



LOWER MINNESOTA RIVER WATERSHED DISTRICT

Executive Summary for Action

Lower Minnesota River Watershed District Board of Managers Meeting

Wednesday, April 18, 2018

Agenda Item

Item 6. A. - Hennepin County Slope failure study

Prepared By

Linda Loomis, Administrator

Summary

Hennepin County completed the first phase of its study to inventory historical landslides in Hennepin County. The findings of this study have been released to Emergency Managers throughout the County. The LMRWD has received this information, which will be incorporated into the SONAR. The County would like to undertake a second phase that will field verify the work and look further into causes of the slope failures. Freshwater Society is closely involved in this work and has reached out to watershed districts that are impacted by landslides to help fund phase 2.

An email from Steve Woods is attached providing more details of the inventory, phase 2 and requesting a meeting with the watershed districts. Mississippi WMO, Nine Mile Creek WD, US Fish & Wildlife Service and Steve Woods & Carrie Jennings from Freshwater met on April 11th to discuss participation by the watersheds. Hennepin County has agreed to fund \$10,000 toward phase two. It is estimated that phase 2 will cost \$40,000 to complete. Given the number of landslide features in the LMRWD, we thought \$10,000 from the LMRWD would be an appropriate amount. The remaining \$20,000 would come from Mississippi WMO, Nine Mile Creek WD, Minnehaha WD and RPBCWD. Riley/Purgatory/Bluff Creek WD and Minnehaha WD were not at the meeting, but there are plans to check in with them before proceeding.

There is money in the education budget to pay for this.

Attachments

Email from Steve Woods

Recommended Action

Motion to authorize participation in phase 2 landslide study and level of participation

Bluff erosion and landslides in Hennepin County

Steve Woods <SWoods@freshwater.org>

Fri, Mar 30, 2018 at 2:40 PM

To: "ranhorn@ninemilecreek.org" <ranhorn@ninemilecreek.org>, "Doc Snyder (dsnyder@mwmo.org)" <dsnyder@mwmo.org>, "cbleser@rpbcd.org" <cbleser@rpbcd.org>, "Linda Loomis (naiadconsulting@gmail.com)" <naiadconsulting@gmail.com>, James Wisker <JWisker@minnehahacreek.org>
Cc: Carrie Jennings <cjennings@freshwater.org>

I've either spoken with each of you or left a voicemail about a project Hennepin County has been doing and is looking to expand into a second phase. This is the email I promised.

We have been working with Hennepin County Emergency Management to inventory historic landslides and map all landslides in the County. Their purpose for undertaking this work is to minimize health and safety risk, damage to infrastructure, and help predict areas susceptible to landslides in light of changing precipitation events and human modifications to slopes.

We have identified the historical landslide deposits, small slides along rivers and slopes in the interior of the county, as well as large slides along the Minnesota and Mississippi in your watersheds.

Watershed	Slide Deposits	Modified slopes that have failed	Small river slides	Large scarps where slides originate	Small slides in interior of county	Total number of slide features
Mississippi	1	1	4	1	15	22*
Nine Mile	11	3	1	39	56	110
Riley/Purgatory/Bluff	18	16	4	16	177	231
Lower Minnesota	93	43	2	137	343	618
Minnehaha Creek	4	8	3	2	220	237

*Unquantified number of rockfalls that were not detectable on LiDAR but require field-checking.

Hennepin County has committed an additional \$10,000 to field check this work and identify specific soil and geologic units and the unique conditions associated with these slides (springs, stormwater discharge, impervious soil horizons). However, this is not enough to complete the work. We're hoping the watershed organization will consider partnering with the County for fiscal support somewhat proportionate to the landslide occurrences in your jurisdiction.

Water management plays a role in the stability of at-risk slopes. Stormwater, impervious surfaces, rooflines, swimming pools and other changes to hydrology can exacerbate the problem resulting in stream impairments from high sediment loads.

We would like to schedule a short meeting on the morning of April 10, 11, or 12 (or a conference call) to discuss the possibility of additional watershed support for this work. Could you please let Carrie and I know which of those mornings work for you or someone else on your staff?

Carrie Jennings, PhD, P.G.
Research and Policy Director
Freshwater Society