

## Lake Winnebago 2014 Spring Refill Conference Call Minutes

**Introduction:** The U.S. Army Corps of Engineers (USACE), Detroit District held its annual Lake Winnebago drawdown conference call on April 16, 2014. Mr. Keith Kompoltowicz, Chief of the Watershed Hydrology Branch for the USACE, Detroit District, opened the call at approximately 2:00 pm (C.D.T.), with a roll-call of attendees. A list of participants may be found at the end of this document.

**Presentation of Agenda:** Mr. Kompoltowicz began the call by presenting the agenda. This included a discussion on the basin's current and expected spring conditions, refill timing and extent, and an open discussion.

**Basin Conditions and Significant Events since the January Drawdown Conference Call:** Mr. Kompoltowicz summarized the weather conditions over the past few months with one word – cold. January, February and March saw temperatures that were well below normal. The cold and snowy conditions created an impressive snowpack across the basin and a solid ice cover on the lake. He also stated that the recent heavy rain has begun the spring refill despite still having ice on Lake Winnebago.

### January

The average monthly temperature in Oshkosh was 9 degrees below average. Total precipitation was just above average with 17" of snow recorded in Green Bay where the January average is 13". By the end of the month, the snow water equivalent (SWE) was 3-4" and temperatures were well below average so we lowered the drawdown target to 1.30 ft by March 1. The lower drawdown level was selected in order to provide more storage for the excess runoff from snowmelt.

Only one gate change was made on January 23 when we opened half a gate to continue drawing down the level toward 1.30 ft. Lake Winnebago was at 1.69 ft at the end of the month and there were 2.5 gates open at Menasha. Outflows at Appleton averaged about 2,900 cfs.

### February

February was even colder than January with the Oshkosh monthly average temperature 12 degrees below normal. It was also snowier than normal with 18" of snowfall recorded which is about 8" above the February average. Ice continued to build on the lake and by the end of the month, ice thicknesses were around 30" on Lake Winnebago.

The cold and snowy weather added to the already healthy snowpack and the drawdown target was lowered again. After consulting with others and researching past winters with similar conditions, the new level of 1.0 ft by late March was selected.

One gate was opened on February 20 to keep the level dropping toward 1.0 ft. By the end of the month, the level was 1.31 ft with 3.5 gates open at Menasha. Outflows at Appleton averaged about 3,330 cfs during February.

Mr. Kompoltowicz took the opportunity to further explain the lowering of the drawdown target. This year's SWE was double the amount we had in 2013. Although snowfall and precipitation were at or below average this year, the snowpack never melted. It continually grew with each snowfall. We wanted to keep the level low in preparation of snowmelt and spring rains. Just about a year ago, over an inch of rain fell on the snowpack and the level quickly rose to 3.0 ft. The intention of the lower drawdown was to avoid high spring levels on Lake Winnebago and the rest of the system.

### March

March was also colder than average. The average temperature in Oshkosh was 7 degrees below normal. The cold weather encouraged ice development and by mid month, there were reports of over 3 feet of ice on Lake Winnebago. Precipitation and snowfall were both below normal in March.

By mid-month, the snowpack had a good SWE value of 4-6" north of New London and 2-4" across the rest of the basin. The lake level was 1.14 ft when US Papers in Menasha notified us of a potential plant shutdown if the level dropped any lower. Therefore, we closed a gate at Menasha and the plan was to hold the level at or above 1.15 ft until the spring melt.

At the end of the month, temperatures approached the 60s and a good 0.75" of rain fell so we opened gates at both dams. On March 31, the lake level was 1.39 ft and there were 6 tainter gates open at Menasha and 5 tainter gates open at Neenah. The only gates left to open were the needle gates at the private Neenah dam. Outflows at the Appleton USGS gage were 6,660 cfs.

### April

So far, temperatures have been near average and warm enough to melt the snowpack and ice on Lake Winnebago. After this weekend's rain, precipitation for April is already above the monthly average. Oshkosh and Berlin picked up 5 inches of rain which has now put the Upper Fox River at Berlin at minor flood stage.

Inflows are expected to remain high and slowly rise the next few days so the lake level will continue to rise as well. All available gates at both dams are now open. There are 6 tainter gates open at Menasha, 5 tainters and 7 needles open at Neenah. Outflows are around 11,500 cfs and Lake Winnebago's level is 2.27 ft and rising.

The ice conditions have changed quickly due to the rain. There is still ice on the lake, but it's no longer tight to the shore. Ice shoves have occurred along the west shore of Lake Winnebago.

#### River Conditions

The bitterly cold winter made operations along the Lower Fox River challenging. Despite wind chills around -50 degrees, our crew in Kaukauna was able to maintain the pools within their operating bands and assist river users as needed. The Lower Fox River froze over this winter which eliminated the potential for frazil ice. In March when we had a couple sunny days and daytime highs around 40, the ice melted. Outflows measured at Appleton in January, February and March were below average. Currently, outflows are well above average as a result of the heavy weekend rain.

