



# Inspection of Stearns County Ditch 14

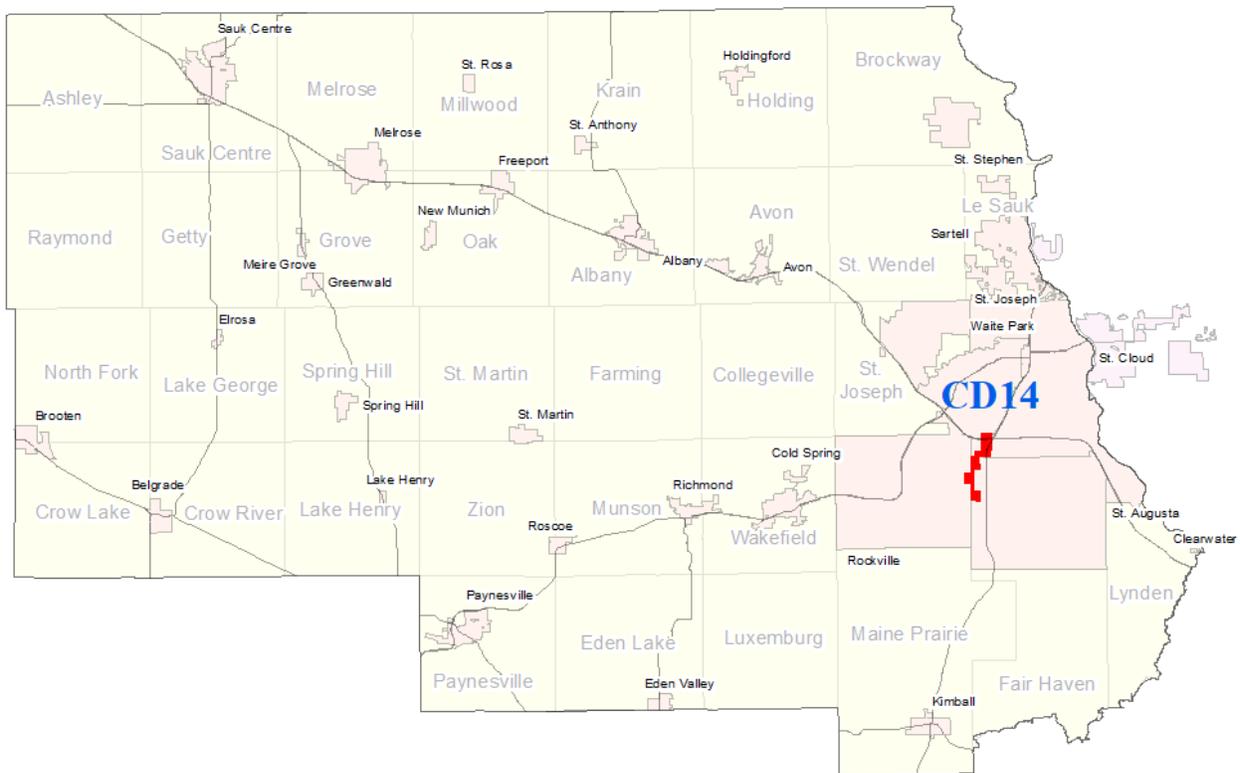
September 30, 2022

## Purpose

Staff is presenting this report to the Stearns County Board of Commissioners, acting as the Drainage Authority for Stearns County Ditch 14 (CD14), as required by Minnesota Statute 103E. The purpose of this report is to share the results of the inspection. The ditch system exists between the City of Saint Cloud, City of Waite Park, and the City of St. Augusta.

## Background

CD 14 was established in 1906 by property owner petition. The ditch is approximately 4.3 miles in length and contains about 892 of benefited acres. CD 14 is considered public waters of Minnesota, which means that the Department of Natural Resources (DNR) has oversight.

