

REPORT OF CONSTRUCTION STORMWATER COMPLIANCE EVALUATION INSPECTION (CEI)

AT

Nebraska Department of Transportation (NDOT)
Highway 91 and Highway 275, Scribner, Nebraska

NPDES NO: CSW202105509 (Scribner N)
CSW202105511 (West Point N & S)

November 1-3, 2021

BY

U. S. ENVIRONMENTAL PROTECTION AGENCY
Region 7
Enforcement and Compliance Assurance Division (ECAD)

INTRODUCTION

I performed a Compliance Evaluation Inspection (CEI) at NDOT's Highway 275 Project from mile markers 114.0-119.76 near West Point and 123.81-128 near Scribner, Nebraska. The inspection was authorized by Section 308(a) of the Federal Water Pollution Control Act, as amended. This narrative report presents the findings of the inspection.

PARTICIPANTS

NDOT

Gabe Robertson, Stormwater Program Manager, gabe.robertson@nebraska.gov
Ronald Poe, NPDES Programs, ronald.poe@nebraska.gov
Rick Fisher, Project Manager Scribner N, rick.fisher@nebraska.gov
Doug Lollman, Project Manager West Point N & S, doug.lollman@nebraska.gov
Justin Gibney, Field Tech III
Nick Soper, Erosion Control Design (exit briefing only)
Rick Hartman, Construction Tech III (exit briefing only)

U.S. Environmental Protection Agency (EPA):

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INSPECTION PROCEDURES

I arrived, previously announced, on November 1, 2021 at the NDOT job trailer near the intersection of Highway 91 and Highway 275 south of Scribner, Nebraska. I introduced myself and presented my credentials to Messrs. Robertson, Poe, Fisher, Lollman, and Gibney. I stated that I needed to conduct a Construction Stormwater inspection of both the West Point and Scribner projects. Mr. Robertson, Mr. Poe, and Mr. Fisher attended all three days of the inspection. Prior to meeting at the job trailer, I conducted a visual reconnaissance of the project sites, searching for areas of concern observable from the public roads such as discharges, drainage patterns, flow directions, distance and direction of nearest perennial waters, visual

condition of perennial waters, and site layout. Stormwater appeared to flow along the ditches until reaching a discharge point. There were many sections of the project that were flat with little relief which caused pooling of water. I noticed construction activities at the stream crossings of Elkhorn River, Mud Creek, and Plum Creek. I did not notice sediment discharges to surface waters.

Upon arrival to the job trailer, I explained the scope and purpose of the inspection. I informed the NDOT personnel that I would be performing a complete Construction Stormwater inspection, under the authority of Section 308(a) of the Federal Water Pollution Control Act to evaluate the facility's compliance status with the requirements of the Clean Water Act and with the National Pollution Discharge Elimination System (NPDES) permits. I explained that the inspection would consist of a review of required records, each Storm Water Pollution Prevention Plan (SWPPP), and a visual inspection of the highway construction projects. I stated that I would document my findings and observations by making photocopies, taking photographs and/or videos, and obtaining statements from facility staff.

I conducted this inspection in accordance with the procedures described herein and followed all applicable EPA Region 7 Standard Operating Procedures.

I completed the visual inspection on November 3, 2021. I summarized the findings and recommendations of the visual inspection with Messrs. Robertson, Poe, Fisher, Gibney, Hartman, and Soper during the exit briefing of the inspection. See attachment 2 for the digital photographs and photo log. See attachment 3 for a general site layout of both projects.

