

Frequently Asked Questions Regarding a Winter Drawdown Of the Minong Flowage

Why is a drawdown being suggested for the Minong Flowage?

The Minong Flowage Association, in partnership with Washburn County, tribal agencies, and the DNR has invested many years of time and nearly \$300,000 in WDNR surface water grant funding to understand which Eurasian water milfoil (EWM) management strategies are the most effective and acceptable to our partners and the public. You can learn more about our planning efforts that led to the current drawdown strategy here: <http://minongflowage.org/>.

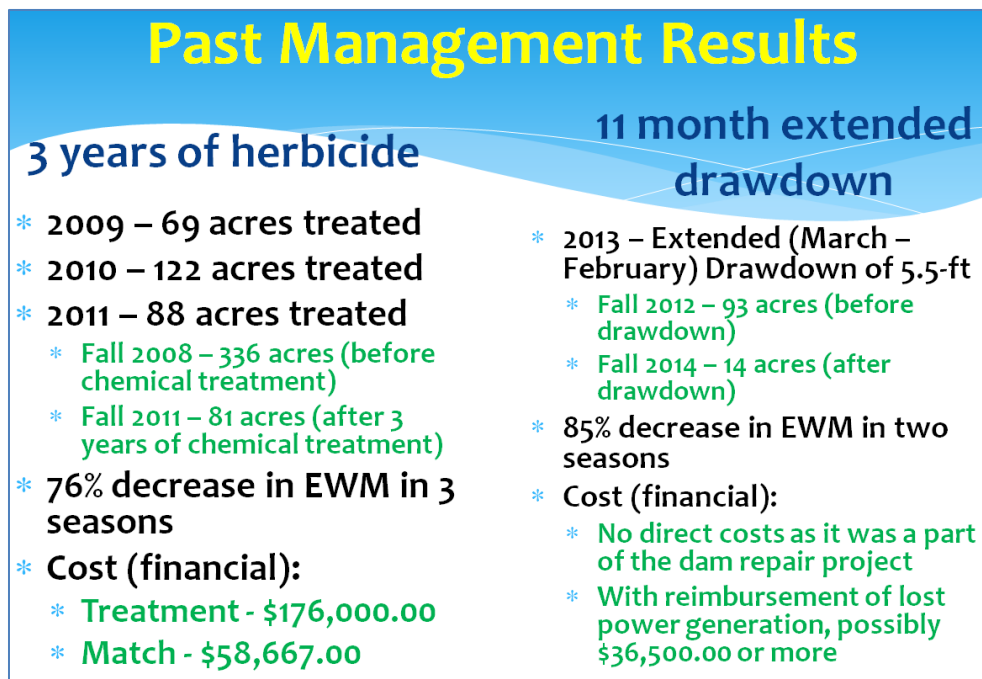


Figure 1: Past EWM Management and associated costs on the Minong Flowage (LEAPS, 2018)

What is Eurasian water milfoil and why is it a problem?

EWM is a non-native, aquatic, invasive plant species from Europe and Asia that is present in at least 650 lakes in WI (WDNR, 2016). In some lakes it can form large, dense, surface mats of vegetation that exclude other more desirable vegetation, while in other lakes it can just be “another plant”. At its worst in the Minong Flowage (2008-09) it covered more than 336 acres of the 1500-acre flowage with dense growth, matted vegetation. It currently covers about 100 acres of the Flowage, most of which is not nearly as dense as it was in 2008 and 2009. If left unmanaged, it is expected that the distribution and density of EWM in the Minong Flowage could again reach 300 acres or more.

How do you know drawdown will be effective at controlling EWM?

Winter drawdowns have been shown to be effective for providing control of Eurasian Water milfoil (EWM). Two examples include Soo Lake in Price Co. over the 2010-11 winter season, and in the Minong Flowage over the 2013-14 winter season. In Soo Lake, the winter drawdown provided five years of reduced EWM growth. In the Minong Flowage it took four years for EWM to reach a level that a winter drawdown would be considered.

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What is the drawdown plan? When does it start, at what rate, to what depth, for how long?