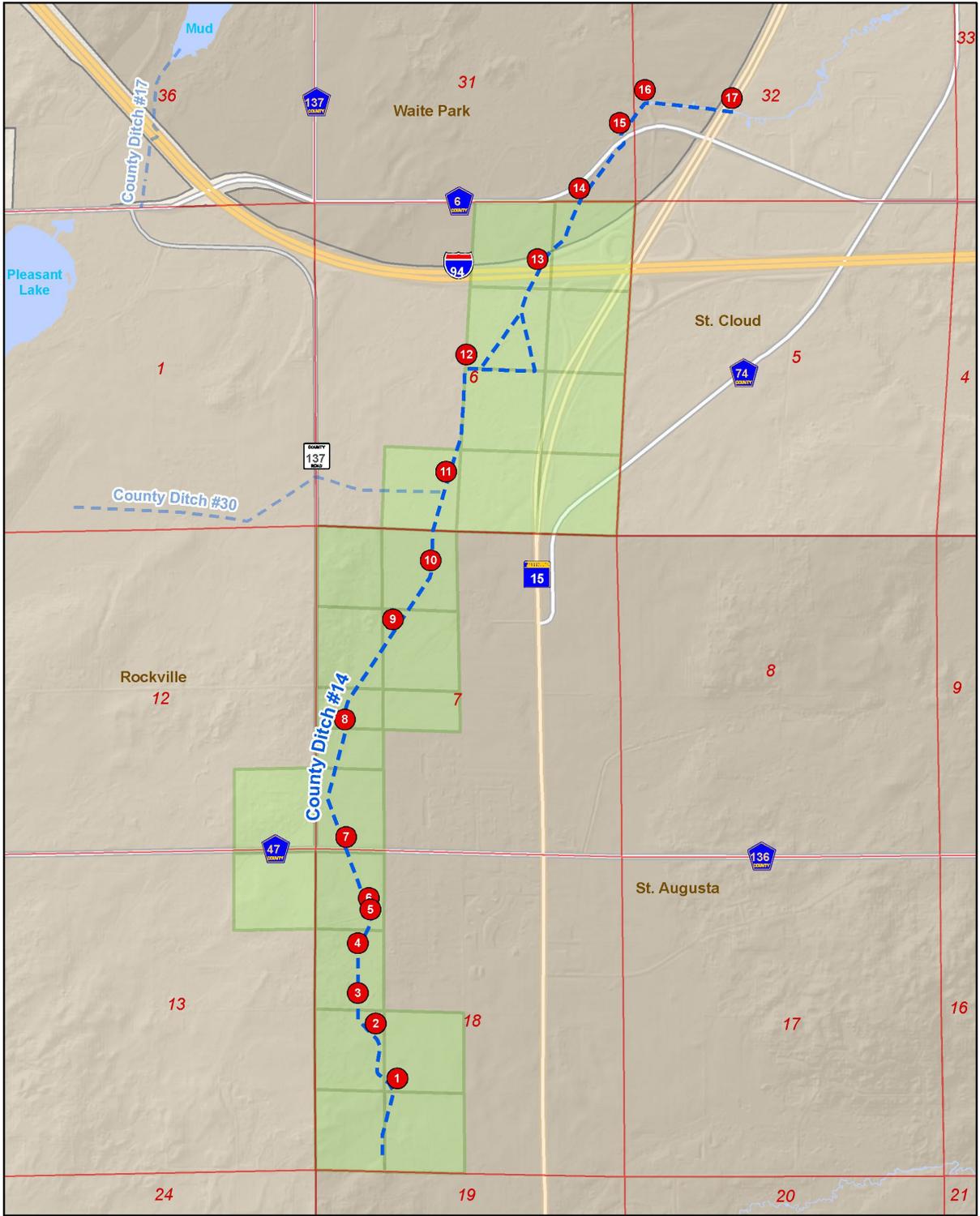




## **Inspection Summary**

The inspection of CD14 began in the summer of 2018 and continued into 2022. Staff inventoried all the crossings over the ditch system, took photos, and coordinated a drone video flight. There is no reestablishment of records on CD14, and the original engineering elevations cannot be accurately translated to any modern elevation measurement.

