

FORT PECK: 3,675M ACRE FEET
22.6% TOTAL FLOOD CONTROL STORAGE

GARRISON: 5,711M ACRE FEET
35% TOTAL FLOOD CONTROL STORAGE

DAHE: 4,303M ACRE FEET
26.4% TOTAL FLOOD CONTROL STORAGE

BIG BEND: 177K ACRE FEET
1.1% TOTAL FLOOD CONTROL STORAGE

FORT RANDALL: 2,294M ACRE FEET
14.1% TOTAL FLOOD CONTROL STORAGE

GAVINS POINT: 133K ACRE FEET
0.8% TOTAL FLOOD CONTROL STORAGE



**US Army Corps
of Engineers®**
Northwestern Division

MISSOURI RIVER WATER MANAGEMENT DIVISION

WWW.NWD.USACE.ARMY.MIL/MRWM

FALL PUBLIC WEBINARS

Get an update on runoff and reservoir operations and planned operations for next year's runoff season.

Webinar Schedule: Nov. 2, 2020

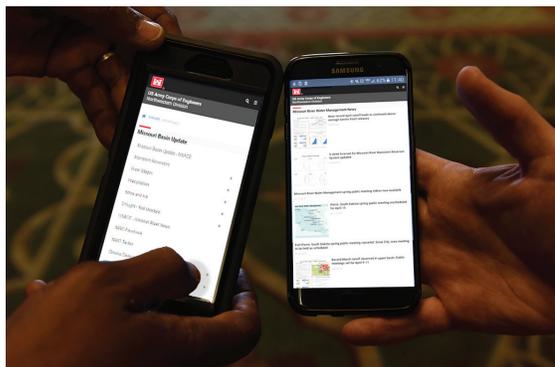
AFTERNOON

1:30 PM Central Time | Access Code: 199 733 6436

EVENING

6:00 PM Central Time | Access Code: 199 565 3823

Or join by phone +1-844-800-2712 using the access codes above.



BASIN WEB APP

Save this web page to your smart phone's home screen for current Missouri Basin forecasts and information from official sources.

go.usa.gov/xE6fC



“Participation in public meetings by all with a vested interest, including elected officials, Tribal leaders, industry, media, and the general public, ensures a common understanding of our goals and requirements when making decisions on Missouri River operations.”

— BRIG. GEN. D. PETER HELMLINGER
COMMANDER, USACE NORTHWESTERN DIVISION

AVG. ANN. RUNOFF

25.8

MILLION ACRE FEET (MAF)

