

Date | 8-26-2014

To | Chisago Lakes LID Board of Managers

cc | Jerry Spetzman

From | Greg Graske

Regarding | Spring Channel and Outlet Structure Inspection

On July 11, 2014 an inspection of the Chisago Lakes Outlet Channels and Structures was conducted. Chisago County staff Jerry Spetzman along with EOR engineer Greg Graske performed a partial field inspection of the channel system as a follow up from the spring inspection. The following summarizes the inspection, actions performed, and any future actions recommend. Actions in red are recommended for follow up in the near future, actions in orange are actions that require future follow or monitoring up but are not urgent, and actions in green are minor maintenance items that were completed in field prior to this report.

Channel from Chisago Lake to Wallmark Lake

The upstream portion of the channel from Chisago Lake to Wallmark Lake was inspected. The channel area near Stinson Avenue appeared to be stable and the existing rock check dam appears to be eliminating any further head cutting and erosion of the channel. Water levels have risen substantially on Chisago Lake. The downstream section of this ditch was not visited during this inspection.



Photos: channel near Chisago Lake

Recommended Action:

➤ None

Outlet Structure from Chisago Lake Outlet Channel into Green Lake

The outlet structure connecting the channel from Chisago Lake to Green Lake was visited. The gates were tested and were working correctly. One of the gates on the fence was open at the time of the inspection last inspect. A new lock was purchased and installed on the gate. A lift handle was also installed on the access hatch to ease opening when the wood is swollen due to moisture.



Photos: Gate with missing lock

Recommended Action:

- None

Suggested Follow Up:

- Monitor site for continued beaver activity and need for beaver control.

Minor Maintenance Items Completed:

- Tested Gate Operation
- Installed new lock on fence gate
- Installed lift handle on access hatch

Outlet Structure and Pipe between Lake Ellen and Swamp Lake

The gate was opened on June 27th due to rising water levels on Green Lake. Significant beaver sediment and debris build up was noted around the entire structure. This was initially thought to be Beaver activity, but upon talking to a trapper he did not find sign of beaver activity in the area. Water was no longer going over the structure at the time of the inspection. The sediment and debris should be removed. If continued maintenance is needed additional measures might be needed to ensure a free flowing structure.



Photo: Lake Ellen Outlet Structure-beaver activity

Recommended Action:

- Remove mud and debris from around structure

Suggested Follow Up:

- Monitor Erosion Control Device in farm field for needed maintenance
- Monitor for ongoing mud and debris build up

Swamp Lake Outlet The Swamp Lake outlet pipes under County Road 80 were visited. This location has 7 pipes under the road to convey flow. No concerns were noted.

Recommended Action:

- None

Ivywood Outlet Structure

The culvert crossing under Ivywood Trail was visited. This site is not generally part of the outlet conveyance due to the outlet channel to Carlos Avery WMA never being fully completed. No issues noted.

Recommended Action:

- None

North Center to North Lindstrom Channel



Photo: Beaver Dam location near County Road 20 – after removal

The channel at the outlet of North Center Lake was visited. The channel was flowing at the time of the inspection. A beaver dam was obstructing flow at the downstream side of the County Road 20 Bridge during the previous inspection. The dam has since been removed and no further activity was noted.

Suggested Follow Up:

- Monitor for continued beaver activity

Minor Maintenance Items Completed:

- Beaver Dam Removed