

SITE LOCATION: CSAH 61-Flying Cloud Drive

PURPOSE: Construction Stormwater Site Visit on Behalf of the Lower Minnesota River Watershed District (LMRWD)

DATE & TIME: 4 December 2018, 0830-1030

INSPECTOR: Sarah Duke Middleton, Water Resources Scientist
Young Environmental Consulting Group, LLC

WEATHER: 22°F, overcast with light snow and light winds

SITE CONDITIONS: In undisturbed locations, the site is firm/frozen. In active construction areas where dirt work is taking place, the soils are soft. Snowpack across the project ranges from 3 to 6 inches.

PHASE: Active construction, including the construction of walls, prep for bridge construction (predominately in the middle section of the project), and some grading.

DISCUSSION

Prior to the site inspection, I met with Corey Kurth (Engineering Technician with the City of Eden Prairie) at the project's construction trailers. We were unable to locate Hennepin County staff at the construction offices for a project update, so we proceeded to the field. Corey accompanied me for the duration of the field visit.

Corey indicated that the project will wrap up utility work onsite for the winter and will largely focus on wall construction. Once utility work is concluded for the year, grading onsite will be minimal.

INSPECTION NOTES

The first part of December brought additional snow pack to the project. An additional 3 to 4 inches covered the site since my last field visit. This masked most of the site conditions, except were current construction activities were taking place.

Areas of the project that were covered in snow seemed to be untouched since my November 19, 2018, visit. Firm/frozen site conditions and a lack of liquid precipitation have led to a mostly stable site. Regions where active grading is occurring revealed soft soils during my site visit. In these areas, my boots often sank a few inches into the soil. See photos 13 through 24 for grading activities.

Dewatering is taking place in several areas, predominately in the center of the project (see photos 27 through 30). The dewatering set ups I saw during the site visit had large, brown mud-like substances surrounding the filter/dewatering bag. In one instance, a dewatering bag was not visible (see photo 28). At this site it was unclear if direct discharge was taking place. Two rows of silt fence are directly downslope of these setups, and the discharge has not filtered through these BMPs. The dewatering set up noted in the November 19, 2018,

inspection appeared unchanged since my last visit (see photos 2 through 4). The hose still lies on top of a filter bag in the wetland area, with a brown plume in the surrounding water. I was able to confirm that, at the time of my site visit, no water was coming out of the hose.

See the attached photo log for documentation of current site conditions.

RECOMMENDATIONS

Lower Minnesota River Watershed District:

- Attend the next project meeting to present the District's concerns about erosion and sediment management of the project as well as the potential negative effects to adjacent water and natural resources.

Project Team/Site Supervisor:

- Numerous BMPs appear to have failed. Review site conditions (slope, drainage, etc.), and provide and install appropriate BMPs for site conditions and anticipated seasonal precipitation.
- Culverts draining stormwater: Culverts on the northern side of the road receive drainage from nearby construction activity. Without BMPs in place, sediment-laden stormwater flows directly into the culvert and outputs into Rice Lake or other down-gradient water features. See the following photos for reference: 1, 5, 9-11, 24, and 40-41.
- Actively maintain and install all site BMPs per regulatory requirements, design, and installation specifications.
- Remove construction debris and trash from the site (used oil bottles, fiber, rope, food waste, etc.).

NEXT PROJECT SITE VISIT

Site visits will take place on a monthly basis during frozen conditions, unless warmer weather or a rain event occur. The next site visit will take place during the first week of January 2019, unless otherwise directed by the LMRWD.

PHOTO LOG

The following photographs were taken during the site visit on Tuesday, December 4, 2018. All photos show a red arrow indicating north and a text box indicating the general location of Rice Lake. Aerial photos of the project site are incorporated to designate where site features are located/photographed.

Due to the linear nature of the project, the site has been divided into four segments (see aerial photo ->). The photo log will highlight locations of site features at the segment level.