The currently proposed drawdown is expected to be half the duration, or about 6 months, of the 2013-2014 drawdown, which lasted over a year. Therefore, there should be fewer and less severe impacts. In the present planning process, a winter drawdown would begin in early October with the water level being drawn down at no more than 2 inches per day until a maximum drawdown of 60 inches (5-ft) is reached. It would be expected that the draw down phase of the project would take at least 36 days based on the amount of water let out but would be dependent on the amount of precipitation that falls during the active drawdown period. Once the desired amount of water was removed (5-ft) the drawdown would be maintained until about mid-April. The water level in the Minong Flowage would begin to be restored once ice has begun to separate from the shores and any obstructions protruding through the ice. Filling of the Minong Flowage is expected to take 21 days depending on the amount of snowmelt and spring precipitation. Normal operating (pool) level would be expected to be restored no later than May 15.

Will the Flowage be safe for winter usage during the drawdown?

It should be as safe as it is in any other year with or without a drawdown. As with any other lake or flowage, people should be safe and cautious when recreating on ice.

Will wells go dry again?

Hydrological impacts should be less given the timing and reduced duration of the drawdown. Wells that tend to be impacted most are point wells, which are shallower than more contemporary wells.

Will trees die like the last drawdown?

Impacts to trees are expected to be less given the timing and reduced duration of the drawdown. We also don't expect as many floating trees because they will not have enough time to dry out and dislodge.

Are there winter conditions under which the drawdown will be more or less effective for managing milfoil?

Several factors affect the success of drawdown with respect to plant control. While drying of plants during drawdowns may provide some control, the additional impact of freezing is substantial, making drawdown a more effective strategy during late fall and winter. However, a mild winter or one with early and persistent snow may not provide the necessary level of drying and freezing. The presence of high levels of groundwater seepage into the lake may mitigate or negate destructive effects on target submergent species by keeping the area moist and unfrozen. Under what would be considered a "normal" winter, it is expected that enough freezing will occur to enact control.

What happens if the drawdown doesn't work because of winter conditions? Do we do it again the next year?

The drawdown will be evaluated based on it providing multiple years of EWM control and minimal impacts to native plants and animals. Thus, back-to-back winter drawdowns are highly unlikely.

Will the drawdown affect other aquatic plants, including wild rice, in the Flowage?

Water marigold, Watershield, Coontail, Common waterweed, Duckweed, Eurasian watermilfoil, Northern water milfoil, other Milfoil (*Myriophyllum*) species, Spatterdock, White waterlily, Curly-leaf pondweed, Fern-leaf pondweed and

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Bladderwort are some common species present in the Minong Flowage that would be expected to decrease in growth because of a winter drawdown.

Chara, Manna grass, Rice cutgrass, Naiads, Ribbon-leaf pondweed, Leafy pondweed, Variable pondweed, Floating-leaf pondweed, Clasp-leaf pondweed, Flat-stem pondweed, Arrowhead, Bulrush (Scirpus) species, and Sago pondweed are some common species that would be expected to increase in growth because of a winter drawdown. Wild rice can also benefit from some water level variation whether natural or artificial, including past Minong Flowage drawdowns.

Is there a possibility of fish kills due to the drawdown?

According to the WDNR Fisheries Manager the main concerns are related to spring refill. The water level should be returned to normal by May 1st-15th (depending on winter). This timing helps nest building fish have stable water levels during spawning. The fish species of most concern are black crappie, bluegill, and largemouth bass in the flowage. Partial winterkills may occur in more stagnant parts of the flowage during a winter drawdown. That is acceptable if we aren't doing drawdowns too often that the fishery cannot recover. A total winterkill would be highly unlikely given that the river provides flow and oxygen in the winter. A 5-year minimum between drawdowns would be needed in case of any significant fishery kills. This accounts for the ages that these fish species mature: bluegill (3 years old), black crappie (2 -4 years old), and largemouth bass (3-4 years old).

Can other species, such as mussels, reptiles, and furbearers, be affected?

