

ENVIRONMENTAL BULLETIN

A routine publication providing environmental-related guidance to NDOT District Staff and Contractors



FALL 2022 IN THIS ISSUE

Silt Checks – A Best Management Practice Overview	1
NDOT Erosion and Sediment Control Training	3
Updates to the Borrow – Waste Excavation – Plant – Stockpile – Construction Debris Webpage	4
Stormwater Permit Compliance.....	5
ECODatabase Inspection Tool – Update Instructions	6

Silt Checks – A Best Management Practice Overview

Silt checks, also referred to as wattles, are frequently utilized on NDOT projects and installed on foreslopes and backslopes, ditches, and around culverts.

General Guidelines

- Silt checks, or wattles, need to be installed along a contour to control erosion by breaking up stormwater flows on long slopes or across ditches.
- The primary purpose of a silt check in a slope application is to interrupt and reduce the energy grade line of flow paths along a slope while temporarily ponding runoff and creating a long level weir to promote sheet flow. As flow paths are shortened and energy grade lines are flattened, runoff velocities and the sediment carrying capacity is reduced and infiltration rates are increased, which reduces the volume of runoff.
- Silt checks may be installed as a temporary erosion control during construction, or after final grading is complete **in conjunction with** final stabilization efforts.
- Check the condition of the silt check through the life of the project. The composition of typical silt checks is held together within a biodegradable net. Over the life a project, this degrades and reduces the effectiveness.
- Silt checks need regular inspection after rain events particularly after significant events to verify they are still functional and in place.
- Remember to view NDOT’s Approved Products List (APL) to identify silt check products that may be used on NDOT construction sites.



Inspecting Silt Checks

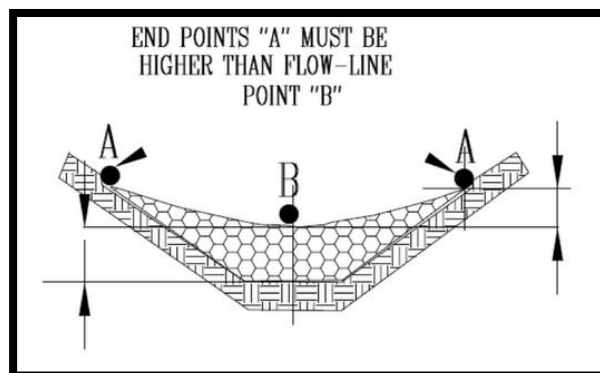
Below are key criteria for inspecting a slope, ditch, or culvert installation.

- When inspecting the installations **on slopes**:
 - Is the control installed on the contour? Any angle not along the slope contour may concentrate flow leading to rill or gully erosion.
 - Is the control spaced at intervals defined by the slope's steepness? Typically, silt checks should be applied over an entire slope face at regular intervals and should be spaced to divide the slope face equally. Proper spacing is a critical factor for installing slope interruptions. The ends of silt checks are typically upturned to force flows over the level portions of the check.
 - Refer to the Special Plan sheets in the SWPPP for proper silt check installation.
 - Silt checks should be supplemented with other temporary and permanent erosion and sediment control best management practices like hydromulching, rolled erosion control products, and silt fence.
- When inspecting the installations **on ditches**:
 - Just like slopes, silt checks installed in ditches require appropriate intervals to reduce the runoff velocity and sediment carrying capacity within a ditch. One key factor to check is if the ends are higher than the flowline of the ditch. The checks should be placed perpendicular to the flow, and they should be placed so the bottom of the upper silt check is at the same elevation of the lower silt check to provide for pooling.
- When inspecting the installations **in culverts**:
 - When used for culvert protection, it is important to overlap the ends to maintain a level top elevation and to minimize flow through joints along the silt check. The manufacturer's staking instructions should be followed to ensure proper wattle function and longevity.

SILT CHECK: SLOPE, SPACING, AND DIAMETER		
SLOPE	SPACING (FEET)	DIAMETER (INCH)
LESS THAN 50:1	100	9
50:1 - 10:1	75	12
5:1 - 3:1	40	12
3:1 - 2:1	25	12
GREATER THAN 2:1	15	12

Guideline table to use when inspecting slope steepness and spacing.

