

Devils Lake Outlet Management Advisory Committee Meeting Minutes

Tuesday, April 16, 2024: 1:00 P.M.

In Person/Virtual Meeting

Committee Members Present:

Dr. Andrea Travnicek, Ph.D., Director, ND Dept. of Water Resources (DWR) (*Virtual*)
Representative Dennis Johnson, ND House of Representatives
Senator Terry Wanzek, ND State Senate (*Virtual*)
Ben Varnson, Nelson County
Bill Mertens, Ramsey County
Bruce Grubb, City of Fargo (*Virtual*) – represented by Daniel Portlock
Dick Johnson, City of Devils Lake
Gwen Crawford, City of Valley City (*Virtual*)
Jeff Frith, Devils Lake Basin Joint Water Resource Board
Joel Anderson, Towner County
Lonna Jackson-Street, Spirit Lake Nation (appointment effective on 4/26/2024)
Nicole Armstrong, Manitoba, Canada (*Virtual*)
Tammy Kuk, Benson County

Committee Members Absent:

Cindy Schwehr, Barnes County
Katrina Kessler, MN Representative
Kenneth Vein, City of Grand Forks
Tim Meyer, City of Lisbon

Others Agency Staff Present in Person:

Alexis Faber, Investigations Section Manager, DWR
Amanda Lee, Grand Forks Service Hydrologist, National Weather Service (NWS)
Ben Gehrig, Natural Resources Scientific Programmer, DWR
John Paczkowski, State Engineer, DWR
John Reiten, Policy Advisor from the Governor's Office
Peter Wax, Environmental Scientist, ND Department of Environmental Quality (DEQ)
Ryan Norrell, General Counsel from the Governor's Office
Sindhuja S.Pillai-Grinolds, Director of Water Development Division, DWR
Travis Thyberg, Project Support Assistant, DWR
Yaping Chi, Water Resources Engineer, DWR

Approximately 55 people attended the meeting both in person and virtual, including approximately 30 public attendees.

Introduction

DWR State Engineer, John Paczkowski called the meeting to order at 1:02pm. Andrea Travnicek, DWR Director, gave opening remarks. John Paczkowski held the roll call.

A PowerPoint titled “Devils Lake Outlets Management Advisory Committee update” was presented, which included NWS situational update, Devils Lake basin (Basin) overview, 2023 operational summary for Devils Lake, Devils Lake West End Capital Improvement Project update, Devils Lake engineering service contract update, outlook for 2024 Devils Lake Outlet operations, and 2023 water quality review.

National Weather Service Situational Update

Amanda Lee, Service Hydrologist for the NWS in Grand Forks, presented an update on climatological and weather forecast.

The update noted that in the fall of 2023, the Basin had an above-normal temperature overall (2-3 degrees) and average precipitation for the season. The winter of 2023-2024 experienced well above normal temperature with below-average winter precipitation. NWS noted that the drought monitor for April 2024 shows that the basin is experiencing moderate drought conditions. The forecast for Spring 2024 indicated above normal temperature and below normal precipitation. From May through July 2024, temperatures and precipitation are expected to remain at normal levels. Looking ahead to August to October 2024, temperatures are expected to be above normal, while precipitation is expected to be below normal.

The NWS presentation noted that the elevation of Devils Lake was 1449.2 ft in April 2024. The March 2024 outlook developed by NWS was based on operations of the Devils Lake Outlets at a daily average of 350 cubic foot per second (cfs) from May 15, 2024, through October 30, 2024. The outlook noted a 50% chance of the Devils Lake elevation not exceeding 1449.7 feet. NWS noted that the exceedance probabilities are dependent on the pumping operations, the committee recommendations, actual precipitation, and other operational factors.

