

Date | 11-20-2020
To | Chisago Lakes LID Board of Managers
cc | Jerry Spetzman
From | Greg Graske

Regarding | Fall Channel and Outlet Structure Inspection

The fall inspection of the Chisago Lakes Outlet Channels and Structures was conducted on October 29th. EOR engineer Greg Graske and District administrator Jerry Spetzman performed the inspection of the channel system. Gary Schumacher, Bruce Meyer, and Jason Houle also participated in the 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 up or monitoring but are not urgent, and actions in green are maintenance items that were completed recently.

Channel from Chisago Lake to Wallmark Lake

The channel from Chisago Lake to Wallmark Lake was inspected. Chisago Lake water levels were rising this spring, and water started overtopping the weir in early April. Water continued to flow over the weir to Walmark Lake until early May. Water levels have now receded, and water is no longer flowing over the weir. Additional downed trees, trash, and woody debris was noted at both ends of the Sportsman Drive. Some of the debris was cleared around the upstream end of the culvert. It is recommended that a contractor be hired to remove the downed trees and clean up the area.



Photos: Right – Downed trees at Sportsman Drive culvert

Recommended Action:

- Hire contractor to clean up of downed trees and woody debris at Sportsman Drive culvert

Suggested Follow Up:

- None

Minor Maintenance Items Completed:

- Cleared debris in area upstream of the Sportsman Drive Culvert

Channel from Wallmark Lake to County Road 19

The channel leaving Wallmark Lake was visited. No major issues were noted.

Recommended Action:

- None

Channel from Chisago Lake to Green Lake

Water was freely flowing from Chisago Lake to Green when the Lofton Weir was open in the spring. At the time of the inspection the Lofton Weir was closed and no water was flowing. A temporary bridge had been placed across the channel for hunting access and the start of a beaver dam was noted. Both items were discussed with the adjacent landowner while in the field. The landowner indicated that he had already contacted a beaver trapper and that the bridge would be removed at the end of the hunting season.



Photo: Left – Temporary Hunting Bridge, Right Beaver Dam

Recommended Action:

- Remove Beaver Dam

Suggested Follow Up:

- Confirm that temporary bridge is removed

Outlet Structure from Chisago Lake Outlet Channel into Green Lake (Lofton Weir)

The outlet structure connecting the channel from Chisago Lake to Green Lake was visited. The control gates were opened April 2nd at which time the water level on Chisago Lake was approximately 899.6. Chisago Lake receded to approximately 898.7 on June 11th and the weirs were closed per the approved Channel & Weir Operations and Maintenance Plan. The weirs remained closed for the rest of the year.



Photos: Outlet Control Structure

Recommended Action:

- None

Suggested Follow Up:

- None

Minor Maintenance Items Completed:

- Hammered down nails that had popped up
- Raised Gate to prevent freeze up over the winter

Outlet Structure and Pipe between Lake Ellen and Swamp Lake (Lake Ellen Weir)

The gate was opened on March 26th. Water levels on Lake Ellen had receded and water was no longer flowing over the weir at the time of the inspection. The weir was closed for the season on October 29th.



Photo: Erosion control device in farm field

Recommended Action:

- None

Suggested Follow Up:

- Monitor erosion control device in farm field for needed maintenance
- Have County survey staff gauge attached to Lake Ellen Weir and the top of the structure next spring

Minor Maintenance Items Completed:

- Hammered down nails that had popped 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. Water levels peaked at approximately 881.8 on April 30th. The approved Channel & Weir Operations and Maintenance Plan requires closing the Lake Ellen Weir if water levels reach 882.7. Rocks had been noted inside several of the culverts holding back water. These rocks were removed during the inspection.



Photo: removing rocks from outlet pipes at Swamp Lake

Recommended Action:

- None

Suggested Follow Up:

- None

Minor Maintenance Items Completed:

- Cleared out rocks from inside of the culverts

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 were noted. In mid-April someone had propped up one of the stop logs to allow more water to flow through. The stop log was put back in place on April 23rd. A solution to prevent tampering with the weir stop logs should be considered.



Photo: Ivywood Control Structure

Recommended Action:

- None

Suggested Follow Up:

- Incorporate locks to prevent tampering with the stop logs

Minor Maintenance Items Completed:

- None

Outlet under County Road 19 to Bloomquist Creek

The outlet channel near County Road 19 that flows to Bloomquist creek was visited. Water levels have significantly receded since the spring inspections. No issues were noted.



Photo: Upstream of County Road 19

Recommended Action:

- None

Suggested Follow Up:

- Continue monitoring water levels at this location

Minor Maintenance Items Completed:

- None