FACILITY DESCRIPTION

Facility Operations

The Scribner and West Point road projects include adding a median and two more lanes of traffic to the existing Highway 275 roadway. The Scribner project crosses the Elkhorn River and Mud Creek, while the West Point project crosses Plum Creek. Each project has its own borrow sites and temporary sites for soil sourcing and storage of excavated material. Construction for the Scribner project began on July 6, 2021, while construction did not begin on the West Point project until October 6, 2021. NDOT has hired contractors to conduct the construction work and install the erosion and sediment controls. Best Management Practices (BMPs) are to be implemented by all site personnel according to the SWPPP. NDOT conducts the site inspections and creates reports identifying any deficiencies found during the inspections. The needed corrections are then passed to the contractor who takes corrective actions. NDOT then follows up to determine whether the deficiencies have been corrected. According to NDOT site personnel, the erosion and sediment control depictions in the SWPPPs are indications of what controls are to remain once the construction work is complete, but possibly not fully stabilized. The SWPPPs do not have controls for different phases of the project. NDOT personnel stated that during the active construction phase, erosion and sediment controls are decided upon by the contractor on a daily basis. NDOT has bi-weekly meetings with the contractors to discuss BMPs as well as other topics. If an additional BMP or change to an existing BMP is needed, NDOT can also note those items in an inspection report and translate them to the contractor.

Regulatory History

NDOT applied for coverage under the Nebraska Department of Environmental Quality (NDEQ) Storm Water Discharges from Construction Sites General Permit (NER160000) by submitting a Notice of Intent (NOI) for each project on April 21, 2021. Although the General Permit NER160000 expired on October 31, 2021, the permit has been administratively extended and is active until a replacement is issued. Copies of the NOIs are included in the SWPPPs (attachments 4 and 5).

FINDINGS AND OBSERVATIONS

The following findings were noted during the visual and record review. A summary is provided in the NPDES Storm Water Worksheet (Construction) (attachment 1). The visual inspection findings were discussed during the exit briefing. The weather conditions at the time of the inspection were partly cloudy and windy (30-40°F). The last rainfall event in the area was approximately 1.46 inches, on the morning of October 28, 2021, according to the NeRain website. From October 24 to October 28, NDOT site inspectors recorded a total of 3 inches of rain at the West Point project and 4 inches of rain at the Scribner project. This rain event had a significant impact on the site.

Scribner Project

The Scribner project had two active borrow sites and one active temporary site associated with its scope (Photos 1-6). Temporary site #1 and Borrow Site #1 were used to store excavated soil and stumps (Photos 1, 2). Both the Temporary Site #1 and Borrow Site #1 were well maintained with appropriate BMPs. One of the borrow sites, labeled Borrow Site #3, was not included in the SWPPP because it was originally planned and permitted to be part of a different NDOT project (Photos 3-6, attachment 3). Borrow Site #3 provides soil for the Scribner project. NDOT decided to use soil from Borrow Site #3 on the Scribner project after the SWPPP had been finalized. After my inspection was completed, a digital copy of the Borrow Site #3 site map was emailed to me including a statement from Mr. Robertson that the Scribner SWPPP was amended to include the site map of the borrow site (attachment 7). Borrow Site #3 did not have a sediment basin constructed per the SWPPP site map. Mr. Fisher stated the basin would be fully constructed once the quarry pit reached the same depth of the designed basin. At the time of the inspection, an inner soil berm and an outer mulch berm were being used to filter stormwater runoff near the anticipated sediment basin location (Photos 4-6). Evidence that the mulch berm had been compromised recently was noted (Photo 6). However, no sediment was found to have discharged from Borrow Site #3 at the time of the inspection.

Scribner project road construction activity during the time of the inspection stretched from station 2525 to station 2780 (Photos 23-37). A large portion of the project had reached preliminary grade status (Photos 23, 31, 35, 37). The topsoil had been removed and stockpiled as a berm along the length of the project. Most west boundary sections of the stockpile berm had good growth after being seeded, while other sections did not (Photo 23). Once the site is ready for final stabilization, the topsoil will be placed in the ditch and seeded. Contractors were installing drainage infrastructure within the areas where rough grading was complete (Photos 24-26). There were some sections where infrastructure installation and rough grading were recently complete and ready for stabilization (Photos 23, 31). Some drainage culverts did not have