**Current Ice Conditions:** Mr. Art Techlow, the Winnebago System Biologist for the Wisconsin DNR, reported that the upper pools are ice free. There is some ice on the south end of Lake Winnebago which is expected to move north by the end of the week as winds shift around. Art anticipates ice out to occur by the end of the week or this weekend at the latest.

**Snowpack and Spring Outlook:** Mr. Tom Helman from the National Weather Service reported that the frost is nearly gone leaving saturated soils behind. The short term outlooks are showing a strong winter system just north of the region that will bring a wintry mix of precipitation to the Winnebago basin. Then attention turns to the potential for heavier rain later next week. Look for cool and dry weather otherwise. Longer term outlooks show better chances for slightly below temperatures and near average precipitation.

Mr. Kompoltowicz thanked Mr. Techlow and Mr. Helman for their updates and then discussed the proposed strategy for the next few months.

**Refill Strategy:** Mr. Kompoltowicz explained that the regulation strategy, as in previous years, is to achieve 3.0 ft. by June 1. We will do our best to provide a gradual rise and gradual gate changes as conditions allow. We still have 6 weeks of spring left and need to maintain a buffer for excess runoff so an interim target of 2.50 ft by May 1 has been selected. Today's lake level is 2.27 ft and rising from snowmelt and rain. All available gates are open at the Neenah and Menasha dams to prevent the level from getting too high. Since the basin is already under a flood watch, we will aggressively pass excess water to minimize flooding.

Mr. Kompoltowicz then opened up the discussion to any questions and/or comments from the audience.

Mr. Brad Graham from the Freemont/New London area asked if the gradual gate changes at the Neenah and Menasha dams will affect the walleye spawn in the Wolf River. Mr. Kompoltowicz explained that the gate movements at the Lake Winnebago control

structures have little to no impact on the stage of the Wolf River. Snowmelt, precipitation and runoff govern the flow and stage of the Wolf River. Mr. Graham then asked about the Shawano dam operations. Mr. Techlow explained the Shawano dam is a private dam operated as run of the river which means the inflow equals the outflow. He also explained that the walleye depend on flow in the marshes to keep the eggs oxygenated. The peak spawning likely occurred over the weekend and there is still plenty water available for any walleye looking to spawn.

Several stakeholders from local marinas expressed their concern with the lower water levels preventing them from being able to launch boats. A mid-April level of 2.50 ft is needed to launch boats and the level's been too low. Mr. Kompoltowicz stated that the average level for April 15 is 2.50 ft and the lake is just shy of that today at 2.27 ft. Within the next couple of days, the level should be above 2.50 ft. There was also concern at Bayshore Marina that the low drawdown this year caused some damage to seawalls which will have to be repaired.

Mr. Bill Hitchcock concurred with the need for 2.50 ft by mid April to launch boats reiterated his concern with the low levels this winter that will require some repairs at Wind Pointe Harbor. He expressed his wishes to have Lake Winnebago at 3.0 ft by May 1 and keep the level at 3.0 ft longer in the fall; potentially throughout September.

Mr. David Patek, the City of Oshkosh Director of Public Works, commended the Corps for lowering the water level and mitigating the impacts of spring runoff thus far. He asked the Corps to delay hitting 3.0 ft sometime later in the summer and to maintain a gradual refill.

Mr. Mark Radl from Oshkosh was pleased with the lower levels which allowed ice shoves to occur further offshore. The shoreline damages were mitigated due to offshore sandbars dissipating the energy from the ice movement. Mr. Radl was thankful that the ice shoves occurred during low levels. He urged the Corps to be vigilant in passing water to keep the water level low as May typically brings the heaviest rains. In recent years, the strongest storms have been happening in late May.

Mr. Kompoltowicz thanked the participants for their input and asked Mr. Bonetti for an update on the sturgeon spawn. Mr. Bonetti stated that he recently met with Rob Elliott from the Fish and Wildlife Service regarding the sturgeon spawn. The sturgeon spawn is temperature sensitive requiring water temperatures in the low 50s. Current temps downstream of DePere are below 40 so the spawn is likely a few weeks away.

Mr. Bonetti then asked Mr. Pedersen for his thoughts on conditions this past year along the Lower Fox River. Mr. Pedersen said currently, the flows and tailraces are high as to be expected after a big spring rain. He noted that the lower river is now flushed out and the last trash and debris had gone through within the past couple of weeks. Mr. Pedersen thanked the Corps for their hard work during the brutal winter. Their gate changes were well planned out and coordinated ahead of time. He commended them for maintaining great communication throughout the winter and asked them to keep it up.

There were no further questions, so Mr. Kompoltowicz wrapped up the call and thanked everyone for their participation. He then directed the audience to Lake Winnebago webpage at

<http://www.lre.usace.army.mil/Missions/GreatLakesInformation/LakeWinnebago.aspx> .

He also asked people to contact Melissa Kropfreiter at [Melissa.a.kropfreiter@usace.army.mil](mailto:Melissa.a.kropfreiter@usace.army.mil) to receive meeting notices and a copy of the meeting minutes. Mr. Kompoltowicz again thanked everyone for their participation and stated that the next meeting will be the annual regulation meeting. As suggested at last year's annual meeting, the Corps is considering to host the meeting earlier than October; potentially in late Summer.