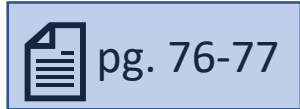


# Operational Improvements - FIIP Operations Model

## Appendix 3.5 (3) (e) (iv):

- e. **Water Management Planning Tools** – The CITT shall develop or commission development of water management planning tools to support FIIP water management and Adaptive Management according to the implementation schedule provided in Appendix 3.4.
- iv. The CITT shall develop operational models or tools that provide for short-term (weekly to daily) instream flow and irrigation water supply adjustments. The Project Operator, in consultation with the CITT, may refine and update operational models or tools.



# Operational Improvements - FIIP Operations Model

## Appendix 3.4

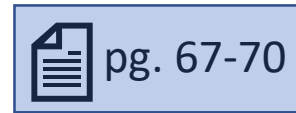
Tables:

3.0 (Mission South)

4.0 (Mission North)

5.0 (Jocko Valley)

6.0 (Little Bitterroot Valley)



<u>3. Operations Model</u>					
a. CITT Scope of Model Work					
b. CITT Contract for Services					
c. CITT/Contractor Construct Model			Modeling applies to Mission Valley South and North Areas		
d. CITT Run and Maintain Model					Ongoing for Duration of Compact

# Operational Improvements - FIIP Operations Model

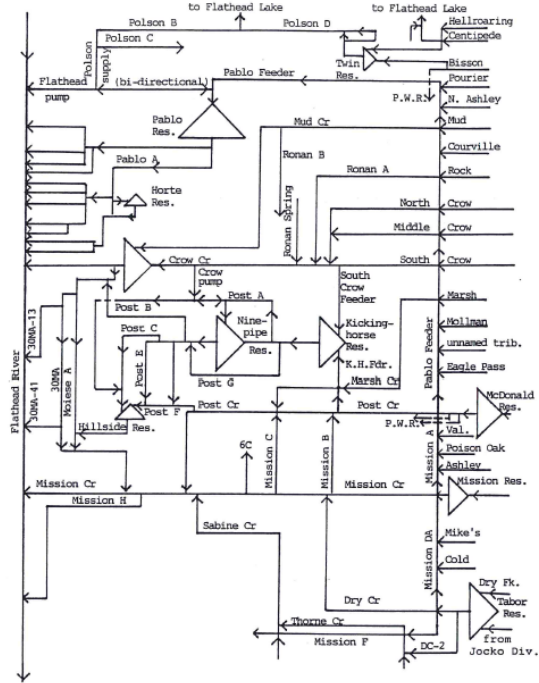
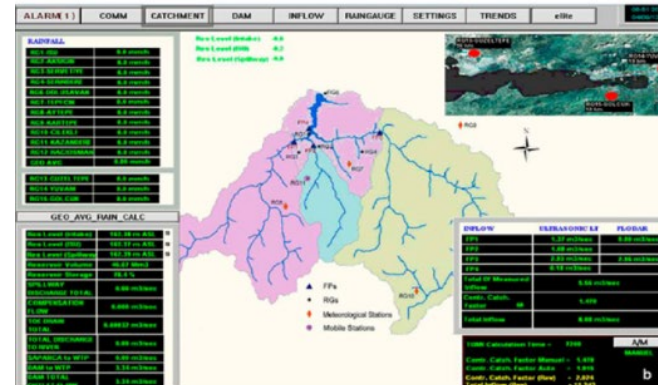
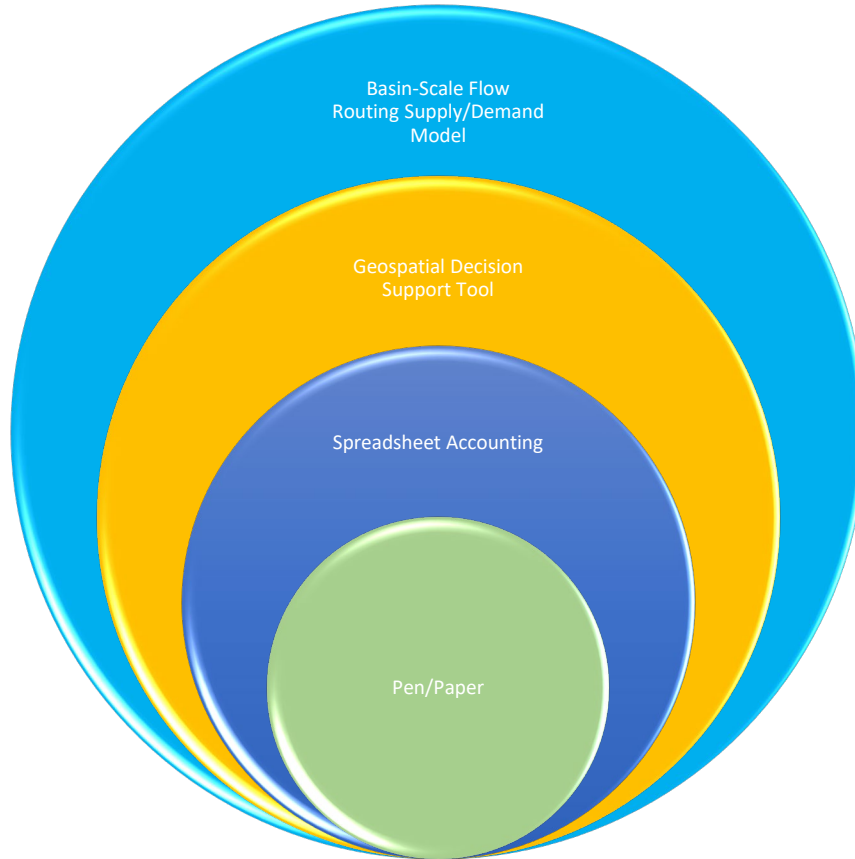


Figure 2. Mission Division flow schematic.