adequate BMPs or the BMPs needed maintenance (Photos 25, 26, 34). The culverts in photos 25, 26, and 34 drain under the highway to another ditch on the opposite side where no evidence of discharged sediment was present. At station 2605, a pump was being used to remove pooled water around the foundation of a culvert box. The water from station 2605 was being discharged to a storm inlet which led to an existing culvert on the opposite side of the highway near station 2610. This water flowed from the station 2610 culvert through a heavy vegetated right-of-way to a vegetated field. The discharge from the station 2610 culvert appeared clear at the time of the inspection. Disturbed areas on the north side of Elkhorn River near station 2625 were in need of BMPs along the drainage ditch leading to the river as well as along the river's edge (Photos 29, 30). Construction debris and trash were also present near the Elkhorn River (Photo 30). Disturbed areas along the south side of the Elkhorn River had recently been graded and were ready for stabilization efforts (Photo 31). Station 2670 has a continuous flowing stream through the site. Silt fencing along the slope had failed and more effective BMPs were needed (Photo 33). Silt fencing at station 2780 was damaged during the last rain event (Photo 36). The silt fencing at station 2780 had a small amount of sediment deposited on top of the silt fence indicating sediment was discharged to the ditch. The ditches draining to station 2780 did not have BMPs installed to slow the velocity of the runoff (Photo 37). Site access points along the project needed rock to reduce track-out.

West Point Project

The West Point project had two borrow sites active during the inspection (Photos 7-10). Borrow Site #1 was being used for storage of excavated soil and stumps (attachment 3). It was not part of the West Point SWPPP because it was originally planned and permitted as part of a different NDOT project. After my inspection was completed, a digital copy of the Borrow Site #1 site map was emailed to me including a statement from Mr. Robertson that the West Point SWPPP was amended to include the site map of the borrow site (attachment 7). Borrow Site #1 had a mulch berm below a damaged silt fence (Photo 7). The silt fence should be removed or maintained. No evidence of sediment discharge from Borrow Site #1 was present at the time of the inspection. Borrow Site #3 also had some BMP issues. The construction exit was in need of additional rock to reduce track-out (Photo 9). Section 4.9 of the SWPPP describes the inspection and maintenance of a construction exit to ensure sediment is not tracked onto adjacent roads and to replace and/or add material as needed to maintain its effectiveness. Silt fences in the ditches near the exit were installed incorrectly and the mulch check did not extend up the foreslope and backslope of the ditch (Photo 8). Silt fencing details are included in the SWPPP showing proper installation techniques. A sediment basin had been installed at Borrow Site #3; however, it did not have a surface skimmer or an emergency spillway (Photo 10). Thus, once the sediment basin fills up, water can only escape by overtopping the berm and flowing to the ditch. According to Mr. Lollman, additional sediment had been added to raise the west berm on October 15, 2021 because the basin had overtopped on October 13. According to the Borrow Site #3 site map in the SWPPP, the contractor shall use an approved pond skimmer for smaller outflows and shall provide an emergency spillway to accommodate larger runoff events (attachment 5).

West Point project road construction activity during the time of the inspection stretched from station 2000 to approximately station 2265 (Photos 11-22). A majority of the project was in the rough grading phase. The topsoil had been removed and stockpiled as a berm along the length of the project. None of the stockpile berms had been seeded, but it is noted in the inspector's October 25 site inspection report that cover crop for stockpiles had been requested. Mr. Lollman

stated that due to the recent rains the landscaping contractor had been unable to access the site for seeding. Once the site is ready for final stabilization, the topsoil will be placed in the ditch and seeded. Photos 13 through 15 and Photos 17 through 19 show areas where construction activities are complete for this year and are ready for stabilization. Station 2021 had silt fencing that failed to prevent sediment from leaving the site (Photo 12). The station 2021 silt fence failure was noted as a deficiency in the SWPPP inspector's October 28 report. Active grading was occurring near an unprotected culvert at Station 2073 (Photo 16). Mr. Lollman stated he did not know the culvert was there because it was not detailed in the SWPPP but would have BMPs installed. The culvert at station 2073 leads under the highway to a ditch on the opposite side where no evidence of sediment discharge was found. Activities near Station 2238 and 2240 needed BMPs between the road and the wetland as well as along the drainage channel (Photos 19, 20). Cut and fill activities were ongoing around Station 2265 (Photo 22). NDOT will be filling the pond in Photo 22 as part of the project. BMPs were needed along the west boundary of these disturbed areas.

