Tribe to consider how additional sources of water supply could help in an emergency
- Develop and maintain a list of individuals/companies able to haul water
- Coordinate with the Tribe to identify funding opportunities to develop additional storage capacity for public water supplies

# Drought Mitigation

## Sectors, Mitigation Questions, and Possible Actions

### Water Management for Wildlife & Livestock

**Question: Does the Tribe have a plan to improve access to water for wildlife and livestock and to protect existing water resources?**

- If not, encourage the Tribe to consider a plan to protect sensitive areas, including the construction of additional water sources to encourage better distribution of livestock and less reliance on riparian areas and springs
- Consider assisting the Tribe in developing a funding plan or process to repair existing wells, pumps, and watering facilities (tanks, pipelines, drinkers). Such a funding source for this mitigation would be NRCS' Environmental Quality Incentives Program (EQIP). **Figure 5 provides more information on the steps to apply for funding for such mitigation.**

### Land Management for Wildlife & Livestock

**Question: What land management practices for wildlife and livestock are in place that can improve drought resilience?**

- If range surveys are not up to date, discuss with the Tribe and/or Regional BIA office the options/process for conducting a review of the health of the range units
- If policies are not in place, or being utilized, for rotating/resting pastures, discuss options and funding with the Tribe to develop and/or implement those policies
- If applicable, discuss additional grazing areas (e.g., identify unallocated land, unused range units, acquisition of additional land, etc.) and what barriers there are to utilize these additional resources
- Identify range units and farm/pasture leases with or adjacent to sensitive areas (e.g., surface waters and springs) and develop and implement a plan or lease language that requires lessees to maintain buffers to protect sensitive areas
- Assess whether existing policies to enforce fish and game regulations are effective in the context of drought
- If a plan does not already exist, assist the Tribe in developing a plan and funding to monitor the health, productivity, and utilization of native plant communities in the range units
- Assist the Tribe in prioritizing and constructing additional fencing, such as cross fencing for rotational grazing, if feasible
- Assist individual operators in grazing management practices and funding in cooperation with NRCS

# Drought Mitigation

## Sectors, Mitigation Questions, and Possible Actions

### Water Management for Irrigation

**Question: Does the Tribe have a plan to improve efficiency of irrigation infrastructure and farming practices to improve resilience to drought?**

- If a plan is not in place to inspect current irrigation infrastructure for leaks/inefficiencies consider coordinating with the Tribe and identify funding to repair or replace irrigation systems, as needed
- Are improvements needed in how water is measured and diversions regulated so that only the amount necessary is being diverted
- Return to more traditional farming techniques, including smaller fields, traditional soil and water conservation practices, and reducing or eliminating use of tractors
- Are there approaches that could be used to improve field conservation measures (e.g., level fields, line ditches, efficient irrigation/tillage, mulch)
- If a plan or process is not already in place, coordinate with the Tribe and NRCS in identifying farm/pasture leases with areas of/or with the potential for high soil erosion and/or declining soil health that may require amendments or rest/rotation
- Evaluate the feasibility of the Tribe reestablishing hay on abandoned croplands for eventual re-lease by a lessee