# Operational Improvements - FIIP Operations Model



## At What Scale?

- Reservoir/Supply
- Major Headworks
- RDA Administrative Areas
- Laterals
- Sub Laterals
- Farm Delivery

# Operational Improvements - FIIP Operations Model

## REQUEST FOR QUALIFICATIONS (RFQ) WATER OPERATIONAL TOOL DEVELOPMENT

### CONFEDERATED SALISH AND KOOTENAI TRIBES (CSKT) DIVISION OF ENGINEERING AND WATER RESOURCES

#### SECTION 1: SOLICITATION NOTICE

##### 1.1: Notice

Notice is hereby given that the Confederated Salish and Kootenai Tribes has released this Request for Qualifications, and will be accepting Statements of Qualifications until DATE from professional consulting and engineering firms having experience in water planning, irrigation water management, and basin-scale water modeling. Firms that have experience developing or adapting operational tools for irrigation water allocation are encouraged to apply.

##### 1.2 Definitions

**Contracting Officer (CO):** Individual delegated by the Owner to execute contracts. Currently, \_\_\_\_\_.

**Contracting Officer Representative (COR):** Individual delegated by the Contracting Officer to manage the Consultant contract. Currently, Brian Hogenson, Water Management and Planning Program Manager, DEWR.

**Consultant:** The Consultant is the Offeror who is selected to provide technical services. The term Consultant is not recognized as such until a fully executed contract is completed. A consultant may respond to this RFQ using a Subconsultant team approach. However, the Owner will execute a contract solely with the Consultant, and the Consultant will bear responsibility for Subconsultant activity.

**Flathead Indian Irrigation Project (FIIP):** An entity within the Bureau of Indian Affairs tasked with the operation and maintenance of the irrigation project.

**Offeror:** A prospective consultant that is submitting in response to this RFQ. Following the endpoint in the selection process, the Owner will expect to develop a contract with the selected Offeror.

**Owner:** The Confederated Salish and Kootenai Tribes (CSKT), a sovereign nation, is the Owner for the Projects, but not the FIIP Structures.

**Parent Contract:** The Parent Contract will establish the relationship between the Owner and the Consultant and will identify cost considerations and the process to authorize individual tasks and task fees. The Parent Contract will incorporate, by reference, this RFQ and the SOQ prepared by the Consultant. Appendix B defines certain aspects of the CSKT Consultant Agreement, including the requirement that the agreement shall be based on the CSKT Standard Form Contract.

**Project Team:** The Project Team consists of the Consultant and Subconsultant(s), the Owner personnel, Bureau of Indian Affairs (BIA) personnel, FIIP personnel, and additional expertise as identified and designated by the Owner.

-1-

**Request for Qualifications (RFQ):** The RFQ is the formal solicitation to a prospective Offeror to demonstrate their qualifications to complete the technical duties sought by CSKT

**Subconsultant (if any):** A member of the Offeror team who is clearly defined in the Offerors SOQ. Subconsultant(s) will contract directly with the Consultant, who will bear responsibility for Subconsultant activity.

**Statement of Qualifications (SOQ):** The written SOQ prepared by the Offeror, and prepared as described in Sections 3 and 4 below. An SOQ will be the formal submittal by the Offeror intended to fulfill the objectives of the RFQ. Offerors who meet the qualification criteria may be selected for a follow-up interview process, at the discretion of the Owner.

**Task Order:** Tasks will tier from the Parent Contract and will be authorized by Task Order. Task Orders will identify the scope of work for a task and the associated fee for the task.

##### 1.3 Project Overview

The Confederated Salish and Kootenai Tribes Division of Engineering and Water Resources is soliciting SOQs from well-qualified water resource consulting firms to provide services related to water resource management. The selected firm would aid CSKT's Water Management Program in the development of water operational planning products.

Management of surface water resources on the Flathead Indian Reservation is highly nuanced and variable across the landscape. Three broad geographical areas – the Jocko Valley, Mission Valley, and Little Bitterroot areas – are supplied by their local drainage networks and are regulated by a total of 17 storage reservoirs. Irrigation demand includes approximately 127,000 acres of historically irrigated land served by a 1,100-mile canal network. Additionally, minimum enforceable stream flows, established at 33 flow points, are set to be phased in with the enforceability of the water rights established in the CSKT Water Compact. With this multi-faceted water management framework, irrigation project operators need clear operations tools capable of displaying water supply conditions in real-time and informing water management decisions.