Devils Lake Basin Overview

Yaping Chi presented the 2023 Basin Overview. The lake has been experiencing a rise since 1993. Ms. Chi presented the 2023 water balance analysis for the Basin. The water balance analysis included the total water entering the lake, consisting of 20.0 inches of precipitation and 218,290 acre-feet of inflow. The analysis also accounted for water leaving the lake through evaporation and discharge from the outlets, totaling 29.9 inches of evaporation and 88,064 acre-feet of discharge from the outlets. The presentation noted that the lake level is currently on the down trend since 2011, except for the springs of 2022 and 2023. The lake was at 1449.1 feet on April 3, 2024, and is expected to rise about half a foot in 2024 to approximately 1449.7 feet. The lake elevation in April 2024 was noted to be approximately 5 feet lower than its peak in 2011.

2023 Operational Summary

Ms. Chi presented the operational summary and noted that during the 2023 operation season, a total of 88,064 acre-feet (approximately half a foot) of water was removed, contributing to a cumulative discharge volume of over 1.4 million acre-feet since 2007. In

2023, the West End Outlet was started on May 16th with a total operation duration of 159 days, while the East End outlet was started on June 6th with a total operation duration of 98 days. Ms. Chi apprised the advisory committee about the equipment repairs that occurred during the 2023 operating season. One 75 cfs pump at the West End Outlet was not operational until June 2023 due to delays in component availability for the repairs.

The discharge rate from the West End Outlet started at 175 cfs. When the 75 cfs pump became operational in June 2023, the discharge rate increased to 250 cfs, which was continued until August 1st. After August 1, 2023, the discharge rate was reduced to 200 cfs for the remainder of the pumping season. The West End outlet was shut down on October 24th, 2023.

The East End Outlet operation was delayed due to a leakage issue encountered at the beginning of the operating season. Once this issue was resolved, pumping began at 200 cfs on June 6th. After one week, the discharge rate was reduced to 150 cfs due to water quality constraints until August 24th. After August 24th the discharge was further reduced to 75 cfs. The East End outlet was shut down on September 15th, 2023.

It was noted that throughout the operation season, sulfate concentrations downstream of the outlets were monitored weekly to ensure compliance with meeting the sulfate concentration not exceeding 750 mg/l on the Sheyenne River upstream of Baldhill dam.

Update on Devils Lake West End Capital Improvement Project

Ms. Chi noted that DWR had an agreement with Bartlett & West/AECOM Joint Venture to complete a capital improvement plan (CIP) for the Devils Lake West End Outlet. It was noted that the final CIP report, received in April 2024, identified the infrastructure that requires updates or maintenance and estimated the timeframe to update it. This report will serve as a guide to prioritize future projects.

Update on Devils Lake Engineering Service Contract

Ms. Chi noted that a 5-year contract, ending on March 1, 2029, was executed between DWR and Bartlett & West/AECOM Joint Venture for maintaining the continued operations of both the Devils Lake West End Outlet and East End Outlet. Ms. Chi clarified future plans include initiating the Request for Qualifications process ahead of the current contract's expiration to avoid any lapse in services.

Outlook for 2024 Outlet Operations

Ms. Chi stated that the plan for 2024 is to continue to operate both outlets starting as early as May 1st if weather allows. The outlets will be shut down in the fall, when the overnight temperature drops to prevent any infrastructure damage from freezing.

2023 Water Quality Review

Peter Wax, Environmental Scientist with Water Quality Special Projects Division of DEQ, presented information about water quality during the 2023 outlet operating season. Water quality was monitored at 20 sampling sites spanning from Devils Lake to downstream in the Sheyenne River and Red River. It was noted that the sulfate concentration at Cooperstown in 2023 did not exceed 750 mg/l. Mr. Wax emphasized the challenge of achieving maximum discharge from the outlets while meeting the water quality criteria and recognized the efforts DWR puts into operating the outlets while meeting the operational constraints. He noted that at Pembina, the sulfate concentration was stable in 2023. Mr. Wax explained that the high sulfate concentration at Pembina in January 2024 was not due to the Devils Lake outlets. The graphs presented showed that the high sulfate concentration on the Red River upstream of the Sheyenne River confluence (Harwood, sample site 31834) has the highest impact on the sulfate concentration at Pembina. Mr. Wax answered questions from the audience, explaining that the 750mg/l sulfate concentration constraint aims to protect the aquatic ecosystem.