# Inspection Locations



## Summary of Crossings on CD 14

- 1) Private Crossing: PID: 81.43153.0669
- 2) Private Crossing: PID: 81.43153.0672
- 3) Private Crossing: PID: 81.43302.0412
- 4) Private Crossing: PID: 81.43153.0650
- 5) Private Crossing : PID: 81.43302.0302
- 6) Private Crossing: PID: 81.43153.0650
- 7) Public Crossing: County State Aid Road #47
- 8) Private Crossing: 81.43150.0345
- 9) Observation Location: 81.43150.0345
- 10) Private Crossing: 81.43150.0315
- 11) Observation Location: 81.43150.0315
- 12) Observation Location: 82.43653.0000
- 13) Public Crossing: Interstate 94
- 14) Public Crossing: Old County Road #6
- 15) Public Crossing: County State Aid Road #6
- 16) Public Crossing: Granite view Road
- 17) Public Crossing: State Highway #15

Inspection Area 1 – 81.43153.0669

This portion of the ditch inspection was completed on a private crossing located on property 81.43153.0669 in Section 18, T123N, R28W. The pipe is in good condition. The crossing information is as follows:

- Culvert: 24 inch Corrugated Metal Pipe
  - South Invert: (Upstream Invert) = 1092.29 feet
  - North Invert: (Downstream Invert) = 1092.58 feet

Drone Photo



North Invert



Inspection Area 2 – 81.43153.0672

This portion of the ditch inspection was completed on a private 81.43153.0672 in Section 18, T123N, R28W. The ditch and crossing are in good working condition. The crossing information is as follows:

- Culvert: 24 inch Corrugated Metal Pipe
  - South Invert: (Upstream Invert) = 1093.07 feet
  - North Invert: (Downstream Invert) = 1093.01 feet

Drone Photo



North View



Inspection Area 3 — 81.43302.0412

This portion of the ditch inspection was completed on a private crossing owned on PID: 81.43302.0412: In Section 18, T123N, R28W. This crossing consists of a ATV or walking bridge. The bridge is in good working condition and does not restrict water flow.

Drone Photo



Inspection Area 4 –81.43153.0650

This portion of the ditch inspection was completed on parcel 81.43153.0650.



Inspection Area 5 – 81.43302.0302

This portion of the ditch inspection was completed on a private crossing PID: 81.43302.0302 in Section 18, T123N, R28W. This crossing consists of a ATV or walking bridge. The bridge is in good condition and does not restrict water flow.



Inspection Area 6 –81.43153.0650

This portion of the ditch inspection was completed on a private crossing (239th St.) PID: 81.43153.0650 located in Section 18, T123N, R28W. The pipe is in good condition. The ditch south and north of crossing has some vegetation. The crossing information is as follows:

- Culvert: 36 Inch Plastic pipe (Good Condition)
- South Invert: (Upstream Invert): 1092.72 feet
- North Invert: (Downstream Invert): 1092.50 feet

Drone Photo



Looking south



Inspection Area 7 – 81.43153.0640

This portion of the ditch inspection was completed on County State Aid Road #47. The culvert is in good working condition. The ditch channel south and north of the crossing has sediment and vegetation. The crossing information is as follows:

- Culvert: 36 inch Reinforced Concrete Pipe (Good Condition)
- South Invert: (Upstream Invert): 1090.65 feet
- North Invert: (Downstream Invert): 1091.07 feet

Looking South



Looking North



Inspection Area 8 – 81.43150.0345

This portion of the ditch inspection was completed on a private crossing PID: 81.43150.0345 located in Section 7, T123N, R28W.

Drone Photo



Inspection Area 9 – 81.43150.0345

This portion of the ditch inspection was completed on parcel PID: 81.43150.0345 located in Section 7, T123N, R28W. The ditch channel between Inspection section #9 and Inspection #10 has vegetation and sediment in it. The water remains to flow good under these conditions.



Inspection Area 10 – 81.431.50.0315

This portion of the ditch inspection was completed on a private crossing PID: 81.431.50.0315 located in Section 7, T123N, R28W. The culvert is in fair condition. The channel is a little narrow but is functioning under the current conditions. The crossing information is as follows:

- Culvert: 48 inch Corrugated Metal Pipe (Fair Condition)
- South Invert: (Upstream Invert): 1086.01 feet
- North Invert: (Downstream Invert): 1086.28 feet

Drone Photo



South Invert



Inspection Area 11 – 82.43656.0000

This portion of the ditch inspection was completed on. PID: 82.43656.0000 located in Section 6, T123N, R28W. This portion of the ditch is open and free of debris and vegetation.