Most importantly, silt checks **should have complete ground contact to prevent undercutting**. Installers need to conform to the existing ground, so the BMP has a smooth surface along the contour. The ground should be free of large clods and full contact between the ground and silt check should be made to prevent rills from forming under the checks.



Point A is the ends of the silt check and needs to be higher than the center of the silt check at point B.



FOR MORE INFORMATION

Contact Roadside Development and Compliance Unit at 402-479-4499

NDOT Erosion and Sediment Control Training

NDOT Erosion and Sediment Control **INSPECTOR CERTIFICATION**

The NDOT Erosion and Sediment Control Inspector Certification is currently being offered in an online format only. To obtain your new inspector certification, please complete both the “Inspector Re-Certification” and “Installer Certification” courses described below.

Participants who successfully complete these courses are awarded a five-year inspector certification and can conduct construction stormwater site inspections on NDOT projects.

NDOT Erosion and Sediment Control **INSPECTOR RE-CERTIFICATION Course**

Inspector re-certification can be obtained online by accessing the UNL-LTAP training website. This online course provides previously certified and new inspectors (new inspectors must also complete the installer course) a convenient way to certify for five years. The course is designed for NDOT construction site operators, supervisors, and managers who will be conducting or assisting with construction stormwater site inspections. Learning objectives include stormwater permit requirements; erosion and sediment control best management practices (BMPs); good housekeeping and pollution prevention BMPs; inspection and maintenance procedures; and SWPPP management.

Course Link: <https://www.ltap.unl.edu/assnfe/searchcourses.asp?csKeyword=erosion>

NDOT Erosion and Sediment Control **INSTALLER CERTIFICATION Course**

This online course is designed for NDOT construction site operators, supervisors, and technicians who will be installing or maintaining erosion and sediment control best management practices (BMPs) on an NDOT construction site. Learning objectives include an overview of NDOT’s construction stormwater program, NDOT erosion control plan reading, the process of accelerated soil erosion, the distinction between erosion control and sediment control, installation and maintenance requirements for erosion and sediment control BMPs and good housekeeping BMPs.

Participants who successfully complete this course are awarded a five-year installer certification and can install and/or maintain erosion and sediment control BMPs on NDOT projects.

Course Link: <https://www.ltap.unl.edu/assnfe/searchcourses.asp?csKeyword=erosion>



FOR MORE INFORMATION

Contact Phyllis Schwab at LTAP 402-472-5748 pschwab@unl.edu

Updates to the Borrow – Waste Excavation – Plant – Stockpile – Construction Debris Webpage

NDOT is committed to reviewing all Borrow, Waste, Plant, Stockpile, and Construction Debris sites for potential natural and historic resources that could occur on sites outside of the project area. To streamline the process that contractors go through to submit correct review requests, the new information mentioned below has been added to the webpage.

New Contractor Site Use Request Identification and Evaluation Submittal Guide

The new submittal guide is a “How To” document that was rewritten to provide clear instructions on how to fill out the request form along with reasons why it’s important. The guide was previously over 80 pages long and was difficult to navigate through all the information. The revised guide has been reduced to three pages and provides concise instructions on how to fill out the request form.

