

**Lake Winnebago
Inter-Agency Regulation Meeting Minutes
23 October 2012**

1. **Introduction** The U.S. Army Corps of Engineers (USACE), Detroit District held its annual inter-agency regulation meeting at the Radisson Paper Valley Hotel in Appleton, Wisconsin. Mr. Michael O'Bryan, Chief of Engineering and Technical Services for the USACE, Detroit District, called the meeting to order at approximately 3:10 p.m.
2. **Attendees** A list of attendees is included at the end of the minutes.
3. **Presentation of the agenda** Mr. O'Bryan opened the meeting with introductory remarks and self-introduction of all attendees. He then summarized the meeting agenda, which included a basin overview, 2011-2012 maintenance and repair work, weather conditions, a summary of the 2011-2012 water level regulation activities, and a presentation on the 2012-2013 water level strategy. The meeting continued with presentations by Mr. James Bonetti, Mrs. Melissa Kropfreiter and Mr. Keith Kompoltowicz each addressing their areas of expertise.
4. **Lake Winnebago basin** Mr. James Bonetti, Chief of the Fox River Sub-Office, described the 6,430 square mile Fox-Wolf-Winnebago watershed and its unique characteristics. He noted that the size of the basin provides challenging and unique issues when regulating Lake Winnebago. There are two major rivers that flow into Lake Winnebago. The Wolf River originates in Forest County to the north and flows southerly through Lakes Poygan, Winneconne and Butt des Morts into Lake Winnebago. The Upper Fox River originates in Green Lake County, flows through Green Lake and Winnebago Counties and meets the Wolf River in Oshkosh before flowing into Lake Winnebago. Lake Winnebago, with the lake level at the crest of the Menasha dam, is about 206 square miles, and is roughly 30 miles long, 10 miles wide and has a maximum depth of 20 ft.
5. **Lake Winnebago Controls** Mr. Bonetti stated that the Federal dam at Menasha and the private dam at Neenah are the control points for outflow from Lake Winnebago. Flows released from these two dams discharge into the head of the Lower Fox River. He pointed out the tainter and needle gates as well as the spillways at both dams. Mr. Bonetti further defined how the Fox River Sub-Office crew operates the 6 gates at the Menasha dam while Neenah Paper operates the 14 gates on the dam in Neenah through coordination with the Detroit District. Mr. Bonetti noted that since the Neenah dam is private, a 1-day notice to Neenah Paper is preferred to make gate changes because Neenah Paper has to mobilize their contractor to make any gate changes at the Neenah dam.
6. **Lake Winnebago Stakeholders** Mr. Bonetti presented an overview of the over 30 major stakeholders located along the 39-mile long Lower Fox River. The users include municipal, industrial, environmental, recreational, governmental, personal and local interest groups. Mr. Bonetti indicated that there are many diverse interests that have competing uses with

opposing ideas with some benefitting one and not the other. Mr. Bonetti emphasized that the USACE's job in the daily regulation of Lake Winnebago is to balance the needs and concerns of all stakeholders.

7. **Locks on the Lower Fox River** Mr. Bonetti reported that all of the locks are operational except for the Rapide Croche boat lift and four of the five Kaukauna locks. Work is ongoing at the remaining Kaukauna locks.
8. **2011-2012 Maintenance and Repair Work** Mr. Bonetti gave an overview of the maintenance and repair work that was conducted in the Fox-Wolf-Winnebago watershed this past year. He highlighted repairs completed at the De Pere and Little Chute dams where the gate anchorages (trunnion pins) and several gates were replaced. Mr. Bonetti also showed photographs of the new spillway pier repairs and walkways at the Cedars and Little Kaukauna dams. In addition to the work at the federal dams, both Kaukauna Utilities and Neenah Paper are making improvements to their hydropower facilities. Mr. Mike Pederesen from Kaukauna Utilities explained their facility improvements are targeted to be completed in November 2013.

Finally, Mr. Bonetti discussed the ice shoves and algae blooms that impacted users on Lake Winnebago this year. Although there wasn't a solid ice cover this year, several ice shoves occurred due to winds moving large sheets of ice across the lake. Mr. Bonetti showed a video from Taycheedah which captured an ice shove moving on to shore and damaging a boat house. Next, Mr. Bonetti discussed the algae blooms that were spread across the lake this summer. The Corps opened gates once at the Menasha and once at the Neenah dam for a few hours in July in an attempt to flush the algae blooms downstream. The results were minimal and most algae blooms remained in place, especially in the Menasha sloughs. Both ice shoves and algae blooms are a result of mother nature and there is little the Corps can do to prevent them from occurring.