Segment 1



Rice Lake

Photo No.: 1

Location: 44°48'50.52"N 93°31'54.09"W

BMPs Present: None visible

Description: Inlet on top of roadway. Outlet is not visible due to snowpack.



Photo No.: 2

Location: 44°48'55.61"N 93°31'39.61"W

BMPs Present: None visible

Description: Location of dewatering – originally noted in the November 19th inspection report.



Photo No.: 3

Location: 44°48'55.13"N 93°31'37.16"W

BMPs Present: Filter bag – unattached to hose

Description: Dewatering setup (first noted in the November 19th inspection report). The site appears unchanged. The hose is lying unattached, on top of the filter bag. The brown plume had not been disturbed in the wetland area.

During this site visit, I confirmed that the hose DOES NOT have water flowing out of it.



Photo No.: 4

Location: 44°48'54.75"N 93°31'37.20"W

BMPs Present: None visible

Description: Part of dewatering setup pictured in photos 2 and 3.

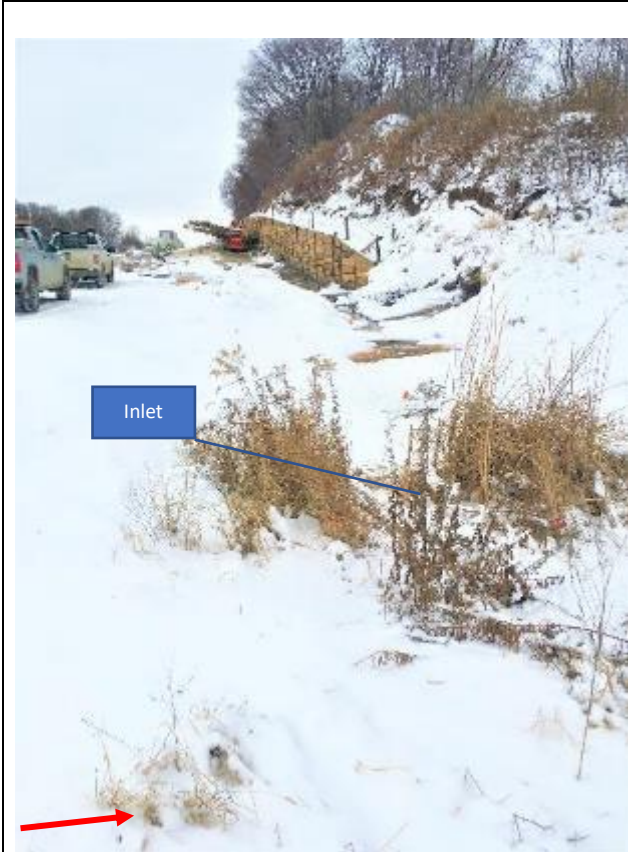


Photo No.: 5

Location: 44°48'57.67"N 93°31'21.90"W

BMPs Present: Possible rock checks

Description: Drainage of ROW on north side of project. Wall drains downslope towards vegetation at forefront of photo. There is an inlet in the vegetation (not visible due to vegetation and snow pack).



Photo No.: 6

Location: 44°48'57.88"N 93°31'20.53"W

BMPs Present: Two rows of silt fence; fabric

Description: South side of ROW appears unchanged since the November 19th site visit.



Photo No.: 7

Location: 44°48'57.88"N 93°31'20.53"W

BMPs Present: Multiple rows of silt fencing; sand bags in culvert

Description: Outlet of culvert. BMPs appear largely intact, and surrounding area is stable.



Segment 2



Photo No.: 8

Location: 44°49'01.73"N 93°31'10.47"W

BMPs Present: None visible

Description: Northern side of ROW.



Photo No.: 9

Location: 44°49'01.63"N 93°31'09.42"W

BMPs Present: Two rows of silt fence; vegetation buffer

Description: Outlet of a culvert leading to Rice Lake. Area is frozen and stable.