2020 RUNOFF*

30.2

MAF - *FORECAST

2020 PEAK STORAGE

61.8

MAF - JULY 16

STORAGE CAPACITY

72.4

MAF

2020 PEAK SYSTEM
(GAVINS PT.) RELEASE

38

KCFS
1,000 CU FT/SEC

AVERAGE ANNUAL
HYDROPOWER GENERATION

9.4 BILLION
KILOWATT HOURS

2020 FORECAST
HYDROPOWER GENERATION

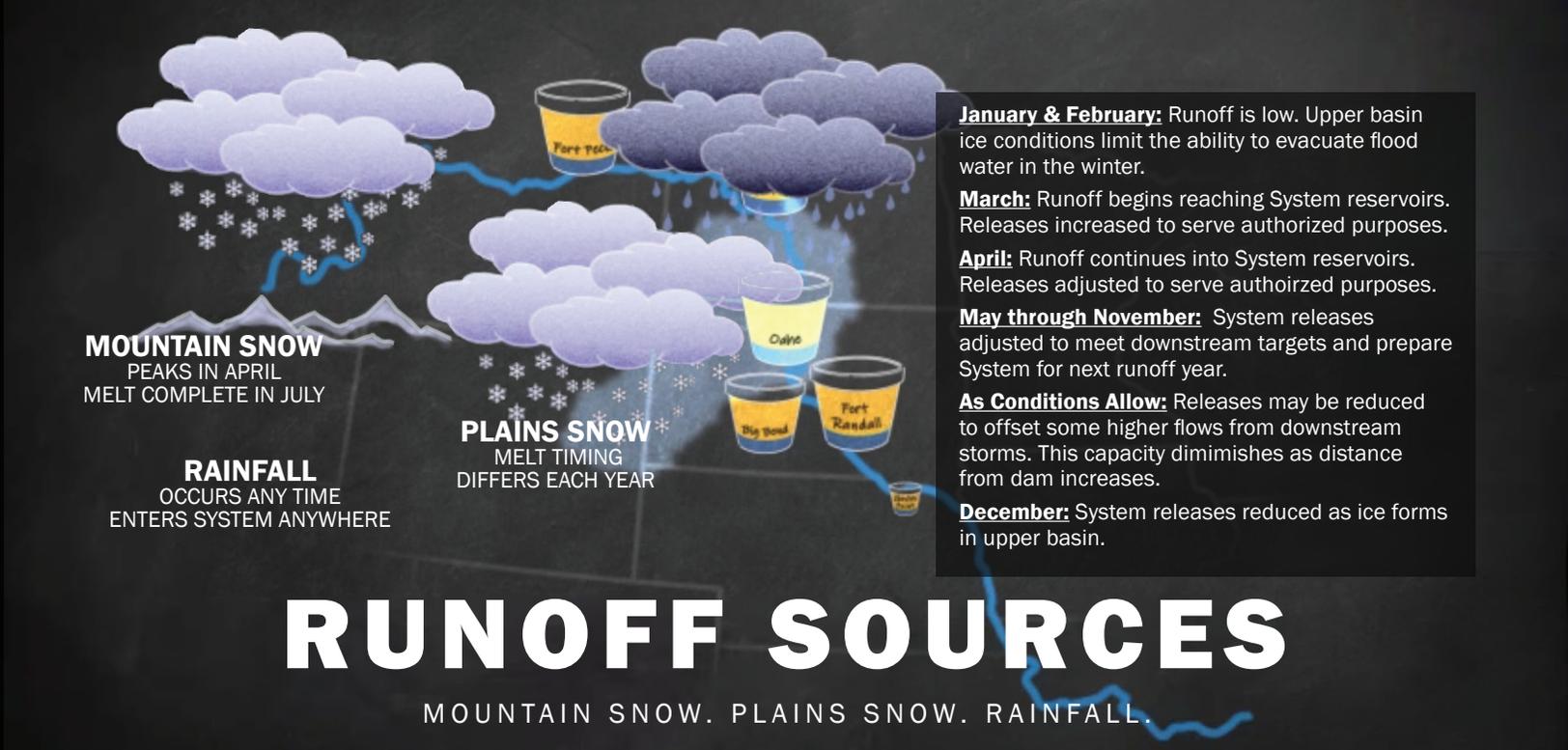
10.1 BILLION
KILOWATT HOURS

2020 MINIMUM WINTER
SYSTEM RELEASE*

17 KCFS
*FORECAST

MISSOURI.WATER.MANAGEMENT@NWD02.USACE.ARMY.MIL

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MOUNTAIN SNOW
PEAKS IN APRIL
MELT COMPLETE IN JULY

RAINFALL
OCCURS ANY TIME
ENTERS SYSTEM ANYWHERE

PLAINS SNOW
MELT TIMING
DIFFERS EACH YEAR

January & February: Runoff is low. Upper basin ice conditions limit the ability to evacuate flood water in the winter.

March: Runoff begins reaching System reservoirs. Releases increased to serve authorized purposes.

April: Runoff continues into System reservoirs. Releases adjusted to serve authorized purposes.

May through November: System releases adjusted to meet downstream targets and prepare System for next runoff year.

As Conditions Allow: Releases may be reduced to offset some higher flows from downstream storms. This capacity diminishes as distance from dam increases.

December: System releases reduced as ice forms in upper basin.

RUNOFF SOURCES

MOUNTAIN SNOW. PLAINS SNOW. RAINFALL.

MISSOURI RIVER RUNOFF FORECASTS ARE DEVELOPED USING THE BEST AVAILABLE INFORMATION FROM MULTIPLE SOURCES.



The past few years have provided a variety of challenges to everyone in the Missouri River Basin. In 2018 we saw above normal mountain snowpack, the storms in 2019 were devastating, and our daily routines are still impacted by COVID-19 health measures.

Through it all, the Missouri River Water Management Division remains committed to open, transparent communication about

the conditions that drive the decisions we make when regarding Mainstem System Reservoir operations.

In accordance with continued social distancing recommendations, our fall public meetings will be webinars that provide the current basin conditions, and an outlook for 2021 runoff.

