Minnesota allows Enbridge to move 10 times as much water as originally approved

On June 4, 2021, the DNR authorized Enbridge to appropriate an additional 4.5 billion gallons of water for temporary trench dewatering for the remaining 144.5 miles of construction. Enbridge’s original request was for 510 million gallons, bringing their total to 5 billion gallons of dewatering.

Enbridge at the least made a very serious error in its engineering calculations — now the DNR has approved a massive dewatering during a drought without meaningful Tribal consultation or public notice.

Minnesota approves this water withdrawal during a Drought

The Minnesota DNR considers Tribal consultation sending an email

On March 11th the DNR requested comments on the increased water request from 13 local soil and water conservation districts, three watershed districts, and thirteen counties. In addition, the DNR sent out a request for comments to State and Federal agencies such as the USCOE, Board of Water and Soil Resources (BWSR), MPCA and DNR staff (EWR, Wildlife, Fisheries)

The DNR notified Tribal Natural Resources Directors staff via email on May 14th to notify them of the proposed permit change and invite them to a Q & A session. DNR’s findings indicate that the tribes inquired about whether supplemental environmental review was needed for this request. DNR responded with a link to the EIS and summarily concluded that “the proposed Amendment request is not out of compliance with the document.”

This is not government to government consultation.
DNR assumes there will be no impact, because Enbridge says so

When it granted the original permit, DNR found that there would be no environmental impacts because the dewatering is temporary. However, DNR’s findings do not discuss the rate of groundwater recharge, or how long it takes for the discharged water to filter back into the groundwater and restore the natural water balance. And DNR did not consider whether a temporary drop in water levels would impact the ecology of sensitive wetlands or rare plant species that may be present along the route. DNR simply assumed there would be no impacts.

From the DNR findings on amended permit:

Tribal Natural Resource Staff asked about the infiltration rates in the areas where water will be discharged. DNR Response: DNR asked MPCA staff about the infiltration rates as it relates to their stormwater discharge permit and MPCA provided a response indicating that there was not an analysis conducted on discharge infiltration rates, additionally the MPCA included a description of permit requirements that discharges shall not create nuisance conditions.

Background

On November 12, 2020, DNR granted Enbridge four separate water appropriation permits:

- Up to 510 million gallons per year for trench and construction dewatering, increased to 5.6 billion gallons

- Up to 63.1 million gallons for trench and construction dewatering near the Gully 30 fen. (Calcareaus fens are a rare kind of wetland. State law requires DNR to make specific findings before issuing a permit that could impact a calcareaus fen.)

- Up to 13.8 million gallons per year for dust suppression during construction

- Up to 113.1 million gallons for HDD and mainline hydrostatic testing
What is construction trench dewatering?

Construction trench dewatering is necessary to remove excess water from the trench during construction. To install the pipeline, a trench needs to be excavated through the topsoil and unconsolidated glacial sediment (and/or bedrock). The depth of trench may vary depending on the topography at the land surface, but in general it is less than 10 feet and probably ranges from 7 to 9 feet. In places along the pipeline, where the groundwater level is near the land surface (i.e., wetlands, peat bogs, etc.), the excavated trench may fill or partially fill with water up to the level of the groundwater table elevation soon after it is dug. In order to work in the trench and install the pipeline, the trench needs to be dewatered by removing the standing water and preventing excess seepage from entering the ditch until the pipeline is installed and work is completed.

One method of dewatering is to place a sump pump in the standing water and pump the water out of the ditch, the water being carried to another area by a discharge hose and discharged back into the environment. Enbridge originally planned to use this “traditional” dewatering techniques along 80% of the Line 3 route.

Another method is to install a well point system containing a series of individual wells on both sides of the excavation with the well point screens set at a depth below the bottom of the excavation. A pump removes the water from all the well points, and channels the water into a main pipe/hose system that then carries the water to a discharge site some distance from the excavation site. The pumped groundwater discharges into a containment area that is prepared to mitigate (i.e., hay bales and filter fabric) the water’s environmental impact by filtering out sediment. The discharge water then infiltrates back into the soil and glacial sediment and returns to the groundwater system. Thus, by using a well point pumping system, the groundwater elevation along the pipeline is temporarily lowered allowing the excavation site to be temporarily water free.

“Scientists have been raising concerns for years that MNDNR and MPCA were underestimating the impacts to wetlands posed by Line 3 construction and operation. This giant increase in requested dewatering shows that both Enbridge and the state did indeed fail to adequately account for the cumulative impact this project would have on vast areas of sensitive wetland ecosystems across northern Minnesota. In fact, even though Minnesota DNR has granted the new permits for dewatering – and I would add, granted them with no public input and no consultation with tribes – the agency still hasn’t done the work to understand the impact this huge increase in water appropriation will have on sensitive waters in the region,” Christy Dolph, University of Minnesota research scientist.
What is construction trench dewatering? (cont'd)

Enbridge assumed it would need roughly the same amount of water for construction dewatering that it used for the Alberta Clipper pipeline, which is co-located with 41% of the new Line 3 route. DNR accepted Enbridge’s assumption, concluding that Enbridge’s methodology “provides a reasonable approximation of the volume of water that may need to be appropriated.”

DNR also summarily concluded that “[s]ufficient hydrologic data are available to allow the DNR to adequately determine the effects of the proposed appropriation. The information available to the DNR is adequate to determine whether the proposed appropriation volume and use of water is sustainable and protective of ecosystems, water quality, and the ability of future generations to meet their own needs.” DNR did not cite any information supporting this analysis and has not done so to date.

According to local geologists, the hydrology of the area where the pipeline is being built is highly variable and can change in 50 or 100 feet. As a practical matter, detailed information on the hydrology of the area is not available. For example, because small hills or valleys a “Valley of Depression” can occur, basically pumping of water causing water all along the system to shift down, causing larger spread movement/relocation of water throughout the area.