### Wildland Fire

**Question: Does the Tribe have a plan to improve its response to wildland fire?**

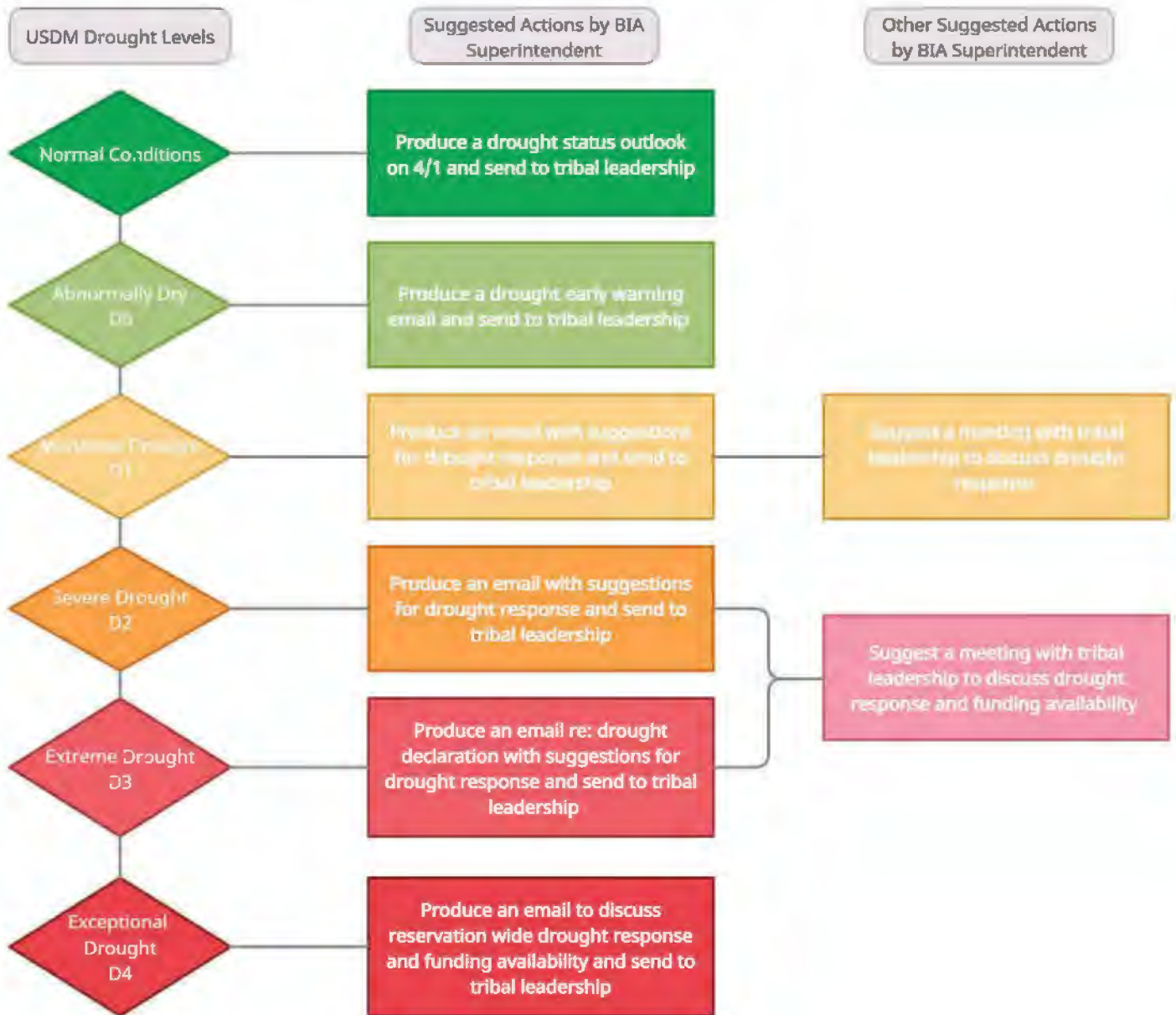
- If one does not already exist, assist the Tribe in developing a georeferenced list of fire hydrants across the Crow Reservation that need to be replaced or a list of potential locations for the placement of fire hydrants across the Reservation
- If one does not already exist, assist the Tribe in identifying the best remote locations and develop water sources for wildland fire fighting in those remote areas
- If applicable, assist the Tribe in creating a burn permit policy to reduce the number of escaped fires
- Assess the status and effectiveness of fuel reduction and prescribed burning policies
- Work with the Tribe on using fire suppressants that reduce or eliminate water requirements





# DROUGHT TOOLS FOR RESPONSE


Drought responses are typically considered at the onset of drought and can vary based on the severity of a drought (i.e., duration, spatial extent, and intensity of drought). The communication roadmap/flowchart below (Figure 6) shows the six USDM drought levels and the corresponding suggested response actions to be implemented by the BIA Crow Agency Superintendent to assist the Tribe.