OUR WEBSITE PROVIDES PUBLIC ACCESS TO THE DATA USED TO CREATE OUR FORECASTS, OUR ANALYSIS OF THE CONDITIONS, AND OUR FORECASTS. UPDATES OCCUR DAILY, WEEKLY, MONTHLY AND MORE OFTEN AS NEEDED.

The four primary sections of the Missouri River Water Management website are:

[Current Conditions](#) | [Forecasts](#) | [Reports](#) | [Statistics](#)

This information is updated at regular intervals.

HOURLY

- [Plot data](#)
- [Reservoir elevations](#)
- [Reservoir releases](#)
- [River stages](#)

DAILY

- [Reservoir bulletin](#)
- [River bulletin](#)
- [Gavins Point release forecast](#) (provisional*)

*NWS issues official forecasts

WEEKLY

- [3-week forecast*](#)
- [Mountain Snowpack](#)
- [Basin update*](#)

*More often as needed

MONTHLY

- [System statistics](#)
- [Runoff forecast*](#)
- [News release*](#)
- [Conference calls*](#) (Jan-June)

*More often as needed

YEARLY

- [Annual Operating Plan](#)
- [Summary of Operations](#)
- [2 x Public Meetings](#)

WHEN RUNOFF IS LOW,
RELEASES ARE NEEDED TO
SERVE SYSTEM PURPOSES.
WATER IS RELEASED FROM
THE CARRYOVER AND
MULTIPLE USE ZONES.
(IN YELLOW)

UNREGULATED RUNOFF
ENTERS THE MISSOURI
RIVER WITHOUT
BEING CAPTURED IN
A RESERVOIR WITH
CONTROLLED RELEASES.
(IN WHITE)



US Army Corps
of Engineers®



Natural Resources Conservation Service



NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE



NATIONAL WEATHER SERVICE



USGS
science for a changing world



BUREAU OF
RECLAMATION

**DATA. INFORMATION.
ANALYSIS. DECISION-MAKING.
COMMUNICATION.**

The Missouri River Basin Water Management Division prepares its reservoir and release forecasts in collaboration with agencies such as the National Weather Service, US Geological Survey, US Bureau of Reclamation, Natural Resources Conservation Service.

The long-range, or [Calendar Year Runoff Forecast](#), is issued at the beginning of each calendar year and updated at the beginning of each month to reflect realized runoff and update the forecast for the remainder of the year.

Key stakeholders including elected officials and their staff, Tribal leaders, partner agencies, and the media are invited to participate in [monthly calls](#), typically held from January through June, to learn forecast updates and participate in a forum for an improved understanding of the forecast process.

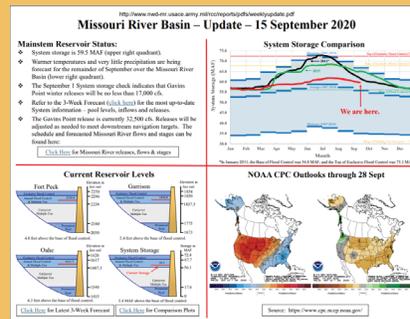
More than 1,500 list subscribers including key stakeholders and members of the public receive the [monthly forecast update](#). Twice annually, in the spring and fall, [public meetings](#) are held to provide updated forecast information and hear public concerns.

To be added to the email list visit: <https://www.nwd.usace.army.mil/MRWM/Questions/> or send an email to missouri.water.managment@nwd02.usace.army.mil. Please include your name and the state where you are located for location-specific correspondence.

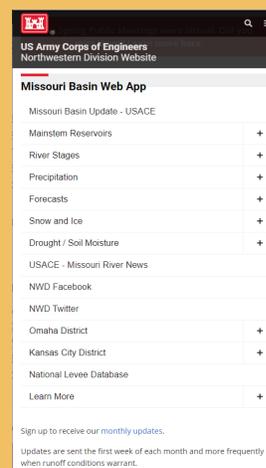
BASIN UPDATES

Missouri Basin Update Graphic: go.usa.gov/xE6wa

Missouri Basin Web App: go.usa.gov/xE6fC



The **Missouri Basin Update** is a graphical snapshot of basin conditions. The graphic is published weekly or more often, when necessary. Information comes from USACE, NWS, NRCS and other partners.



The **Missouri Basin Web App** provides a list of key links from the Missouri River Water Management website including the Basin Update graphic (shown above), daily bulletins, reservoir and river levels, as well as information from NWS, NRCS, and USGS.