The desired operational model will draw from the historical record from 94 real-time gages operated by CSKT – representative of natural flows, diverted flows, and reservoir storage levels. Additional data sources may include historical SNOTEL data, evapotranspiration and crop-water use data, and existing geospatial databases identifying the irrigation canal network and irrigated acres. Prospective Contractors are invited to demonstrate their experience and creativity in solving this challenge. The expected outcome from this project will be a tool that irrigation project operators can use to make decisions about water allocation in real-time.

The time frame for this project will range from interim benchmark deliverables to completion of a final operational tool. It is anticipated that specific areas of the project will be prioritized based on urgency of water management improvements. The selected firm will have the ability to adapt to different time ranges and focus resources specifically aimed at distinct tasks within the project.

##### 1.4 Project Location

The predominant nature of the work will be technical report production and remotely-based interaction between entities at CSKT and the selected firm. Field activities provided in the Parent Contract will be largely conducted within the boundaries of the Flathead Indian Reservation, unless otherwise stated.

-2-

#### SECTION 2: PROJECT DELIVERY

##### 2.1 Water Resource Operational Tool(s)

The Consultant will work with CSKT to develop a water resource operational tool that will improve water management across the entire management area of concern, including the Flathead Indian Reservation and its source waters. This tool may include volumetric source water availability, reservoir storage levels, irrigation diversion rates, irrigated acreage demand, and instream flows so that proper water management decisions can be made.

#### 1.5 Schedule of Activities

Activity	Date
Issue RFQ	March 10, 2025
Deadline to submit questions to CSKT	March 31, 2025
Last day for CSKT to issue addenda and clarifications	April 14, 2025
Deadline for submissions of SOQ	May 1, 2025
Final selection of firm and contracting process begins	June 5, 2025

#### 1.6 Communications with CSKT

Unless authorized by the CO in writing, no other CSKT official or employee is empowered to speak for the CSKT with respect to this RFQ, besides the COR.

Any explanation desired by an Offeror regarding the meaning or interpretation of the RFQ must be requested in writing from the COR, via email, to [brian.hogenson@cskt.org](mailto:brian.hogenson@cskt.org), and no later than the date listed in 1.5 Schedule of Activities. Oral explanations or instructions given before the award of the contract shall not be binding.

Any answers to questions given to prospective Offerors concerning the clarification of, or any changes to, the RFQ solicitation document will be provided to prospective Offerors who identify themselves to the COR, as an addendum to the RFQ. All addenda will be shared with prospective Offerors by posting to the website <https://cskt.org/water-management/> by the date specified in Section 1.5 Schedule of Activities.

#### 1.7 Written Inquiries

All inquiries regarding this RFQ shall be submitted to the COR on or before the time specified for deadline to submit questions to CSKT, as found in 1.5 Schedule of Activities.

A response from the Owner to all inquiries shall be sent via email to prospective Offerors who identify themselves to the COR, on or before the time and date shown for last day for CSKT to issue addenda and clarifications as found in 1.5 Schedule of Activities. Responses will also be posted to the CSKT website following the same schedule as immediately above.

#### 1.8 Submittal Instructions

SOQs are due to the COR by the time and date listed in 1.5 Schedule of Activities. Email an electronic copy of the submission in PDF format to the COR: [brian.hogenson@cskt.org](mailto:brian.hogenson@cskt.org). Maximum document size is 9MB. Sole responsibility rests with the Offeror to see that their submission is received on time at the stated destination. An SOQ may be withdrawn prior to the due date and time by written request. SOQs received after the time and date listed in 1.5 Schedule of Activities may be deemed non-responsive.

#### 1.9 Selection/Procurement Process

A single Offeror will be selected through a qualifications evaluation process. Interested Offerors will submit a SOQ. A selection team will evaluate each response according to the selection criteria identified in Section 4.0 Technical Selection Criteria. The Owner expects to create a short list of up to three Offerors, and may conduct formal interviews from this list. The Owner will select the Offeror based on SOQs received and formal interviews conducted. The Owner may conduct a due diligence review on the Offerors receiving the highest scores. The Owner reserves the right to select a Consultant without conducting interviews.

-3-

The Owner will enter into negotiations with the selected Offeror and attempt to execute a contract upon completion of negotiation of fees and contract terms. If the Owner is unsuccessful in negotiating a contract, the Owner may then negotiate with the next qualified Offeror until a contract is executed, or the Owner may decide to terminate the selection process. Once a contract is executed with the successful Offeror, the procurement is complete.