Minimally mobile invertebrates such as mollusks would seem to be susceptible to drawdowns initiated while they are in shallow water. However, many invertebrates (particularly snails) move offshore for the winter, limiting impacts if a winter drawdown is delayed. Some turtles, like snappers, can move during winter, while others, like painted and Blanding's turtles, cannot. Overwintering green frogs and mink frogs (if present) are likely to be impacted by this drawdown timing as well, although frogs can have frequent years of high reproduction and will be able to repopulate much more rapidly than turtles.

Beaver, muskrats, otter, and mink that den in the banks may be forced to move. Any negative impacts will be minimal because beaver and muskrat populations are healthy. There are potential human/wildlife negative impacts as the beaver and muskrat are forced to move elsewhere and potentially cause problems for neighboring landowners. Beaver lodges are protected, because furbearers and other wildlife use them for shelter and for nesting. Otter and mink handle change better and may benefit from more successful fishing if fish are artificially concentrated. Local trappers may be negatively affected if the animals move from trapping locations that were previously scouted or set with traps.

Will a winter drawdown negatively impact area wetlands?

Available data do not suggest major effects, positive or negative, from winter drawdowns. This is believed to be a result of dormancy by most plants and frozen soil conditions in some areas; wetlands are generally adapted to fluctuating water levels and fluctuations in the winter are of least concern.

If the winter of the drawdown has very little snow, is there a risk the Flowage would not be full in time for the fishing opener?

This is unlikely. WDNR Fisheries has already stated that the Minong Flowage should be at full pool between May 1 and May 15th. If there is little snow which is sometimes indicative of an early spring, the water level would be brought up as

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early as possible, assuming the ice is pulling away from the shore and protruding obstacles. A very late winter, late ice, or heavy snow could impact the expected refill date and the time it takes to fill up the Minong Flowage.

Will the power company seek compensation for lost power generation revenue during the drawdown? If so, what is the estimate of the cost and who is responsible for that expense?

This drawdown cost is much less than using herbicide to exact the same control. Based on average power generation between 2014 and 2017, and the average power that was generated in 2013 during the extended drawdown, it is estimated that as much as \$36,500.00 could be required to offset power generation loss during the drawdown. Funding for compensation has not been determined but could include funds from stakeholders, such as the county, DNR, tribal groups and Renewable World Energies.

Will there be an economic impact to local businesses on the Minong Flowage or in the Minong/Wascott area?

Economic impacts are difficult to predict and separate from other causes like weather conditions. The presence and abundance of EWM in the summertime could have negative economic impacts, which are equally difficult to measure.

Will additional drawdowns be required and if so, how frequently?

It is expected that one of the outcomes of the current planning process for a winter drawdown will be a change in the Minong Flowage Dam Operation Plan that will enable a winter drawdown to control EWM to be completed periodically. Criteria for considering a winter drawdown has been set in the existing Aquatic Plant Management Plan, but it could be revised if needed. Future winter drawdowns would only be considered when EWM in the system reached or exceeded the current (or revised) criteria.

Will the winter drawdown negatively impact water quality?

Turbidity induced by sediment resuspension is likely during refill at rapid rates, but in many lakes the rise in water level is not fast enough to re-suspend sediments by itself. Wind action in shallow waters (previously exposed areas) could promote increased short-term turbidity. The drawdown itself will expose and consolidate lake bed and sediments, which will increase water depth and may improve water quality.

Where can I find more information?

The Minong Flowage Association website <http://minongflowage.org/> contains more detail on the Flowage, including the Aquatic Plant Management Plan and current events/updates about related managed activities.

The following Wisconsin DNR website links provide additional information, including regulatory information:

- General low water information: <https://dnr.wi.gov/lakes/commonquestions/>.
- Water regulation and permit information: <https://dnr.wi.gov/permits/water/>.

The Minong Flowage Association (Board Member Dave Perrin 651-785-4698), Lakes Education and Planning Services (Owner David Blumer 715-642-0635), and the Wisconsin DNR (Lake Biologist Pamela Toshner 715-635-4073) worked together to provide answers to these frequently asked questions.