**Figure 6.** Communication Roadmap for Drought Response

# DROUGHT TOOLS FOR RESPONSE

In addition to the communication roadmap shown in Figure 6, the following response questions and possible actions included in the table below should be considered by the BIA Crow Agency to assist the Tribe. The USDM drought levels refer to Figure 6 drought levels.

Drought Response Sectors, Response Questions, and Possible Actions	
<p><b>Drought Plan Implementation</b></p> <p><b>Question: Have Tribal Drought Plan response actions been triggered?</b></p> <ul style="list-style-type: none"> <li>If the response actions have not been triggered to respond to an ongoing drought, consider steps to work with the Tribe to start response measures consistent with their drought plan or begin implementing best practices for minimizing drought impacts</li> </ul>	
<p><b>Drought Awareness &amp; Communication</b></p> <p><b>Question: How aware is the BIA Regional Office and tribal community that drought is occurring and how is this being communicated?</b></p> <ul style="list-style-type: none"> <li>Consider the level of drought awareness at the BIA Rocky Mountain Regional Office</li> <li>Consider how local information and drought impacts are being communicated to Montana's drought monitoring sub-committee and to the USDM. See information below in the "Report Drought Impacts" section for how to report drought impacts to the Montana Drought Impact Reporter</li> <li>Consider whether communication with Tribal leadership should be increased if drought intensifies</li> <li>What is the current drought outlook for the next three months and has that information been communicated to the tribal leadership</li> </ul>	
<p><b>Access to Drought Emergency Programs</b></p> <p><b>Question: Does the Tribe/tribal operators/community members qualify for emergency assistance programs?</b></p> <ul style="list-style-type: none"> <li>Seek outside assistance (such as for emergency water, feed, personal financial assistance, etc.).</li> <li>See USDA flowchart below (Figure 7) for assistance for livestock producers</li> </ul>	

# DROUGHT TOOLS FOR RESPONSE

## Drought Response

### Sectors, Response Questions, and Possible Actions

#### Domestic Water Supply

**Question: What is the current status of domestic water supply on the Crow Reservation?**

**Could water supply support the community if the drought persists for a year or more?**

- Is the Tribe seeking voluntary limits on non-essential uses
- Is there an emergency/back-up water supply for each public drinking water system
- Does the Tribe need help identifying individuals/companies able to haul water

Response for USDM Drought Levels

D3D4

#### Livestock, Wildlife, & Rangeland

**Question: What response actions are needed for wildlife, livestock, and rangeland to reduce potential drought impacts?**

- Consider if the Tribe requires assistance to purchase, transport (tribal semi-trailer), and/or store bulk emergency feed
- If destocking is necessary does the Tribe have policies in place to reduce grazing pressure on their range units
- What are the options for the Tribe to use/open/permit additional grazing areas
- What are the status of ponds and stock tanks for livestock and wildlife and how likely is it water hauling will be necessary? If so, consider adding a drought impact to the Montana Drought Impact Reporter (see "Report Drought Impacts" section below)
- Is it possible for the Tribe to continue maintaining buffers to protect sensitive areas
- Is a review necessary to adjust regulations during drought to reduce pressure on stressed species

Response for USDM Drought Levels

D1D2D3D4

# Drought Response

## Sectors, Response Questions, and Possible Actions

### Farm & Pastureland

**Question: What response actions are needed for farm and pastureland to reduce potential drought impacts?**

- Are there emergency programs that could support operators to fallow fields

Response for USDM Drought Levels



### Wildland Fire

**Question: What response actions are needed to reduce impacts from drought related wildland fire?**

- Are policies in place to impose fire restrictions
- If the wildland fire season is expected to be above average, are there efforts in place to reduce forest fuels
- Is there a need to increase field personnel

Response for USDM Drought Levels



Oftentimes, funding is needed for responding to drought. The flowchart (Figure 7) and tables on the following pages are tools that can be used to identify disaster or emergency funding programs that may be available at different levels of and impacts from drought.