##### 1.10 Award of Project/Right to Reject

The Owner intends to award the contract to the successful Offeror whose SOQ conforms to this RFQ and is most advantageous to the Owner. The Owner reserves the right to reject any and all SOQs and to waive

#### 3.4 Submission Contents

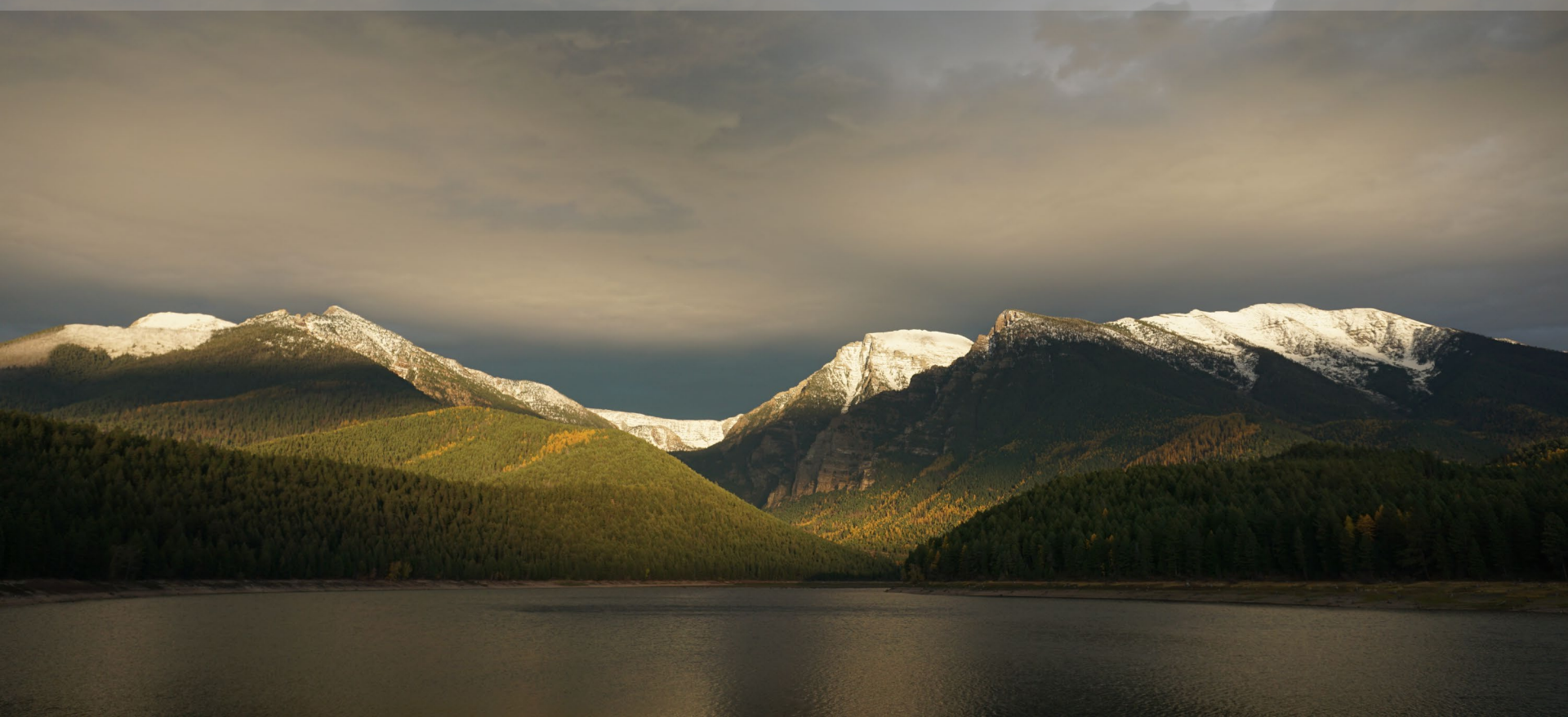
Submissions shall be organized as follows and meet the section page limits noted below.

##### 3.4.1 Front Matter

- Cover Letter – Describes overall plan to successfully deliver the project (two pages maximum).
- Completed Addendum Form – Appendix A of RFQ (one page).
- Signed Cover Sheet – Appendix B of RFQ (one page).

##### 3.4.2 Statement of Qualifications

# 2025 Water Supply Outlook (02/12/25)



Approximate date	Purpose of Meeting
End of January	Review reservoir carryover and initial projection of water supply, tentatively categorize water-year type
End of February	Review reservoir carryover and initial projection of water supply, tentatively categorize water-year type, set March wet and normal year streamflow targets, modify MEF timing (if applicable) to match anticipated snowmelt runoff
End of March	Refine projection of water supply, tentatively categorize water-year type, and set April wet and normal streamflow targets, modify MEF timing (if applicable) to match anticipated snowmelt runoff
Mid-April	Refine projection of water supply, categorize water-year type, update wet and normal streamflow targets for the month, set initial RDAs based on water year type, modify MEF timing (if applicable) to match anticipated snowmelt runoff
Early May	Refine projection of water supply, update water-year type (if applicable), set wet and normal streamflow targets for the month, review initial RDAs based on water year type, taking into account any changes in water year type, modify MEF timing (if applicable) to match anticipated snowmelt runoff
Mid-May	Refine projection of water supply, update water-year type, update wet and normal streamflow targets for the month, update RDAs based on any changes in water year type, modify MEF timing (if applicable) to match anticipated snowmelt runoff
Early June	Refine projection of water supply, update water-year type (if applicable), set wet and normal streamflow targets for month, quantify portion of RDAs used to date, modify MEF timing (if applicable) to match anticipated snowmelt runoff
Mid June	Finalize projection of water supply and water-year type, update wet and normal streamflow targets for month, modify RDAs based on any changes in water year type, modify MEF timing (if applicable) to match anticipated snowmelt runoff
Early July	Set wet and normal streamflow targets for the month, evaluate RDAs, quantify portion of RDAs used to date
Mid July	Update wet and normal streamflow targets for the month
Early August	Set wet and normal streamflow targets for the month, evaluate RDAs, quantify portion of RDAs used to date
Early September	Set wet and normal streamflow targets for the month, quantify portion of RDAs used to date
Early October	Discuss annual reporting and water operations for the completed irrigation season, develop long-range forecast based on climatic indicators
Early December	Finalize annual reporting of water measurement, refine long-range forecast based on climatic indicators