Drone Photo



Inspection Area 12 – 82.43653.0000

This portion of the ditch inspection was completed on property PID: 82.43653.0000 in Section 6, T123N, R28W. This portion of the ditch is open and free of vegetation and de-bris.



## Inspection Area 13 – I-94 Intersection

This portion of the ditch inspection was completed on the crossing of I-94 located in Section 6, T123N, R28W. The culverts are in good condition. There is vegetation and sediment on the upstream easterly culvert and the downstream easterly culvert. This culvert is 640ft long, there is a minimal of sediment in the culverts. The crossing information is as follows:

- Culvert: 2– 6ft X 8ft Reinforced Concrete Pipes (Good Condition)
- Southwest Invert: (Upstream Invert): 1082.26 feet
- Southeast Invert: (Upstream Invert): 1082.28 feet
- Northwest Invert: (Downstream Invert): 1081.56 feet

South Invert



North Invert



Inspection Area 14 – Old Co Rd 6

This portion of the ditch inspection was completed on the crossing under Old County RD #6 located in Section 6, T123N, R28W. At this crossing there a 2-48 inch Reinforced Concrete Pipes in fair condition. Under current conditions the water is flowing good. The crossing information is as follows:

- Culvert: 2-48 inch Reinforced Concrete Pipe (Fair Condition)
- Southwest Invert: (Upstream Invert): 1081.33 feet
- Southeast Invert: (Upstream Invert): 1081.61 feet
- Northwest Invert: (Downstream Invert): 1081.72 feet
- Northeast Invert: (Downstream Invert): 1081.99 feet

Looking South



Drone Photo



Inspection Area 15 – County State Aid 6

This portion of the ditch inspection was completed on a crossing under County State Aid Road #6 located in Section 31. T124N, R28W. There are 2-84 inch Reinforced Concrete Pipes at this crossing. The culverts are in good repair and good working condition. There is some vegetation upstream and downstream slightly restricting the water flow. The crossing information is as follows:

- Culvert: 2-84 inch Reinforced Concrete Pipes (Good Condition)
- Southwest Invert: (Upstream Invert) 1080.16 feet
- Southeast Invert: (Upstream Invert) 1080.04 feet
- Northwest Invert: (Downstream Invert) 1080.78 feet
- Northeast Invert: (Downstream Invert) 1080.52 feet

North Inverts



South Inverts



Inspection Area 16 – Granite View Dr

This portion of the ditch inspection was completed on the crossing under Graniteview Dr. in Section 32, T124N, R28W. The culvert is in good condition with some vegetation in the upstream and downstream channel. The crossing information is as follows:

- Culvert: 2–72 inch Reinforced Concrete Pipes (Good Condition)
- Southwest Invert: (Upstream Invert): 1078.89 feet
- Northwest Invert: (Upstream Invert): 1078.74 feet
- Northeast Invert: (Downstream Invert): 1079.31 feet
- Southeast Invert: (Downstream Invert): 1079.30 feet

Drone Photo West Invert



Drone Photo East Invert



## Inspection Area 17 – MN Hwy 15

This portion of the ditch inspection was completed on the crossing of State Highway #15 located in Section 32, T123N, R28W. The culverts are restricting water flow. The crossing information is as follows:

- Culvert: 2 – 72 inch Reinforced Concrete Pipes
- Southwest Invert: (Upstream Invert) = 1076.35 feet
- Northwest Invert: (Upstream Invert) = 1076.18 feet
- Southeast Invert: (Downstream Invert) = 1076.06 feet
- Northeast Invert: (Downstream Invert) = 1076.12 feet

Drone Photo



Drone Photo



## Conclusion

The ditch is demonstrating adequate flow despite vegetation being present on the banks of the channel. No reported concerns have been received from property owners during the inspection process. There are areas where Type 3 wetlands are present which means there must be consideration of the Wetland Conservation Act before repairs can be made. It is possible that a Reestablishment of Records proceeding may be necessary for wetland review of a proposed repair. Based on the absence of visual obstructions or property owner concerns, Stearns County will continue to monitor the drainage system.

A beaver deterrent was installed by county staff to prevent continual plugging of culverts.



There are no 103E.021 permanent buffer strip violations as the CD 10 drainage system has not acquired the one-rod perennial vegetation buffer.

The next schedule inspection is 2024 based on MN 103E requirements.