Water Level Management Update

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Pool 8 Water Level Reduction Postponed Until 2001!

The 1.5-foot water level reduction of Pool 8 scheduled for summer 2000 has been postponed (unless significant rainfall occurs in the watersheds above Pool 8). The decision to postpone was made by the River Resources Forum, an interagency group of Federal and state agencies responsible for river management. The water level reduction was planned to promote the growth of aquatic vegetation and improve fish and wildlife habitat in Pool 8.

A 1.5-foot reduction in Pool 8 is possible only when river flows are within the range of 28,000-70,000 cubic feet per second (cfs). At flows above 70,000 cfs there is too much water in the system making a water level reduction impractical. At 28,000 cfs or less, there is not enough flow to maintain the 1.5-foot drawdown at lock and dam 8 and, at the same time, limit the drawdown at the La Crosse gage to 0.5 foot. River flows below 28,000 cfs mean that the water level reduction in the lower pool would have to be raised to maintain water levels at the La Crosse gage at the maximum reduction of 0.5 foot.

Since the river flows are already below the acceptable range (28,000 - 70,000 cfs) it would be impractical to begin the water level reduction.

This past winter, precipitation in the Upper Mississippi River watershed was well below normal, a situation followed by an equally dry spring. Furthermore, projections by the National Weather Service are for continued dry conditions. Under average precipitation conditions, the river flows in late spring are in a range of 50,000 to 60,000 cfs, currently, those flows are around 26,000 cfs and expected to drop.

The water level reduction is being rescheduled for next summer, if the river flows are within the acceptable range. Historically, low flow years often occur in pairs, and if dry conditions persist into next year, this effort may have to be delayed yet another year. While disappointed that the project has been delayed, the Water Level Management Task Force remains excited about using this tool for improving fish and wildlife habitat and is committed to completing the water level reduction as soon as Mother Nature allows.

For more information, please contact: Gretchen Benjamin, Wisconsin Department of Natural Resources at (608) 785-9982.

Why is the Water so Low in the Upper Part of Pool 8...

And other pools for that matter?

The upper portions of the navigation pools still react somewhat like a natural river. For example, when river discharges are high, the water levels are high, and when river discharges are low, water levels decline. The only difference

Isn't the Idea of a Drawdown to Replicate a Drought?

Yes, natural resource managers would like to replicate low flow or drought conditions with a drawdown. However, to limit the effects on recreational users in the La Crosse area, resource managers agreed to limit the drawdown at the La Crosse gage to 0.5 foot. With this constraint, the 1.5-foot drawdown would have to be raised when river discharge fell below 28,000 cfs. Biologically, this would be a perfect year to conduct a drawdown but, due to other considerations, the reduction will probably be rescheduled for 2001.

The Corps of Engineers manages low flow (drought or near drought) conditions for the nine-foot navigation channel by raising water levels in the lower portion of the pool. This means water levels can be up-to a foot higher in the lower pool (near Genoa, WI for Pool 8) and the dam gates are set to minimize the amount water passing from one pool to the next pool. This makes the pool become more and more like a lake and less like a flowing river. These lake-like conditions set into motion a series of events that can create difficult circumstances for the aquatic community. The lake-like conditions are very different from what would naturally happen during a drought or during a drawdown.

The physical sequence of events that result may include some or all of the following:

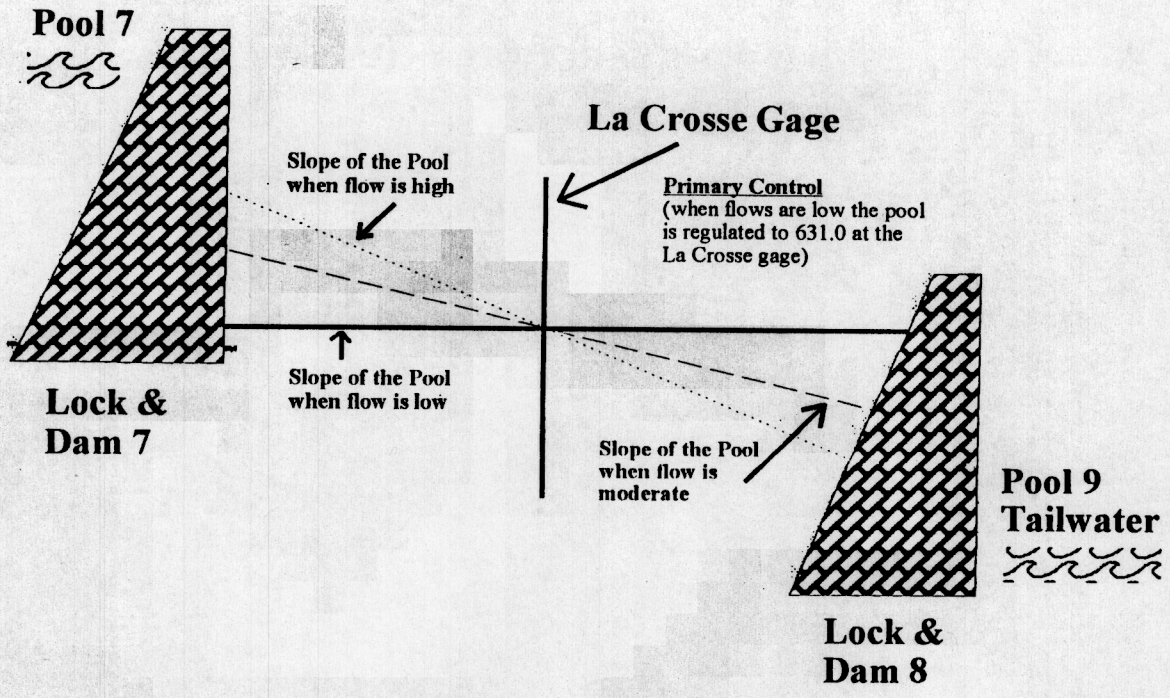
- Water is retained in the pool for a longer time
- Little or no water flows through the pool
- Water temperature elevates
- Dissolved oxygen in the water may be reduced
- Increased water depth in the lower portion of the pool means less sunlight penetrates the river bottom

The biological sequence of events is directly related to physical conditions and can include:

- Increased blue-green algae colonies
- Algae colonies die and through decomposition use-up valuable dissolved oxygen
- Fish kills can occur as algae die-off
- Algae can use excessive amounts of nutrients
- Reduced vigor for large aquatic plants (macrophytes) due to less sunlight penetration and reduced amounts of nutrients
- Increased likelihood of botulism outbreaks for waterfowl
- Future year plant (macrophyte) production can be significantly reduced as a delayed response to stress during low flow/drought year

During the planned drawdown the river's flow would not be slowed. The same amount of water would flow through the pool as if there were no drawdown. The only change would be somewhat lower water levels in the lower portion of the pool. Imagine the navigation pool as a bathtub with water coming in at the head-end from a faucet and flowing out of a notch at the foot-end of the tub. With a drawdown, the same amount of water would be coming into the tub via the faucet, only the water level would be lower because the notch

The diagram below is intended to show the differences in the level of water within Pool 8 during various water level flows.



At the time of this writing, flow conditions on Pool 8 were very low. Since that time, we have received additional localized rain but probably not enough to maintain appropriate flows for the summer water level reduction. The final decision for the 2000 water level reduction will be June 1, 2000. If we have not received significant rain upstream of Pool 8 by that date, then the decision to postpone until next year will be definite.

For More Information on the Water Level Reduction, contact one of the following people:

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