# DROUGHT TOOLS FOR RESPONSE

Funding Response Program Acronyms:  
 CRP - Conservation Reserve Program  
 ELAP - Emergency Assistance for Livestock Program  
 LFP - Livestock Forage Disaster Program  
 NAP - Noninsured Crop Disaster Assistance Program

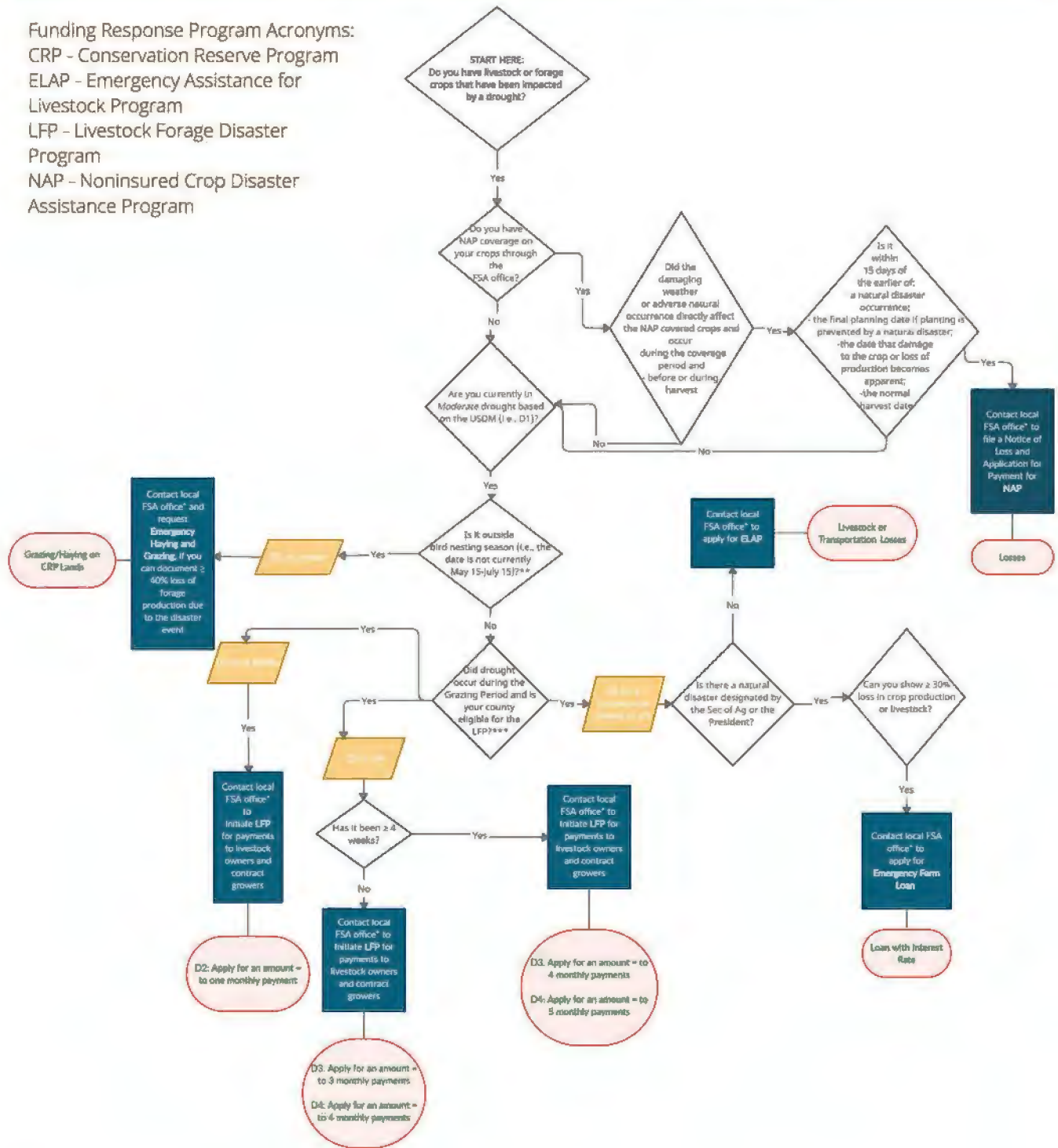


Figure 7. Funding Options for Drought Response

Notes:

