LOWER MINNESOTA RIVER
WATERSHED DISTRICT

Executive Summary for Action

Lower Minnesota River Watershed District Board of Managers Meeting
Wednesday, September 16, 2020

Agenda Item
Item 5. C. - Call for an EAW on Yellow Medicine County Ditch 9

Prepared By
Linda Loomis, Administrator

Summary
The Izaak Walton League Minnesota Valley Chapter is planning to petition the MN Environmental Quality Board for the preparation of an Environmental Assessment Worksheet for a drainage improvement project on County Ditch 9 in Yellow Medicine County. The Ike's have asked the LMRWD to join the petition.

The proposed project has identified several BMPs to address rate and volume control as part of the improvements. Additional BMPs were identified however they are on private property and it is noted that they will not be constructed unless the private property owner is willing.

It is possible that more could be done to reduce the erosion potential caused by the proposed increase to the flow of water. However a more thorough investigation and review of the plans would need to be made. The Izaak Walton League is relying on a review of the project by Patrick Belmont as a basis for its request for an EAW. Dr. Belmont was involved in the Collaborative for Sediment Source Reduction (CSSR) and is very familiar with the issue of sediment and erosion in the Minnesota River.

In the past, the LMRWD used an outside consultant to review TMDL studies done within the MN River Basin. Comment letters were then submitted to the MPCA based on the reviews. Young Environmental Consulting Group did the most recent reviews.

It appears that the Izaak Walton League is planning to challenge every drainage improvement project proposed in the MN River Basin and more requests for the LMRWD to join will be forthcoming. Staff recommends that the Board consider whether or not the LMRWD wants become a party to the petition and adopt a policy in order to be prepared to address similar requests in the future.

Attachments
Email from Ted Suss, President, Izaak Walton League, Minnesota Valley Chapter
Letter from Patrick Belmont dated September 8, 2020

Recommended Action
Provide direction to staff

Gmail Linda Loomis <naiadconsulting@gmail.com>

Yellow Medicine Countyb Ditch 9

Ted Suss <tedlsuss@gmail.com> Wed, Sep 9, 2020 at 1:24 PM
To: Linda Loomis <naiadconsulting@gmail.com>

Linda

Might the LMRWD Board send a letter to EQB calling for a mandatory EAW on this drainage project?

Drainage projects such as the proposed improvement to Yellow Medicine County Ditch 9 increase river flow levels that cause flooding.

The Minnesota Izaak Walton League is leading an effort to prevent completion of this project unless it is designed in such a way to store water in that watershed and make certain that the discharge from this improved drainage system is no greater than the current discharge.

I am writing to seek a letter of support from LMRWD for our call for a mandatory Environmental Assessment Worksheet on Yellow Medicine County Ditch 9.

If your city government chooses to join in this effort, please address the letter to the Environmental Quality Board (EQB) but send a signed digital copy to me at this address so that we can attach your letter to our petition to the EQB.

Because the final engineering report is already completed, we must petition EQB as quickly as possible, therefore time is of the essence.

I am attaching a link to the engineering report as well as a copy of a letter from Patrick Belmont, a scientist who has extensively studied the Minnesota River.

Ted

19047 Yellow Medicine CD 9 Draft FER.pdf

Belmont letter on Yellow Medicine CD 9 Sep 8 2020.pdf
230K

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I have reviewed the final engineering report for the Yellow Medicine County Ditch 9 drainage project and am writing to request a mandatory Environmental Assessment Worksheet be conducted for the project. Let me start by saying that I fully understand why farmers implement these drainage efficiency projects. Crop yields increase significantly following these projects. Many such projects pay for themselves within just a few years due to increased productivity. The problem is that these drainage efficiency projects have significantly increased flood risk, diminished water quality and degraded aquatic habitat downstream.

The basic physics behind these projects is quite simple. Increasing drainage efficiency necessarily means getting the water to downstream receiving bodies more quickly and as a result, peak flows and the erosive power of the river both increase. The extent to which peak flows increase is difficult to predict before the project is implemented, even with a sophisticated model such as XP SWMM, because there is considerable heterogeneity in the soils and sub-surface flow paths. But analyses of historical projects in the Yellow Medicine and many other Minnesota River tributaries clearly demonstrate that each individual project has an impact and the cumulative effects of drainage projects have had devastating impacts on flooding, water quality, biological communities and recreational activities downstream. Recent papers by Kelly et al., 2017, Schottler et al., 2014, Foufoula-Georgiou et al., 2015; Hansen et al., 2016, and Belmont and Foufoula-Georgiou, 2017 lay out the scientific evidence linking artificial drainage to increased peak flows and downstream impacts. While some have attempted to argue that the substantially increased flows in Minnesota are entirely due to changes in precipitation, this argument has been resoundingly discredited by Belmont et al., 2016 and Foufoula-Georgiou et al., 2016, among others.

While it is laudable that some amount of water storage has been integrated into the proposed plan, in an effort to mitigate peak flow increases and delivery of water to downstream receiving waterbodies, I believe that the proposed amount of storage is entirely inadequate to avoid detrimental impacts downstream. A considerable amount of additional work would be required to determine the amount and location of water storage needed to offset the proposed increases in drainage efficiency, but I expect that the amount of storage would need to be increased 10-20 fold (see Mitchell et al., 2018; Cho et al., 2019). Further, the location of the

water storage included in the plan is located far upstream from the project area. The downstream costs of increasing drainage efficiency with inadequate water storage are very real, as we have seen for decades in terms of increased flooding, diminished water quality and degraded ecological populations in streams and rivers throughout Minnesota. Continuing to allow drainage projects with inadequate water storage simply forces those living downstream to pay the externalized costs of these drainage projects. Minnesota can and must do better than that.

Sincerely submitted,

Patrick Belmont
Professor and Head of the Department of Watershed Sciences
Utah State University

References:

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