

ANNUAL OPERATION-PROPOSED (DRAFT)

Dates	Headwater Levels (Operating Range)	Required Flows
November 15 to Spring thaw (first major runoff event)	Minimum of 5'.6"	Run of River (1)
Spring thaw to ice out (75% of ice off of Rest Lake)	5'.6" – 6'.6"	50 cfs or more
From ice out until July 1 (Fill Chain)	6'.6" - 8'.6"	50 cfs or more (except for time period below)
May 1 to June 8 (2)	6'.6"-8'.6"	75-150 cfs (or more) (3)
June 9 to June 30	6'.6"-8'.6"	50 cfs or more
July 1 to September 15	8'.0"-8'.6"(4)	50 cfs or more (5)
September 15 to October 1(Begin Fall Draw down)(6)	8'.6"-8'.0"	50 cfs or more
October 2 to November 15 (Fall Drawdown) (7)	No lower than 5'.6"	50 cfs or more

1. Outflow equals inflow. This is accomplished by maintaining a stable pond level through the winter months.
2. These dates are based on 3 years worth of temperature data. The optimal lake sturgeon spawning temperatures (52.8-61 degrees F) are reached during this time period. Another method of determining timing of flow goals would be installation of a temperature data logger that could be accessed by phone (similar to Turtle Flambeau Reservoir). The goal is to have the data logger/temperature meter installed by spring of 2007.
3. Discharge flows will be determined after cooperative consultation with WDNR (third week of April) and be based on water availability and reservoir levels. A review of past operating records indicate that about 70 % of the time flows greater then 75 cfs can be passed during the May 1 to June 8 time period and still fill the chain by July 1. Initially we will target the 75-150cfs flow range and increase it above 150 cfs only when the pond level is near full, inflows are high, and the weather pattern is wet. Under extreme dry conditions or if inflows are less than 150 cfs, it may not be possible to meet target flow goals. In this case a 50 cfs minimum flow (or another sturgeon spawning minimum flow) may be adopted after both parties initiate consultation. In wet years discharge flows greater then 150 cfs can and should be passed because this will provide more suitable habitat.
4. Maintain summer chain operating levels between 8'.0" and 8'.6" (6 inch range).
5. In the past, river flows were reduced below 50 cfs (as low as 13 cfs) to maintain summer chain elevations between 8'.4"-8'.6". A 50 cfs minimum flow shall be maintained. This will require that the chain be draw down during dry conditions to maintain a 50 cfs flow. If the summer minimum chain elevation is reached (8'.0"), another minimum flow will be established only after an Xcel initiated consultation with DNR. This should occur prior to the minimum elevation being reached. A new minimum flow or run of river based on inflow will be established after consultation. All hydrological and biological conditions should be taken into account during consultation (it is not an automatic decision). This also applies if the summer minimum (8'.0") is not achieved during refill.
6. Start draw down on September 15. Target 8'.0" elevation by October 1.
7. Continue drawing the chain down to 5'.6" by November 15. At no time shall the chain be lowered at a rate exceeding 2 inches per day. The goal is to reduce downstream flooding potential by extending the drawdown period by 2 weeks.