\*Local FSA Contacts



\*\*If your county is eligible for CRP Emergency Haying and Grazing



\*\*\*Grazing Period varies each year; some counties are eligible for Livestock Forage Disaster Program



# Emergency Funding Drought Response Programs

## Programs, Eligibility, Triggers, Website

### Emergency Assistance for Livestock (ELAP)

**Eligibility:** All Producers

**Description:** Financial assistance for feed, livestock, and water transportation under certain weather events contributing to loss (i.e., blizzards, fire). For losses not covered by other programs (i.e., LFP, LIP). Or assistance for feed transportation (livestock that rely on grazing)

**Triggers:** For livestock losses must apply no later than 30 days after loss; D2 for 8 consecutive weeks; or anytime if D3 or D4; or if USDA determines a shortage of local/regional feed. Net operating losses must be filed within 30 days of when loss is apparent

USDM Trigger Levels



Website



### Emergency Conservation Program (ECP)

**Eligibility:** FSA County Committee inspects damaged land to determine eligibility; damage from natural disaster/severe drought

**Description:** Help for tribes or farmers/ranchers to repair damaged farmlands caused by natural disasters and to help with water conservation during severe drought

**Triggers:** Producer documents damage with dated photographs/videos, 3rd-party verification. If any portion of the county = D3 or greater; or the county can request with precipitation data showing 40% decrease for 4 months

USDM Trigger Levels



Website



### Emergency Farm Loan (EFL)

**Eligibility:** Farmers/ranchers who qualify under loan restrictions and demonstrate ≥ 30% loss in crop production/ livestock/livestock products

**Description:** Helps eligible farmers/ranchers rebuild and recover from sustained losses. Disaster must be designated by the Secretary of Agriculture or a natural disaster or emergency is declared by the President under the Stafford Act.

**Triggers:** D2 for 8 or more consecutive weeks; D3 or D4

USDM Trigger Levels



Website



### Emergency Haying and Grazing

**Eligibility:** Relief for livestock producers in areas affected by severe drought or similar natural disaster

**Description:** Allows the grazing and/or haying of land associated with a Conservation Reserve Program.

**Triggers:** Producers located in a county that is D2 or greater before or after the last day of the primary nesting season qualify for emergency haying and grazing on all eligible acres

USDM Trigger Levels



Website



# DROUGHT TOOLS FOR RESPONSE

## Emergency Funding Drought Response Programs

### Programs, Eligibility, Triggers, Website

#### Livestock Forage Disaster Program (LFP)

**Eligibility:** The qualifying grazing losses, and/or notification of prohibition to graze Federal land due to drought (all land) and fires must have occurred in the grazing period and crop year

**Description:** Payments to livestock owners/contract growers who have covered livestock that also produce a non-irrigated grazed forage crop or have non-irrigated forage crops specifically for livestock support, or federal agency supported rangeland that has been impacted by natural disaster

**Triggers:** D2 in any area of the county for  $\geq 8$  consecutive weeks during the normal grazing period; D3 in any area of the county at any time during the normal grazing period; D3  $\geq 4$  weeks during the normal grazing period or is rated a D4 at any time during the normal grazing period; or D4  $\geq 4$  weeks during the normal grazing period

USDM Trigger Levels



Website



#### Livestock Indemnity Program (LIP)

**Eligibility:** Livestock owner/contract grower who can provide evidence acceptable to FSA that the eligible cause of loss not only occurred, but directly caused loss or death

**Description:** Eligible livestock owners/contract growers for livestock deaths in excess of normal mortality caused by eligible loss conditions (i.e., adverse weather, disease, loss to animal attacks by federally reintroduced wildlife). Additionally, for those that must sell livestock at a reduced price due to an injury from an eligible loss condition.

Drought is not an eligible adverse weather event except when associated with anthrax. However, extreme heat is often associated with drought and is considered an adverse weather event.