Photo No.: 10

Location: 44°49'01.89"N 93°31'09.76"W

BMPs Present: None visible

Description: Stormwater runoff flowing from wall and along ROW to half-buried inlet (not visible due to snowpack). Due to current weather and site conditions the runoff is minimal, likely occurring when sun melts the snow.



Photo No.: 11

Location: 44°49'01.85"N 93°31'09.67"W

BMPs Present: None visible

Description: Drainage along northern side of ROW into buried inlet. See photo 10 for an additional view of drainage to this inlet.



Photo No.: 12

Location: 44°49'03.20"N 93°31'01.46"W

BMPs Present: Silt fence with t-posts; silt fence backed with concrete barriers; vegetation buffer.

Description: South side of ROW stable and snow-covered.



Photo No.: 13

Location: 44°49'02.88"N 93°30'59.48"W

BMPs Present: Silt fence with t-posts; silt fence backed with concrete barriers; possibly biologs

Description: Active construction grading upslope of culvert. Where undisturbed, ROW is stable.



Photo No.: 14

Location: 44°49'04.29"N 93°30'55.15"W

BMPs Present: Silt fence with t-posts; silt fence backed with concrete barriers

Description: East side of construction activity in Photo 13. Grading upslope of BMPs.



Photo No.: 15

Location: 44°49'03.98"N 93°30'54.92"W

BMPs Present: Silt fence with t-posts; silt fence backed with concrete barriers

Description: Same general area as photo 14. Soil overtopping a section of silt fencing.



Photo No.: 16

Location: 44°49'11.51"N 93°29'28.73"W

BMPs Present: Silt fence with t-posts; silt fence backed with concrete barriers

Description: Northern side of ROW conditions.



Photo No.: 17

Location: 44°49'07.00"N 93°30'53.15"W

BMPs Present: Silt fence with t-posts; silt fence backed with concrete barriers

Description: (Northern) Culvert inlet for a creek on the north side of the project. Area on either side of the culvert/creek bed is stable. Grading was taking place during the site visit upslope of the culvert.



Photo No.: 18

Location: 44°49'06.02"N 93°30'52.78"W

BMPs Present: Plastic sheeting on open soils; riprap; silt fencing

Description: Outlet of Northern Culvert (Photo 17), streambed, and Southern Culvert. Grading was taking place during site visit very close to the Northern culvert (Inlet and outlet).



Photo No.: 19

Location: 44°49'05.52"N 93°30'53.15"W

BMPs Present: Sheet of fabric covering open soils.

Description: Active construction taking place near Northern Culvert (photos 17 & 18).




	<p><u>Photo No.:</u> 20</p> <p><u>Location:</u> 44°49'04.33"N 93°30'54.44"W</p> <p><u>BMPs Present:</u> Silt fence</p> <p><u>Description:</u> Southern Culvert outlet on southern side of ROW (see Photos 17-18 for Northern Culvert)</p>
	<p><u>Photo No.:</u> 21</p> <p><u>Location:</u> 44°49'05.92"N 93°30'57.71"W</p> <p><u>BMPs Present:</u> Silt fencing with metal t-posts and jersey barriers</p> <p><u>Description:</u> Northern side of ROW and active grading of the site. Soils are very soft and appear slightly lower in elevation than the wetland area (left area of photograph).</p>
	<p><u>Photo No.:</u> 22</p> <p><u>Location:</u> 44°49'05.92"N 93°30'57.71"W</p> <p><u>BMPs Present:</u> Silt fencing with metal t-posts and jersey barriers</p> <p><u>Description:</u> Northern side of ROW near newly graded area (see photo 21). Area appears partially frozen.</p>



Photo No.: 23

Location: 44°49'06.04"N 93°30'58.26"W

BMPs Present: Silt fencing with metal t-posts and jersey barriers; riprap

Description: Northern side of ROW near newly graded area (see photo 21).