9. **Basin Conditions** Mrs. Kropfreiter reviewed basin conditions for the 2011-2012 regulation period. She presented a graphic depicting the conditions experienced each season. Overall, warmer weather was seen basin wide with several locations setting records. The precipitation varied from season to season. There was a wet fall followed by a dry winter and then a wet spring followed by a dry summer. Snowfall for the winter was well below average due to the warm temperatures. Ice out occurred on March 18 which was the earliest ice out in recent years. She then discussed the excess rainfall in the spring and focused on the May 3rd event that caused flooding in Oshkosh and Berlin. Over 4" of rain fell in less than 24 hours causing Lake Winnebago to jump 8 inches and peak at 3.42 ft. on May 9. Precipitation this past fall has also been well below average with moderate drought conditions over much of the basin as of October 9. Mrs. Kropfreiter then explained the importance of snowpack, spring runoff and saturated soil conditions on water levels. She presented a graph that showed several years with similar conditions to 2012 (wet spring followed by a dry summer). In most cases, the lake level was able to achieve 3.0 ft. on June 1, but then slowly dropped below 3.0 ft throughout the rest of the summer despite having all gates closed. A graph then compared this year to 1988 which had a very dry spring and summer causing levels to be near 2.20 ft. for most of the summer. She further explained that

once all of the gates at the Neenah and Menasha dams are closed, the Corps has no control over declining water levels.

10. Lake Winnebago Water Levels 2011-2012 Mr. Keith Kompoltowicz presented several slides outlining the USACE target goals vs. the actual Lake Winnebago water levels with the number of gates open for the October 2011-September 2012 period. The slides showed the gate activities beginning in the fall of 2011 and running through winter drawdown, spring fill-up and regulation activities during the navigation season of 2012. Key regulation events and dates to note include:

- a. October 2011 – November 2011: Maintained a slow and steady drawdown in October. November was exceptionally wet; the Corps opened gates causing outflows to be double their normal values.
- b. December 2011: Conditions were unseasonably warm and dry and ice cover had now formed.
- c. January 18, 2012: Held winter drawdown conference call and began to execute a slow drawdown since there was no ice cover yet.
- d. February 2012: Intentionally kept the level around 2.0 ft due to the lack of snowpack and abnormally dry, warm weather.
- e. March 2012: A wet, heavy snow hit the basin and we had to open gates to keep the level from rising too quickly. On March 18, ice out occurred. In late March, an inch of rain fell on the basin and all available gates were opened.
- f. April 2012: With no snowpack and inflows declining, gates were closed to prevent level from dropping. This is very unusual for April; typically, all available gates are open.
- g. May 3, 2012: Up to 4 inches of rain fell in 12 hours from Berlin to Appleton causing flooding in several locations. All available gates were open to minimize flooding potential on Lake Winnebago. The lake peaked at 3.42 ft. on May 9.
- h. June 2012: Achieved 3.10 ft. on June 1. Closed all gates in the second week of June due to dry conditions.
- i. July and August 2012: All gates remained closed for the remainder of the summer and the lake slowly declined due to the lack of rain.
- j. September 2012: Allowed the lake to slowly decline toward 2.50 ft. by October 15.

11. Current Conditions Mr. Kompoltowicz gave a summary of current lake levels, inflows, outflows and gate settings. He explained that we are slowly drawing down to 2.20 ft. by December 1. Once a solid ice cover forms, we will then drawdown to the crest of the Menasha spillway, 1.68 ft. for the winter.

12. Regulation Strategy, October 2012 - September 2013 Mr. Kompoltowicz outlined the proposed “plan-of-action” for the next year. He stated that the USACE proposes to follow

the previous strategies unless there were any objections. The Corps will draw the lake down from 2.50 ft. on October 15 to 2.20 feet Oshkosh Datum by December 1. After a stable ice cover of several inches forms on the lake, the lake would be further drawn down to a level determined during a conference call to be held in early January 2013. In past years, conference call participants have agreed upon a level of 1.68 ft by the end of February. When the ice cover has broken up in the spring, the Corps will hold a refill conference call and then begin the spring refill. Then we will raise the lake level slowly, raising the lake to a target of 2.4-2.7 feet by May 1 and 2.7-3.0 feet by June 1. The gradual rise is critical to minimize flooding potential in the early spring. Runoff from snow melt and spring rains can raise the level of the lake very quickly. He reiterated that these targets and dates are subject to change based upon basin conditions and consultations with experts. This past year was a perfect example of the ability to alter levels when abnormal basin conditions present themselves. Open communication between the Corps, Wisconsin DNR, Fish and Wildlife Service and other stakeholders is critical to a gradual and successful spring refill.