# Appendix

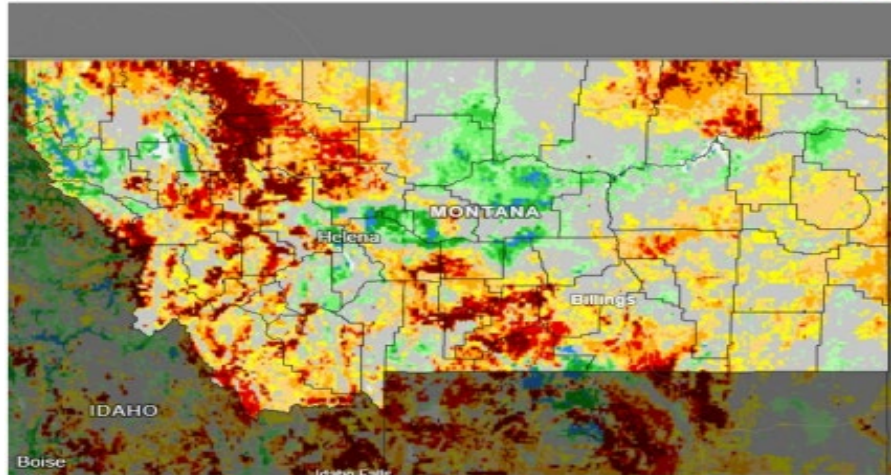
## 3.5 Timeline



# Montana Water Supply Outlook Report

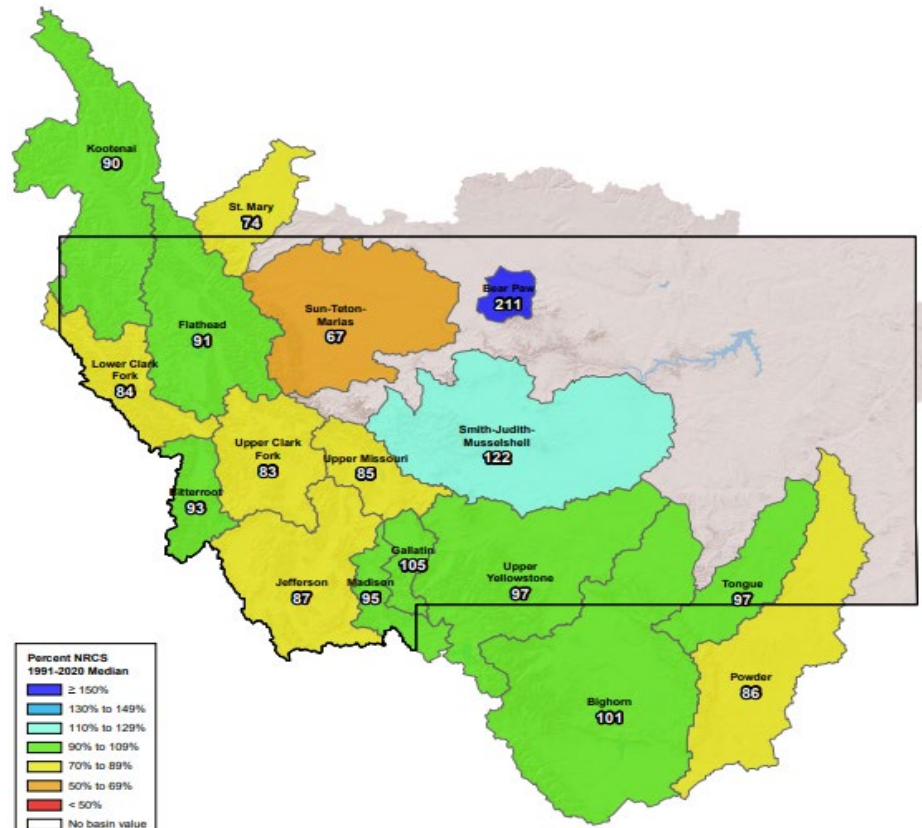
January 1, 2025

NASA SPoRT-LIS 0–100 cm Soil Moisture Percentile



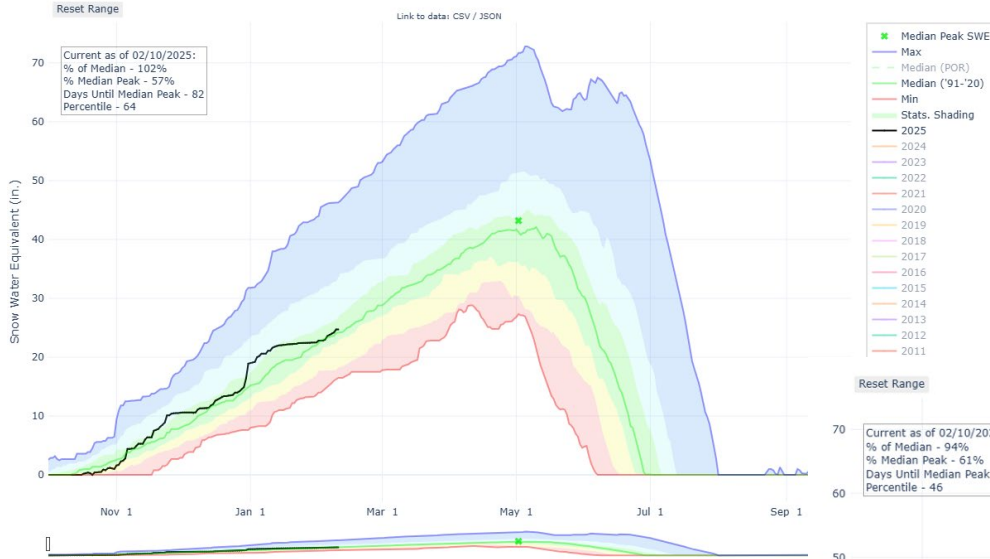
“ While the recent improvement in snowpack conditions is encouraging, there is potential that last year’s well below normal snowpack will have implications for the upcoming runoff season. A below-normal snowpack during the previous season can result in reduced soil moisture and low streamflow levels leading into the current season. In such cases, as the snow melts in the spring, the soil may absorb much of