**Triggers:** Owners/contract growers who suffer livestock losses due to an eligible cause of loss must submit a notice of loss and an application for payment to the local FSA office that serves the physical location (i.e., county) where the livestock losses occurred

Website



#### Noninsured Crop Disaster Assistance Program (NAP)

**Eligibility:** Landowner, tenant, or sharecropper who shares in the risk of producing an eligible crop and is entitled to an ownership share of that crop

**Description:** Financial assistance to producers of non-insurable crops to protect against natural disasters that result in lower yields or crop losses, or prevents crop planting

**Triggers:** When a crop or planting is affected by a natural disaster, producers with NAP coverage must notify the FSA office where farm records are maintained; complete Part B of form CCC-576; this must be completed within 15 days of the earliest: natural disaster occurrence; final planting date if planting is prevented by natural disaster; date that damage to crop/loss of production apparent; or normal harvest date

**Eligibility:** To be eligible, producers must timely apply for coverage and pay the applicable service fee at the FSA office by the application closing date. Note that the application service fee

is free to a *socially disadvantaged farmer or rancher*

(including American Indians) and a *\*\*limited resource farmer or rancher*.

**\*\*Website for Limited Resource Farmer/Rancher Tool**



Website



# REPORT DROUGHT IMPACTS

Montana manages a database for reporting drought related impacts. The website contains a questionnaire where you can report on moisture conditions at your location (or at multiple locations). Reporting drought impacts enables better tracking when moisture conditions are improving or deteriorating. You can also view drought impacts at other locations around the state that have already been submitted

The Montana Drought Impact Reporter is located at:



## MONTANA DROUGHT IMPACT REPORTER

### DROUGHT.MT.GOV

Report on drought conditions in your area with a simple questionnaire

Explore maps and graphs of reported drought impacts

View drought status by county






The Montana Department of  
Natural Resources  
& Conservation



## Example of the Montana Drought Impact Reporter Dashboard

Montana Drought Impacts (Water Year 2022)

Quick Dashboard
Additional Functionality

### How Dry or Wet is It?

Drought can affect wildlife, agriculture production, tourism, wildlife and many other areas important to Montana. The Montana Governor's Drought and Water Supply Advisory Committee provides the [Drought Impact Reporter](#), a free, voluntary questionnaire for reporting local, domestic, and foreign.

Explore the results of the Montana Drought Impact Reporter for the current water year (Oct. 1 to Sept. 30). A map of all the results is located in the Additional Functionality tab. This tab also includes a link to download a spreadsheet of the reports that are available.

Maps are updated daily. When a new report is received through the questionnaire it is automatically added to the maps.

For more information visit [Montana Department of Natural Resources & Conservation Drought Mitigation](#), or [Montana State Library Disaster Impact State](#).

### How dry or wet is it?

- Severely Dry
- Moderately Dry
- Mildly Dry
- Near Normal
- Mildly Wet
- Moderately Wet

How Wet or Dry is it?

Mildly Wet 8.7%

Moderately Wet 5.7%

Mildly Dry 4.97%


Severely Dry 72.5%

Moderately Dry 18.31%

Near Normal 2.1%

8/22/2022 - Garfield County


Description: Top pictures August 2022. Bottom picture late June 2022. On a normal year we stay in this pasture for another 30 days. Today we are gathering to send our cows out of county for more grass.



Number of Reports Since 1/1/2022

# 142

Number of Reports by Date



4
1 of 29
7



# WEBSITE LINKS

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## **Drought Monitoring. Page 8 of Drought Guidebook**

