

EXTENSION OF MEMORANDUM OF UNDERSTANDING BETWEEN THE STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES AND THE CHIPPEWA AND FLAMBEAU IMPROVEMENT  
COMPANY.

WHEREAS, the Department of Natural Resources (Department) and the Chippewa and Flambeau Improvement Company (CFIC) entered into a Memorandum of Understanding (MOU) concerning the operation of the Rest Lake dam effective April 6, 2016; and

WHEREAS, on April 21, 2023, the Department, the CFIC, and stakeholder groups including the Chain interests and downstream interests verbally agreed to a one-year extension of the MOU to gather additional information and to enable the stakeholders to further analyze the tenants of the MOU and evaluate its overall effectiveness; and


WHEREAS, due to extenuating circumstances the parties agree that a two-year extension is necessary to gather and evaluate information;

WHEREAS, For the 2023-2025 extension period, the parties agree the initiatives identified in Exhibit A shall be incorporated into this agreement.

NOW, THEREFORE, the Department and CFIC hereby agree to modify the duration of the MOU by extending it for another year, so that the MOU provisions remain in effect until April 6, 2025.

CHIPPEWA AND FLAMBEAU  
IMPROVEMENT COMPANY

BY:

  
Karl Hoesly, President

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

BY:

  
Steven Little, Deputy Secretary

## **Exhibit A: 2023-2025 Rest Lake MOU Pilot initiatives.**

### Satellite surveillance of the Manitowish Chain and surrounding resources.

#### 1. Spring

In cooperation with the Manitowish Lakes Association a 2-year study period to analyze ice out conditions on the entire chain of lakes. The purpose of the study is to monitor and compare the 75% ice out condition benchmark to begin refill on the Manitowish chain. During the next 2 years, Satellite imagery will be monitored to compare and contrast with the traditional spring refill ice out determination. The Manitowish Lakes Association will procure access to real time satellite imagery technology.

- i. WDNR, CFIC and the Rest Lake stakeholder group will collaborate on the collection, storage and interpretation of the information obtained to further advise management decisions.
- ii. Possible future management outcome would be to utilize Satellite imagery to advise timing of spring refill vs. traditional determination (Visual)

#### 2. Summer

Utilize satellite technology to monitor stream wetted channel and flow conditions to help advise flow regimes

- i. WDNR, CFIC and the Rest Lake stakeholder group will collaborate on the collection, storage and interpretation of the information obtained to further advise management decisions.

#### 3. Fall

Utilize satellite technology to determine navigational constraints and to monitor ice formation in the fall to help advise winter drawdown timing.

- i. WDNR, CFIC and the Rest Lake stakeholder group will collaborate on the collection, storage and interpretation of the information obtained to further advise management decisions.
- ii. Possible future management outcome would be to utilize Satellite imagery to advise timing of fall drawdown vs. traditional drawdown completion (date dependent)

### Analyzing winter baseflows to inform minimum flow

#### 1. 2023 Action items

Gather historical baseflows and collect observed winter baseflows.

- i. WDNR, CFIC and the Rest Lake stakeholder group will collaborate on the collection, storage and interpretation of the information obtained to further advise management decisions.

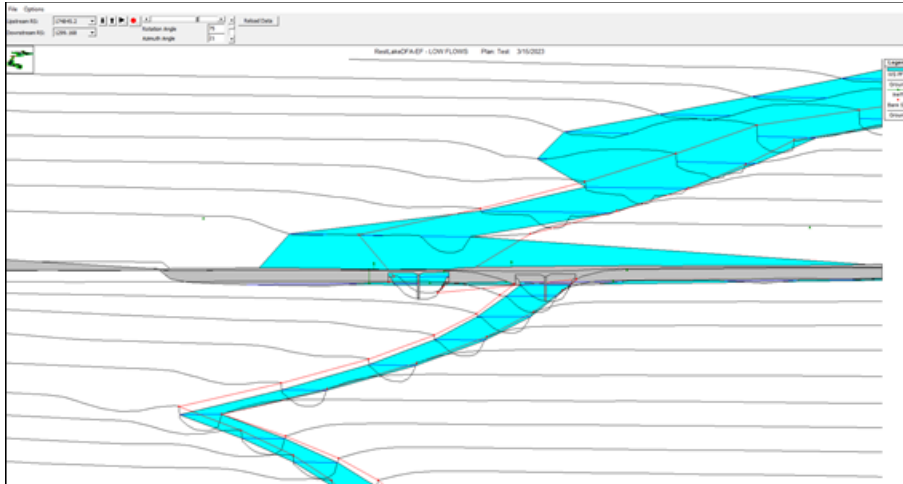
#### 2. 2024 Action items

Collect observed winter baseflows and record winter baseflow recommended flows vs. actual springtime flows. Note flow regime differences.

- i. WDNR, CFIC and the Rest Lake stakeholder group will collaborate on the collection, storage and interpretation of the information obtained to further advise management decisions.
- ii. Possible future outcome would be to utilize winter baseflows to set spring refill baseflows to potentially minimize impact to downstream resources.

## Summer Minimum Flow analysis

1. Submit study proposal for drone surveillance of the Manitowish River and inflow streams.
2. Manitowish River HEC-RAS Model – Compare the current HEC-RAS river model for Manitowish River below Rest Lake to actual flow measurement/river depth data to test model reliability and accuracy in predicting flow depths.
3. Utilize any reliable data gained from modeling and measurements to inform Summer baseflow decisions.



## Utilize modeling and actual flow rates in Spring to conceptualize potential changes to down ramping rates after WTAD

1. Utilize the next two-year period to note the frequency/duration of potential changes to current down ramping rates. Use that recorded information to model the potential benefits to the downstream environment.
  - a. Example: When flows exceed 300 CFS, maximum down ramping rate is 150 CFS per day.
  - b. Example: For all flows less than 300 CFS maximum down ramping rate is IAW the MOU.