the water, potentially reducing available surface water. Although September 2024 brought above-normal precipitation to part of Montana, drought conditions persisted leading into this winter and remain a concern. Normal to above-normal snowpack conditions this winter will be necessary to offset the recent dry conditions. ”



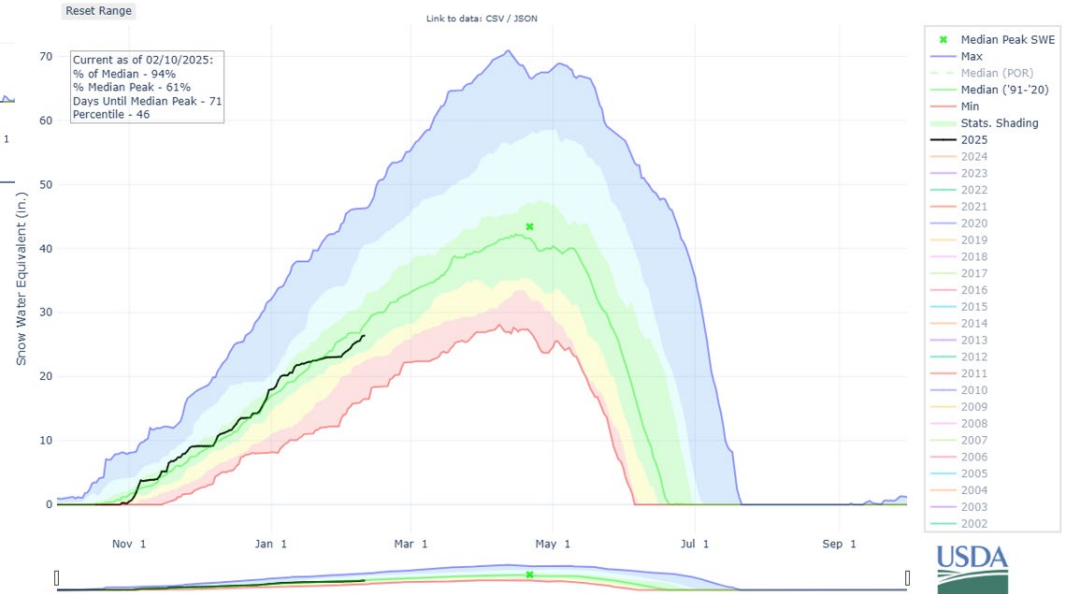


Snow Water Equivalent	<b>Montana SNOTEL</b> Percent NRCS 1991-2020 Median	February 9, 2025, end of day
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# Moss Peak – Elev. 6760'



# North Fork Jocko – Elev. 6110'



# ENSO – La Niña

## Summary

ENSO Alert System Status: [La Niña Advisory](#)