Status by Committee Members

Joel Anderson (Towner County) stated that there are still a lot of farmlands under water.

Nicole Armstrong (Manitoba, Canada) expressed appreciation for being part of DLOMAC and valued the project updates. She mentioned concerns remain regarding how the Devils Lake outlets could affect the water quality of the Red River, particularly downstream in Manitoba, due to potential impacts on drinking water sourced from the Red River. She emphasized the need for continued monitoring efforts and proactive management to address any emerging issues.

Jeff Frith (Devils Lake Basin Joint Water Resource Board) said even with the understanding of the drought index that was pointed out by the NWS, there is still excess water in the Basin (including upper chain lakes). He mentioned that, as a result, the DLJWRB passed a resolution of support for operation of both Devils Lake East and West End outlets to pump excess water from the Basin.

Dan Portlock (representing Bruce Grubb, City of Fargo) thanked for the updates and did not have any additional comments.

Lonna Jackson-Street (Representative for Spirit Lake Nation) had no additional comments.

Representative Dennis Johnson (ND House of Representatives) commented that if there is a way to manage the sulfates constraints, there is an opportunity to push hard to remove water from the lakes this year.

Dick Johnson (City of Devils Lake) asked if there were problems with the West End Outlet last year that resulted in shutting down for an extended period of time. Sindhuja S.Pillai-Grinolds

(DWR) responded that one pump was down as a result of a switchgear issue from the previous year (2022), but that issue was addressed towards the beginning of the 2023 operating season and all four pumps were operational in 2023. Mr. Dick Johnson asked DEQ if the sulfate concentration has restrictions from Manitoba and Minnesota. Mr. Wax (DEQ) responded that all states are required to have water quality standards and, if a state does not have their own water quality standards, the EPA will set those for them. It was also noted that for a state to have primacy, it must establish its own water quality criteria that meets Clean Water Act standards to be approved by EPA. Mr. Wax commented that the outlets operation can be done without harming the environment and being good neighbors, but it takes significant work every year. Mr. Dick Johnson commented that it's important to keep in mind the local farmers in the area should be considered as well. Mr. Dick Johnson indicated that he thinks it's important DLOMAC approves to discharge as much water as possible from Devils Lake and do it in an environmentally friendly way while still having a good recreational benefit as well. Mr. Dick Johnson is supportive of keeping the pumps operating as much as we can as we have the opportunity.

Tammy Kuk (Benson County) lives along the east side of Devils Lake, has concerns with water quality, which would impact pets, livestock, and others. Ms. Kuk understands people wanting to lower the lake level to get their property back, but at the same time her concern is for water quality and tourism.

Bill Mertens (Ramsey County) noted that he agreed with Mr. Frith and Mr. Dick Johnson. He also noted that he is appreciative of DWR's work and DWR's explanation that is easily understandable by the public.

Gwen Crawford (City of Valley City) commented that the Sheyenne River is low, and she doesn't recall the last time they've had to worry about recreation and low levels in the river in April. She appreciated the information provided by DWR.

Ben Varnson (Nelson County) shared some downstream comments, stating that the Devils Lake Outlet mitigation plan has helped some of the downstream landowners that were impacted by the outlets operation on a case-by-case basis. Mr. Paczkowski (DWR) confirmed the availability of the program. Mr. Varnson noted that high water is good for recreation, but there's still a need to support agriculture, ranching, and maintain functional roads. Mr. Varnson noted he will be retiring from his involvement in water resources starting January 1 of next year.

Senator Terry Wanzek empathized for the farmers and ranchers with lost lands and supported to operate the outlets as much as possible without causing serious environmental implications.