Photo No.: 24

Location: 44°49'05.85"N 93°30'58.39"W

BMPs Present: Silt fencing with metal t-posts and jersey barriers

Description: Culvert along northern side of ROW. Water actively flowing from offsite, over jersey barrier, and into culvert. Photos 16, and 21 through 23 drain to this culvert.



Photo No.: 25

Location: 44°49'07.92"N 93°30'42.78"W

BMPs Present: Rock check

Description: Large rock check spanning 100+ft on the northern side of ROW.



Photo No.: 26

Location: 44°49'09.04"N 93°30'36.75"W

BMPs Present: None visible

Description: Sawhorse partially in open water, along the northern side of the ROW. Active construction is taking place nearby on wooden mats.

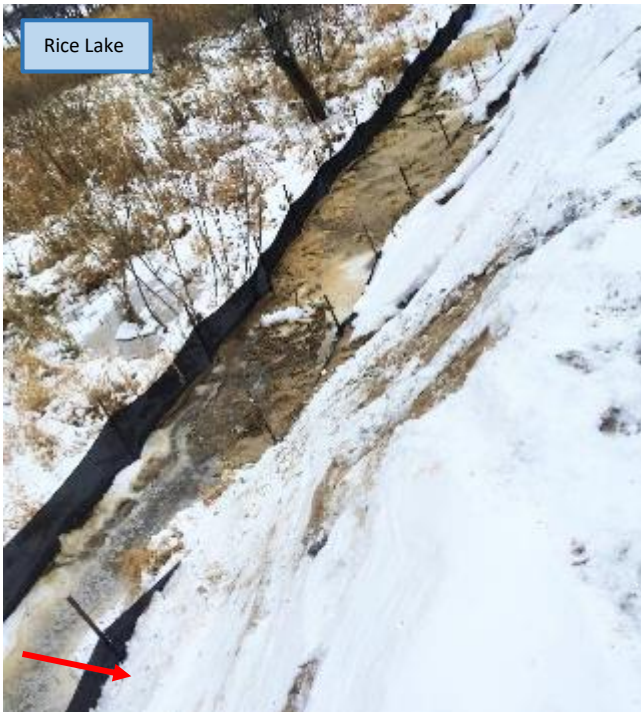


Photo No.: 27

Location: 44°49'08.08"N 93°30'37.23"W

BMPs Present: Two rows of silt fence

Description: Large deposit of brown substance accumulating in silt fencing. This area is along the southern perimeter of the ROW. This was a dewatering location. During this site visit, several areas along this stretch had dewatering setups (see photos 28 through 30).



Photo No.: 28

Location: 44°49'07.80"N 93°30'38.11"W

BMPs Present: Two rows of silt fence

Description: Dewatering hose. It is unclear if water is currently coming out of the hose. A filter bag is not visible. Brown sediment has accumulated in the channel between two silt fence rows along the dewatering area (photos 27 through 30).



Photo No.: 29

Location: 44°49'07.77"N 93°30'38.01"W

BMPs Present: Two rows of silt fence

Description: Another view of dewatering area on southern side of ROW. At the time of the site visit, the brown sediments did not appear to breach/overwhelm the second silt fence.



Photo No.: 30

Location: 44°49'07.60"N 93°30'39.84"W

BMPs Present: Two rows of silt fence; filter bag

Description: Dewatering set up on the southern side of the ROW. It is unclear if the dewatering/filter bag has broken and resulted in the accumulation of brown sediments beneath the bag.

At the time of the site visit, the brown sediments were contained by the first row of silt fence.