- 12. Detroit District Home Page and Facts Booklet** Mr. Kompoltowicz showed the Lake Winnebago webpage on the Detroit District Home page. There is an abundance of information available on the website. The Lake Winnebago web page is:

www.lre.usace.army.mil/greatlakes/hh/lakewinebago.

13. Questions and General Discussion

An open discussion was held regarding the amount of control the Corps has on water levels on Lake Winnebago, the upstream lakes and upstream rivers. Mrs. Marie Strum reminded the participants that the Corps regulates outflows from Lake Winnebago which impacts the water level on Lake Winnebago. The Corps can affect the level by a fraction of how much mother nature can impact it. Once all of the gates are closed at the Neenah and Menasha dams, the only way for the lake level to rise is by rainfall. The Corps' actions at the Neenah and Menasha dams do not impact water levels on the Wolf River in New London. The river levels and flows are controlled by runoff from upstream drainage areas.

Mr. Bill Hitchcock provided statistics of how often the Corps has been able to achieve 3.0 ft. on June 1 and even on May 1. Since we had achieved 3.0 ft. by May 1st many times, he asked the Corps to alter its 3.0 ft. summer target to May 1st. Mr. Kompoltowicz explained that the lake can't be too high in May for environmental reasons. Mr. Art Techlow from the Wisconsin DNR explained that aquatic vegetation depends on light penetration through the water and the deeper the water is, the less sunlight filters through to allow the plants to grow. The spring is a critical time for the ecosystem. The summer target of 3.0 ft. will remain at June 1.

A question arose regarding the low levels on Lakes Michigan-Huron. Mr. Kompoltowicz explained that the lakes have been below average for more than a decade and are expected to set new record lows this fall/winter. He also addressed concerns about the impacts dredging in the 1920s, 1940s and 1960s had on the lake levels. The levels were permanently lowered approximately 14 inches as a result of the dredging of federal navigation channels. Structures

to compensate for the decrease levels were authorized with each deepening project, but that authorization was rescinded in 1977 after a period of high water.

A citizen informed the group of the Fox-Wisconsin Heritage Parkway project and had an informational packet available for those interested.

- 15. Conclusion** Mr. Kompoltowicz concluded the meeting by stating that the Lake Winnebago regulation strategy would be continued as discussed and agreed at this meeting. A conference call will be set up for January 2013 to discuss the basin conditions and plan the winter drawdown as proposed at this meeting. Details on the conference call will be mailed to everyone on the Corps' mailing list and posted to the Lake Winnebago website. Mr. Kompoltowicz thanked the attendees for their attendance.

Attendees

Bill Crabb	Thilmany Paper
Jim Murphy	Property Owner, Neenah
Bradley Graham	Property Owner, New London
Bill Graham	Property Owner, New London
Art Techlow	WDNR
Danielle Santry	Calumet County
Tom Buchta	Neenah Harbor Commission
Gene Moran	Property Owner, Lake Winnebago
Karen Beckstrom	Oshkosh
Bob Beckstrom	Oshkosh
Jon Keerer	Neenah
Randy Linskens	Neenah Paper
Lynne Lenius	Menasha
Colleen O'Brien	Menasha
Andrew Kaoleigh	Fond du Lac AIS Coordinator
Rob Elliott	U.S. Fish and Wildlife Service
Mark Rahmlow	Congressman Ribble's Office
Andrew Sabai	Winnebago Lakes Council
Mike Pedersen	Kaukauna Utilities
Jack Drzewiecki	Century 21 Acre Realty
Bill Hitchcock	Wind Pointe Harbor
Jacque Oldenburg	Leach Farms
Michael O'Bryan	USACE
Marie Strum	USACE
Tom O'Bryan	USACE
Jim Bonetti	USACE
Michael Stencil	USACE
Robert Stanick	USACE
Keith Kompoltowicz	USACE
Melissa Kropfreiter	USACE