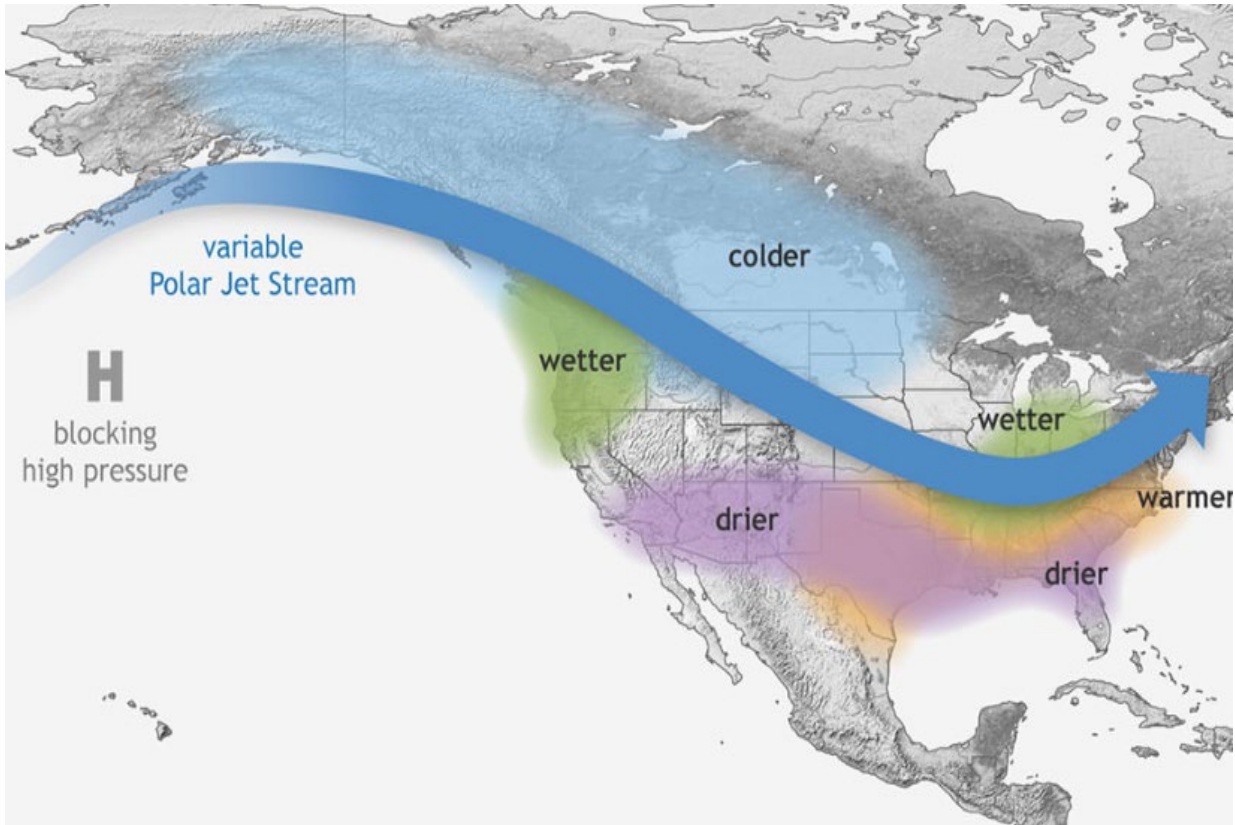
La Niña conditions are present.\*

Equatorial sea surface temperatures (SSTs) are below average in the central and east-central Pacific Ocean.

La Niña conditions are expected to persist through February-April 2025 (59% chance), with a transition to ENSO-neutral likely during March-May 2025 (60% chance).

\* Note: These statements are updated once a month (2<sup>nd</sup> Thursday of each month) in association with the ENSO Diagnostics Discussion, which can be found by clicking [here](#).

# ENSO – La Niña



During La Niña events, trade winds are even stronger than usual, pushing more warm water toward Asia. Off the west coast of the Americas, upwelling increases, bringing cold, nutrient-rich water to the surface. With this shift, **areas in the northern U.S. and Canada are wetter and colder than usual.**

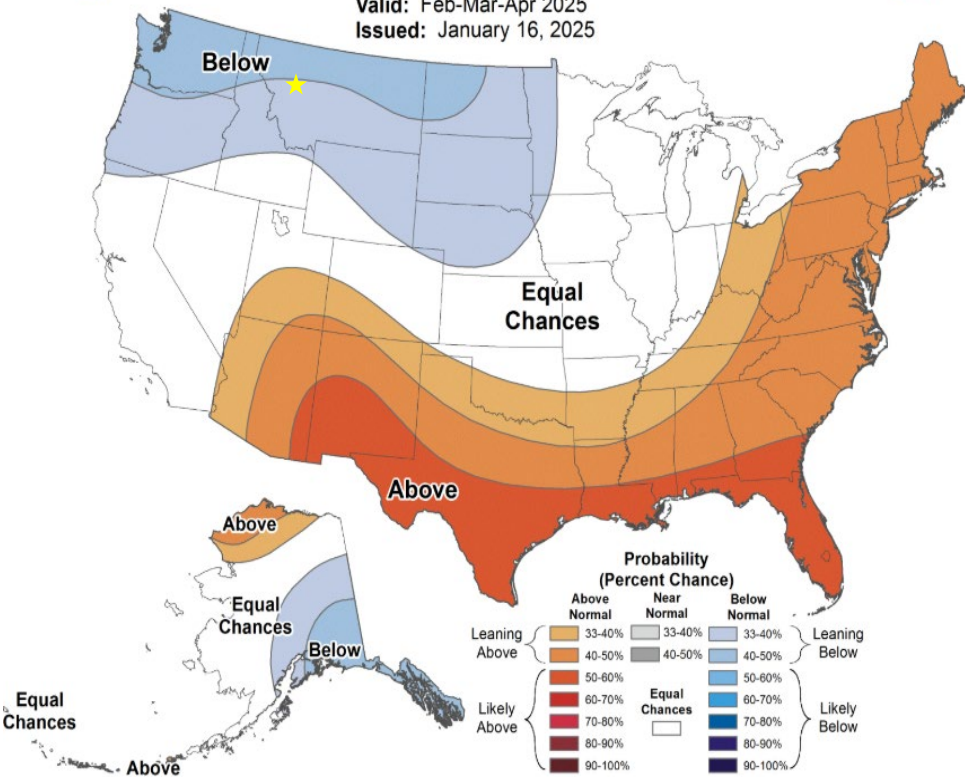
# Three Month Outlook – Feb/Mar/April 2025