- U.S. Drought Monitor - <https://droughtmonitor.unl.edu/>
- Upper Missouri River Basin Drought Dashboard - <https://drought.climate.umt.edu/>
- Montana Current Drought Conditions - <https://storymaps.arcgis.com/stories/76204aa1271a4a7f8a775fc2bba9ef83>
- U.S. Geological Survey (USGS) Water Watch Montana Dashboard - [https://waterwatch.usgs.gov/wwapps/wwgridview.php?st=mt&go=GO&id=wwsa4state&gridcont\\_tp=wwsa4state&full=0&ct=wwsa4state](https://waterwatch.usgs.gov/wwapps/wwgridview.php?st=mt&go=GO&id=wwsa4state&gridcont_tp=wwsa4state&full=0&ct=wwsa4state)
- Monthly and Seasonal Temperature and Precipitation Outlooks - <https://www.cpc.ncep.noaa.gov/products/forecasts/>
- U.S. Monthly and Seasonal Drought Outlooks - <https://www.cpc.ncep.noaa.gov/products/Drought/>
- Natural Resources Conservation Service's National Water and Climate Center - <https://www.nrcs.usda.gov/wps/portal/wcc/home/>
- Wildfire Outlooks - <https://www.nifc.gov/nicc/predictive/outlooks/outlooks.htm>

## **Drought Tools for Mitigation and Recovery**

- USDA's Natural Resources Conservation Service - [www.nrcs.usda.gov](http://www.nrcs.usda.gov)
- Highly Erodible Land Conservation (HELC) and Wetland Conservation (EC) Certification - <https://www.farmers.gov/sites/default/files/documents/Form-AD1026-Highly-Erodible-Land.pdf>

## **Drought Tools for Response. Funding Flow Chart. Page 17 of Drought Guidebook**

- Local FSA Agency contacts - <https://www.farmers.gov/working-with-us/service-center-locator>
- Conservation Reserve Program (CRP) Emergency Haying and Grazing - <https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/Conservation/Haying-and-Grazing/map-Haying%20and%20Grazing.pdf>.
- Counties Eligible for Livestock Forage Disaster Program (LFP) - [https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/Disaster-Assist/Cty\\_PastureTypes\\_Eligible\\_4LFP\\_051922.xls](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/Disaster-Assist/Cty_PastureTypes_Eligible_4LFP_051922.xls)

# WEBSITE LINKS & LITERATURE CITED

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## **Drought Tools for Response. Funding Table. Page 18 of Drought Guidebook**

- Emergency Assistance for Livestock (ELAP) - <https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/emergency-assist-for-livestock-honey-bees-fish/index>
- Emergency Conservation Program (ECP) - <https://www.fsa.usda.gov/programs-and-services/conservation-programs/emergency-conservation/index>
- Emergency Farm Loan - <https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index>
- Emergency Haying and Grazing - <https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/emergency-farm-loans/index>
- Livestock Forage Disaster Program (LFP) - <https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/livestock-forage/index>
- Livestock Indemnity Program (LIP) - <https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/livestock-indemnity/index>
- Noninsured Crop Disaster Assistance Program (NAP) - <https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/noninsured-crop-disaster-assistance/index>
- Limited Resource Farmer/Rancher Application Tool - <https://lrftool.sc.egov.usda.gov/Help.aspx>

## **Report Drought Impacts. Page 21 of Drought Guidebook**

- Questionnaire where you can report on moisture conditions - <https://survey123.arcgis.com/share/9256e9943a964af5ad7e0280e1407712>

## **Literature Cited**

- Redmond, K. T. (2002). THE DEPICTION OF DROUGHT, *Bulletin of the American Meteorological Society*, 83(8), 1143-1148. Retrieved Nov 28, 2022, from [https://journals.ametsoc.org/view/journals/bams/83/8/1520-0477-83\\_8\\_1143.xml](https://journals.ametsoc.org/view/journals/bams/83/8/1520-0477-83_8_1143.xml)
- Svoboda, M., LeComte, D., Hayes, M., Heim, R., Gleason, K., Angel, J., Rippey, B., Tinker, R., Palecki, M., Stooksbury, D., Miskus, D., & Stephens, S. (2002). THE DROUGHT MONITOR, *Bulletin of the American Meteorological Society*, 83(8), 1181-1190. Retrieved Nov 28, 2022, from [https://journals.ametsoc.org/view/journals/bams/83/8/1520-0477-83\\_8\\_1181.xml](https://journals.ametsoc.org/view/journals/bams/83/8/1520-0477-83_8_1181.xml)