Storm Water Pollution Prevention Plan (SWPPP)

The NPDES permit requires the facility to develop and implement a SWPPP. A digital copy of the SWPPP and inspection reports were provided to me during the inspection. After the inspection was completed, additional documents were provided to me by email.

I reviewed each SWPPP for completeness after the inspection and noted that the SWPPPs were incomplete. The map sheets labeled "Temporary Erosion and Sediment Control" do not have BMPs depicted on them. The SWPPPs have map sheets labeled "Erosion and Sediment Control" which detail the BMPs to be installed once construction is complete and the site is ready for final stabilization. The SWPPPs do not have details of required erosion and sediment controls for different phases like grubbing, grading, and during construction. According to Part III.B.2. of the General Permit, *the SWPPP must contain a legible site map(s) showing the entire site during grading, construction, and post-construction phases, identifying locations of major structural and nonstructural Best Management Practices (BMPs)*. According to Mr. Fisher, Mr. Lollman, and Mr. Gibney, the contractors and NDOT decide on erosion and sediment control installations as the project progresses. When controls are installed, the SWPPP site inspector records the additions, and other changes on the temporary erosion and sediment control sheets in the SWPPP.

Site inspections were not recorded at the Scribner project during the month of September 2021. Mr. Gibney stated this was an oversight by NDOT personnel when he was away from the project during that time.

When deficiencies were noted during a site inspection at either project, corrective actions were taken within 7 days per the NPDES permit requirement.

SUMMARY

Cumulative rain events from October 24-28, 2021 at both sites had negative impacts on many of the structural BMPs. Corrective actions needed to repair or replace those BMPs would have been due on November 4, 2021 to comply with NPDES permit Part III.F.8.

The following findings are included in this report:

- 1) Maintenance or installation of structural BMPs was needed on both projects, including borrow and temporary sites. *NPDES permit Part III.F.*
Examples:
 - a. Stations 2073, 2240, 2589, 2591, 2750
 - b. West Point borrow site #3, Scribner borrow site #3
- 2) Structural BMPs were found to be inadequate and in need of more effective alternatives. *NPDES permit Part III.F.7.*
Examples:
 - a. Stations 2021, 2238, 2625, 2670, 2780
- 3) The sediment basin at West Point borrow site #3 was not installed per the SWPPP. *NPDES permit Part III.A.4.*
- 4) Waste disposal practices were not implemented according to the SWPPP or NPDES permit on the Scribner project at the areas surrounding Elkhorn River.
- 5) Stabilization was needed on stockpile berms and in areas where activities had ceased temporarily or permanently. *NPDES permit Part III.F*
- 6) Inspections were not conducted on the Scribner project during September 2021 per the NPDES permit requirements. *NPDES permit Part III.J.*
- 7) The SWPPPs do not clearly describe the planned controls and the general sequence during the construction process in which the measures will be implemented. *NPDES permit Part III.B.2. and Part III.C.*
- 8) All support activities, such as borrow sites, were not included in the SWPPPs. *NPDES permit Part III.B.1. and Part III.B.2.*

A response to the November 1-3, 2021 inspection submitted by NDOT is included as attachment 8.

HANNAH
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ATTACHMENTS:

1. NPDES Storm Water Worksheet (Construction) (6 pages)
2. Digital Photo Log and Photos #1-37 (19 pages)
3. Scribner & West Point Site Layouts (2 pages)
4. Scribner North Project SWPPP (190 pages)
5. West Point North & South Project SWPPP (179 pages)
6. Construction Site Inspections (83 pages)
7. Amendments to Scribner & West Point SWPPPs (2 pages)
8. Response to EPA Inspection (44 pages)