## Seasonal Temperature Outlook



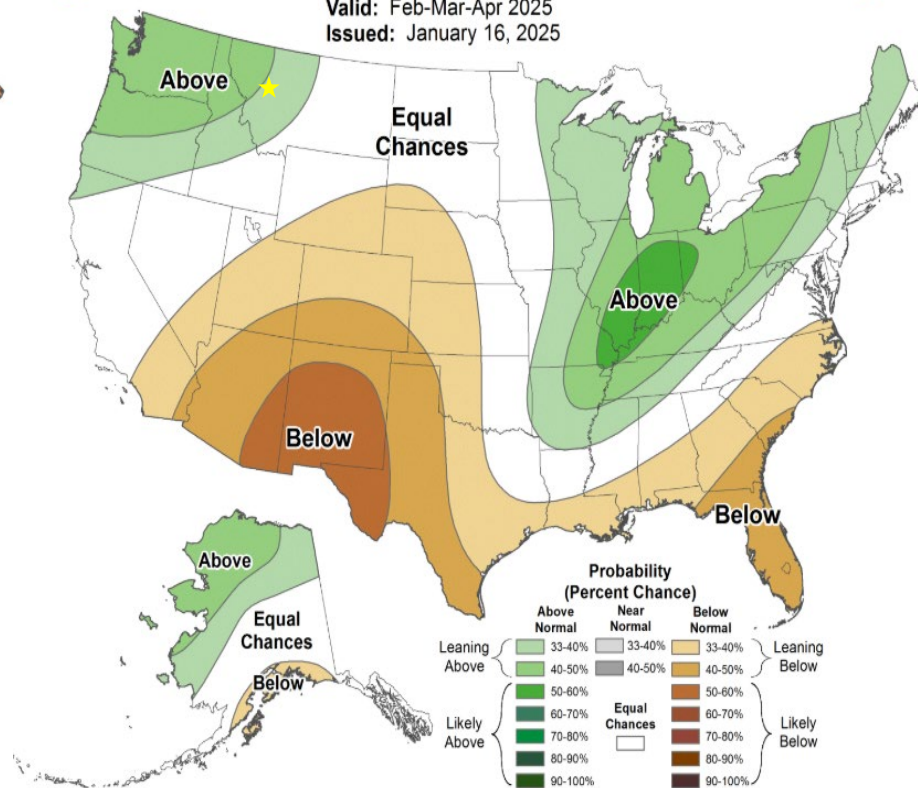
Valid: Feb-Mar-Apr 2025  
 Issued: January 16, 2025



## Seasonal Precipitation Outlook



Valid: Feb-Mar-Apr 2025  
 Issued: January 16, 2025



# Forecasting – NRCS Basin Reports

Forecast Exceedance Probabilities For Risk Assessment  
Chance that actual volume will exceed forecast

Flathead	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Hungry Horse Reservoir Inflow								
SF Jocko R nr Arlee <sup>1,2</sup>								
MF Flathead R nr West Glacier <sup>1,2</sup>								
Hellroaring Creek ab Reservoir nr Polson								
Mission Ck nr St. Ignatius <sup>1,2</sup>								
Sf Flathead R nr Hungry Horse <sup>1,2</sup>								
Flathead Lake Inflow								
North Crow Creek nr Ronan <sup>1,2</sup>								
Agency Crk nr Arlee								
South Crow Ck nr Ronan <sup>1,2</sup>								
Flathead R at Columbia Falls								
NF Flathead R nr Columbia Falls <sup>1,2</sup>								
Swan R nr Bigfork <sup>1,2</sup>								
Mill Ck ab Bassoo ck nr Niarada <sup>1,2</sup>								

New Forecasts for WY 2025



1) 90% And 10% exceedance probabilities are actually 95% And 5%  
2) Forecasts are For unimpaired flows. Actual flow will be dependent On management of upstream reservoirs And diversions

# 2025 Water Supply Outlook Summary (02/12/25)

°Flathead Basin-Wide (91% Median) indicates near average snowpack conditions.

°Conditions have slightly improved since Water Year 2024.

°3 month outlooks indicate favorable conditions for temperature and precipitation.

°Pending Water Supply Forecasts will refine the outlook and inform water year determination.