Save the Web App to your smart phone or tablet's come screen to easily access the most up-to-date information on Missouri River Mainstem System reservoir operations.

EIGHT AUTHORIZED PURPOSES

Human life and safety are our priority in reservoir operations. The system is runoff driven with the operational priorities determined by runoff conditions.



FLOOD CONTROL

All 2020 flood water evacuated from System before 2021 runoff season. [Actual runoff drives operational decisions.](#)



NAVIGATION

The navigation support season is typically from March 1 through December 1 at the mouth of the Missouri River. [The level of flow support is based on System storage.](#)



HYDROPOWER

Above average generation for 2020 - 10.1 billion kilowatt hours. [Scheduled outages](#) for maintenance and repairs may require using regulating tunnels and spillways.



WATER SUPPLY | IRRIGATION WATER QUALITY | RECREATION

These purposes require "access to water" for intakes to draw water from reservoirs and rivers.



FISH AND WILDLIFE

Allow reservoirs pools to remain steady or rise during forage fish spawn from April to May. Favor one of "big three" reservoirs if runoff is low.

APPLICABLE LAWS

In operating and maintaining the Missouri River Mainstem System for the authorized purposes, the Corps must comply with all applicable laws and regulations, including the Endangered Species Act.

MISSOURI RIVER MAINSTEM SYSTEM RESERVOIRS

STORAGE CAPACITY

EXCLUSIVE FLOOD CONTROL ZONE

GENERALLY EMPTY, CAPTURES WATER IN LARGEST OF FLOODS

CARRYOVER MULTIPLE USE POOL

A STORAGE RESERVE TO SERVE SYSTEM PURPOSE NEEDS DURING LOW RUNOFF YEARS AND EXTENDED DROUGHT



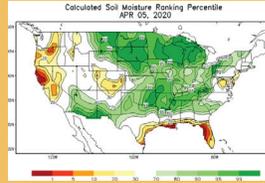
ANNUAL FLOOD CONTROL & MULTIPLE USE ZONE

CATCHES UPPER BASIN RUNOFF THAT COULD CAUSE FLOODING AND METERS IT OUT TO SERVE ALL THE AUTHORIZED PURPOSES

PERMANENT POOL

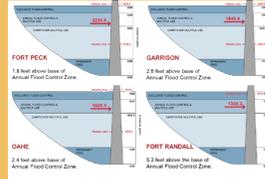
DESIGNED TO BE PERMANENTLY FILLED WITH WATER

INFORMATION USED FOR FORECAST DEVELOPMENT



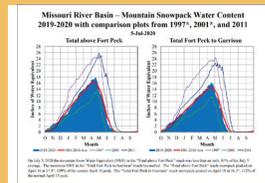
SOIL SATURATION

[Saturated soil](#) is less likely to absorb moisture. Soil saturation also influences frost depth. Frozen saturated soil absorbs very little moisture. [Dry soil](#) will absorb some rainfall. Runoff differs depending on soil saturation.



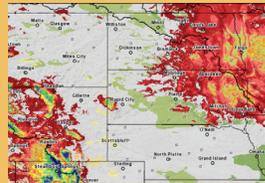
SYSTEM STORAGE

The [amount of space available to store runoff](#) at each project influences how much runoff from mountain and plains snowmelt, and upstream rainfall can be captured.



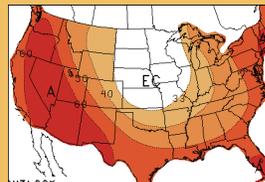
MOUNTAIN SNOWPACK

In October, [mountain snow](#) typically begins to accumulate and peaks in April. Rapid snowmelt can occur with warm temperatures and rain on snow. Mountain snowmelt is usually complete by early July.



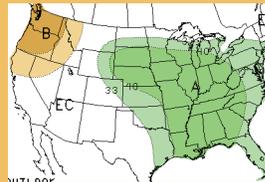
PLAINS SNOW

[Plains snow](#) falls and melts in the late fall and early winter. A seasonal maximum often occurs in February. Rapid melting can occur with warm temperatures and rain on snow.



TEMPERATURES

[Temperatures](#) can impact runoff by causing snowmelt as well as evaporating soil moisture.



RAINFALL

Basin [rainfall](#) runs off to the Missouri River but, when, where and how much enters the river is monitored via a network of river gages. Once runoff reaches a gage, water managers can determine when, where and how much will reach a reservoir.