Other Comments

Lee Gessner (Ramsey County Commission) questioned if the lake would have overflowed at Tolna Coulee last year if the pumps were never operated. DWR responded that, while the direct answer was unknown without having immediate access to the details, it is entirely possible, noting the cumulative effect of the pumps and the amount of water removed over the years. Mr. Gessner has the understanding that the lake would have overflowed the Tolna Coulee control structure if no pumping had ever occurred. He questioned the design capacity of the Tolna Coulee control structure and potential flow rates had the location overflowed and erosion occurred prior to the structure. DWR staff did not have these numbers on-hand and offered to discuss at a later date. Mr. Gessner inquired about the sulfate levels in Stump Lake and at the East End as of the date of the meeting. Mr. Wax (DEQ) responded that he did not know about Stump Lake, but the East End levels were roughly 900 mg/L. Mr. Wax also noted that historically, Stump Lake had levels as high as 12,500 mg/L, which is way higher than it is now. Mr. Gessner also questioned that, if the lake would have overflowed without the project, would there have been extremely high sulfate and extremely high flow entering the Sheyenne River downstream. Mr. Wax (DEQ) confirmed. Mr. Gessner expressed concern that the Tolna Coulee control structure might hold back the water in Devils Lake and noted that everything that's been done has been to protect downstream interest and has not taken into account local concerns. He advocated to get the lake to the lowest level possible. He also asked about the federal plan for the state outlets mentioned in last year's (2023) DLOMAC meeting. Mr. Paczkowski apologized that a response could not be provided as he was not at last year's (2023) meeting.

Dan Webster (local farmer) inquired about the plan for operating the outlets. DWR responded the pumps will be operated to the maximum extent possible, within the operating constraints. Mr. Webster suggested a more aggressive approach to operating the outlets. Mr. Webster expressed frustration over the lack of outlet operation while farmland remains under water, regardless of concerns of water quality, fisheries, and water access for resort owners. He further expressed frustration that these concerns seem unheard and that the pumps are not operated as extensively as they could be. He concluded by emphasizing that the land is unusable regardless of whether it is under an inch of water or feet of water.

Karen Hausmann (Churches Ferry) questioned the lack of evaporation observed last year (2023). She emphasized the need for DWR to maintain the outlet infrastructure to ensure continued operation and expressed frustration the capital improvement report had not been addressed, particularly regarding its content and planned actions. Ms. Hausmann also raised concerns about the loss of land, attributing it to the limited access and echoed Dan Webster's point that insufficient pump operation negates efforts they've done to access the land. Upon completion of her comments, she requested clarification on weather conditions and capital improvements. Ms. Lee (NWS) responded that, despite similar lake levels at the beginning and end of the season, evaporation rates have remained relatively consistent for the last few years. She explained that no significant change in lake levels does not necessarily indicate lack of evaporation. There was a rise of lake level between the start

and end of the season, suggesting the pumps were effective and some evaporation occurred. Ms. S.Pillai-Grinolds (DWR) noted that DWR have started looking into the items recommended by the capital improvement plan, such as pump and standpipe maintenance, but there is no current timeline for executing the projects. Ms. S.Pillai-Grinolds also noted that maintenance and repairs needs to be done outside the operational season, which limits the available time.

Jonathan Erickson (Webster, ND) commented that the culvert feeding Round Lake is insufficient to maintain the water supply to the pumps and inquired if any changes had been made. DWR responded that when water levels are low near the old Highway 281, the area has been breached in the past. This spring, a bathymetric survey will be conducted to assess the situation and ensure adequate water supply when water levels drop. The survey is expected to be completed this spring, after which a plan of action will be developed. Mr. Erickson also asked about the cattail situation at the West End. Ms. S.Pillai-Grinolds (DWR) explained that operations staff regularly clean the intake screens to maintain the normal operation of the outlets. While there is no permanent solution, operation staff work to manage weed growth and any clogging issue is addressed promptly to ensure continued operation.

Mr. Dick Johnson appreciated the professional work done across the state by DWR.

Mr. Frith commented that Devils Lake outlets operation is a complex issue to deal with. But he reiterated the need to operate the outlets as aggressively as it is allowed this operating season. He also clarified that landowners have not been compensated for flooded lands and there is not a program for inundated acres so he noted that the pumps must be operated as much as they are capable of.

Joel Anderson made a motion to operate the pumps as much as legally possible. Jeff Frith seconded the motion. The committee then voted recommending operation of the Devils Lake outlet pumps as much as possible for the current season. The motion passed.

Meeting adjourned at 2:43pm.