Photo No.: 31

Location: 44°49'07.54"N 93°30'41.25"W

BMPs Present: Wooden mats

Description: ROW conditions

	<p><u>Photo No.:</u> 32</p> <p><u>Location:</u> 44°49'07.36"N 93°30'41.53"W</p> <p><u>BMPs Present:</u> Two rows of silt fencing</p> <p><u>Description:</u> Outlet along southern side of ROW. Area is undisturbed and stable.</p>
	<p><u>Photo No.:</u> 33</p> <p><u>Location:</u> 44°49'06.85"N 93°30'44.79"W</p> <p><u>BMPs Present:</u> None visible</p> <p><u>Description:</u> Ponding area on the northern side of the ROW.</p>
	<p><u>Photo No.:</u> 34</p> <p><u>Location:</u> 44°49'06.77"N 93°30'46.28"W</p> <p><u>BMPs Present:</u> Two rows of silt fence</p> <p><u>Description:</u> Southern side of the ROW. Area is stable and undisturbed.</p>



Segment 3



Photo No.: 35
Location: 44°49'10.26"N 93°30'16.34"W
BMPs Present: Vegetative buffer; two rows of silt fencing
Description: Stable and undisturbed ROW (southern side).



Photo No.: 36
Location: 44°49'11.45"N 93°30'05.27"W
BMPs Present: Two rows of silt fence
Description: ROW conditions on northern side of project.



Photo No.: 37

Location: 44°49'10.17"N 93°30'05.90"W

BMPs Present: Three rows of silt fencing

Description: ROW conditions on southern side of project. Ground is stable and undisturbed by construction activities.

Just outside of this photo is a collection of deer carcasses. Appearances suggest they are a result of deer hunting and have been recently deposited on the ROW.



Photo No.: 38

Location: 44°49'07.70"N 93°29'39.78"W

BMPs Present: None visible

Description: ROW conditions.



Photo No.: 39

Location: 44°49'07.32"N 93°29'37.89"W

BMPs Present: Two rows of silt fence

Description: Outlet on southern side of ROW. Area is undisturbed and stable.



Segment 4






Photo No.: 40

Location: 44°49'07.01"N 93°29'35.28"W

BMPs Present: None visible

Description: Northern side of ROW inlet.

 <p>Bluff Creek Area</p>	<p><u>Photo No.:</u> 41</p> <p><u>Location:</u> 44°49'07.26"N 93°29'33.35"W</p> <p><u>BMPs Present:</u> Two rows of silt fence</p> <p><u>Description:</u> Southern outlet, and subsequent flow channel down slope to silt fence. This outlet connected to the inlet in Photo 40.</p> <p>Area is undisturbed and stable.</p>
 <p>Bluff Creek Area</p>	<p><u>Photo No.:</u> 42</p> <p><u>Location:</u> 44°49'05.38"N 93°29'25.59"W</p> <p><u>BMPs Present:</u> Two rows of silt fencing</p> <p><u>Description:</u> Southern side of ROW.</p>
	<p><u>Photo No.:</u> 43</p> <p><u>Location:</u> 44°49'06.02"N 93°29'20.83"W</p> <p><u>BMPs Present:</u> None visible</p> <p><u>Description:</u> Northern side of ROW conditions.</p>


	<p><u>Photo No.:</u> 44</p> <p><u>Location:</u> 44°49'06.45"N 93°29'13.58"W</p> <p><u>BMPs Present:</u> None visible</p> <p><u>Description:</u> Northern side of ROW. Inlet to stormwater conveyance system.</p>
	<p><u>Photo No.:</u> 45</p> <p><u>Location:</u> 44°49'05.17"N 93°29'13.46"W</p> <p><u>BMPs Present:</u> Riprap energy dissipation; two rows of silt fence.</p> <p><u>Description:</u> Outlets associated with Photo 44 inlet. Slow flow of water is coming out of the large concrete outlet. Area is undisturbed and stable.</p>
	<p><u>Photo No.:</u> 46</p> <p><u>Location:</u> 44°49'05.80"N 93°29'03.39"W</p> <p><u>BMPs Present:</u> Silt fence</p> <p><u>Description:</u> Southern side of ROW is stable and undisturbed.</p>



Photo No.: 47

Location: 44°49'04.76"N 93°28'55.21"W

BMPs Present: Silt fence

Description: Southern side of ROW is stable and undisturbed.