# **2025** May Water Year Type Categorization – Presented for Informational Purposes

To: Parties to the CSKT-MT Compact

From: CSKT-MT Compact Implementation Technical Team

Date: May 13, 2025

Re: 2025 May Water Year Type Categorization

## Background

The Compact Implementation Technical Team (CITT) is tasked with developing water management planning tools to support Flathead Indian Irrigation Project (FIIP) Water Management and Adaptive Management per Appendix 3.5, 3.e of the CSKT-MT Compact. This document provides a categorization of water year type pursuant to both Appendix 3.5 and Appendix 3.7 for determination of wet, normal, and dry years.

When water allocations including minimum enforceable instream flows (MEFs), target instream flows (TIFs), river diversion allowances (RDAs) become enforceable, CITT shall categorize water year type April-June, annually. Because MEFs, TIFs, and RDAs are not enforceable at this time, this document was prepared for informational purposes and to meet the CITT's responsibility to provide water management planning.

## Water Year Type Projection

Per Appendix 3.5, CITT shall categorize water year type April-June, annually. In April 2025, CITT categorized the Jocko Area as a Normal Year, the Mission Area as a Normal Year, and the Little Bitterroot Area as a Normal Year.

### Water Year Type

Referred to as Hydrological Condition in Appendix 3.7, this is the CITT determination of wet, normal, and dry year for the Jocko, Mission, and Little Bitterroot Areas based on indicator gage data.

This May 2025 water year type categorization was made using data from the National Resources Conservation Service (NRCS) streamflow forecast for May 1, 2025, USGS and CSKT stream gage data for April 2025, and the exceedance probability tables in Appendix 3.7. A summary of the data used to make the water year type determination can be found in the May 2025 Water Supply Outlook. The water year categorization below includes the seven gages listed in Appendix 3.7 that have an associated NRCS forecast. North Crow Creek near Ronan and Agency Creek near Arlee are gages that were added to the NRCS forecast in 2025.

The reference period of 1983-2002 was used to define volumetric wet, normal, and dry year determinations, as outlined in Appendix 3.7. Data from this reference period was used for the seven gaging sites to determine the threshold of wet (<20% exceedance level), normal (20%- 80% exceedance) and dry (>80% exceedance) years as shown on the right side of Table 1. The left side of Table 1 shows the forecast for the 70<sup>th</sup>, 50<sup>th</sup>, and 30<sup>th</sup> percentile exceedance values of the gages listed in Appendix 3.7. In April, the NRCS volumetric forecast is used to determine April – July projections. In May and June, observed flows for previous months are added to the NRCS volumetric forecast. The % Median column shows a comparison of the forecast to the 30-year median. In this report, the 50<sup>th</sup> percentile exceedance value is used to determine water year type.

	Table 1: May 2025 Water Year NRCS Streamflow Forecast							
	April - July Projections (April Flows + May NRCS Forecast)					Site-Specific Water Year Thresholds		
Geographic Area	Gage Site	70%	50%	30%	% Median	Dry Year	Normal Year	Wet Year
Jocko	South Fork Jocko near Arlee	29,879	32,879	35,879	94%	<24,000	24,000 - 36,000	>36,000
	Agency Creek	5,037	5,637	6,137	93%	<4,640	4,640-6,880	>6,880
Mission	Hellroaring Creek	3,865	4,265	4,565	104%	<3,350	3,350-4,750	>4,750
	North Crow Creek near Ronan	17,111	18,611	20,211	106%	<14,400	14,400-22,700	>22,700
	South Crow Creek near Ronan	9,614	10,514	11,414	103%	<7,700	7,700 - 11,800	>11,800
	Mission Creek	24,476	26,476	28,476	102%	<21,100	21,100 - 29,000	>29,000
Little Bitterroot	Mill Creek above Bassoo Creek near Niarada	2,405	2,905	3,605	62%	<2,200	2,200 - 4,900	>4,900
		Wet						
		Normal					*all values are in acre feet	
		Dry						

### Jocko Area

The 50% exceedance level of both forecast points in the Jocko Area forecast are within the range defined as a Normal Year. These projections represent 94% (South Fork Jocko River) and 93% (Agency Creek) of the 30-year median. CITT is categorizing the Jocko Area as a <u>Normal Year</u> for May 2025.

#### **Mission Area**

The 50% exceedance level for all four forecast points in the Mission Area are within the range defined as a Normal Year. These projections represent 104% (Hellroaring), 106% (North Crow Creek), 103% (South Crow Creek), and 102% (Mission Creek) of the 30-year median. CITT is categorizing the Mission Area as a <u>Normal Year</u> for May 2025.

### **Little Bitterroot Area**

The 50% exceedance level of the forecast point in the Little Bitterroot Area forecast is on the low end of the range defined as a Normal Year. This projection represents 62% (Mill Creek) of the 30-year median. CITT is categorizing the Little Bitterroot Area as a <u>Normal Year</u> for May 2025.

### **Considerations and Limitations**

- NRCS Forecasts for the April-July time period were selected in favor of forecasts for the April-September forecasts as longer-term streamflow forecasts tend to have lower predictive accuracy. This approach is also consistent with the hydrologic condition procedures outlined in Appendix 3.7.
- CITT uses 3<sup>rd</sup> party data and analyses to inform and support Water Year Type categorizations. CITT does not independently vet the accuracy of 3<sup>rd</sup> party information.
- Water supply is highly dynamic and is susceptible to sudden changes triggered by fluctuations in snowpack, temperature, and precipitation. The FIIP Project Operator and other interested parties should continually monitor snowpack, weather, and appropriate forecasts to inform real-time water management activities.

- At this time, this categorization is presented for informational purposes. Specific management decisions should be based on additional information, the most current forecast data, experience, and professional judgement.
- The CITT intends to continue these water year type categorizations as full implementation of the MEF, RDA, and other enforceable flow rates approaches.