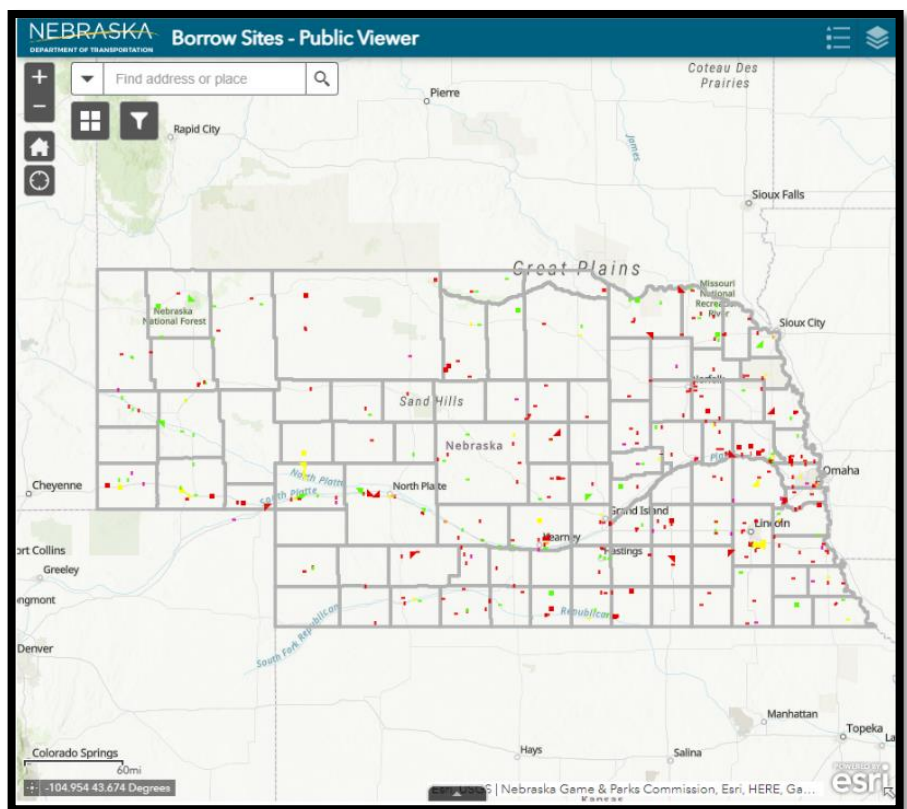
New Contractor Site Use Request Identification and Evaluation Form

Previously, there were two separate request forms for the contractor to submit and it was their decision on which one they thought applied better for their site. The new request form has combined information from the previous two removing any ambiguity that came with deciding which form to use.

Contractor Site Use Interactive Map

Perhaps the most exciting addition is the new Contractor Site Use Interactive Map. Through the environmental review process, a GIS layer is updated with every site location boundary reviewed since 2013. A new interactive map has been added to the website that displays these site boundaries with some basic information (site type, control number, date reviewed, and size of the site in acres). This map was implemented to help contractors find different sites that have been environmentally reviewed and approved in the past, potentially reducing newly impacted areas and expediting the approval process.

Please use the following link to access the updated webpage and interactive map: <https://dot.nebraska.gov/business-center/contractor/use-request/>



FOR MORE INFORMATION

Contact Tony Ringenberg at (402) 479-4685 or tony.ringenberg@nebraska.gov

Stormwater Permit Compliance

As the winter season quickly approaches, here are a few things to keep in mind regarding erosion and sediment control and the Construction Stormwater Permit:

- **Minimizing Disturbed Areas** – The Construction Stormwater Permit requires inactive graded areas to be stabilized if construction activities will not occur in those areas for 14 days or more. This can be addressed with temporary or permanent BMPs. Cover crop **and mulch** may be a reasonable option if permanent seeding cannot be installed in those locations. Remember that seed alone is not stabilization until grass is established.
- **Perimeter Controls** – Ensure sediment controls are installed and maintained to contain sediment at all discharge points throughout the project. Ditch checks and silt traps should be used in conjunction with perimeter controls to minimize the stormwater velocity draining to discharge points.
- **SWPPP Updates** – Double check the Temporary Erosion and Sediment Control Plan to ensure it documents the best management practices (BMPs) installed in the field. Be sure to document the dates when BMPs are installed or removed as well as when major grading starts and stops.
- **Corrective Actions** – Utilize ECOD to document any corrective work that needs to be completed before things freeze up. Pending items should be addressed as soon as possible.
- **Communicate, Communicate, Communicate** – Make erosion and sediment control a topic at all project discussions so everyone is on the same page with stormwater requirements. Seeding should be phased in at the earliest time possible to minimize open areas and to protect resources. The key to a successful erosion control program is a proactive strategy that minimizes the amount of open area.
- **Stormwater Inspection Frequency** – During winter months, inspection frequency may be reduced to at least once every month if the ground is frozen and is likely to remain frozen for the next 30 days. This is typically an option during December through March. When setting up your ECOD inspection report, click the “Winter Conditions” checkbox.




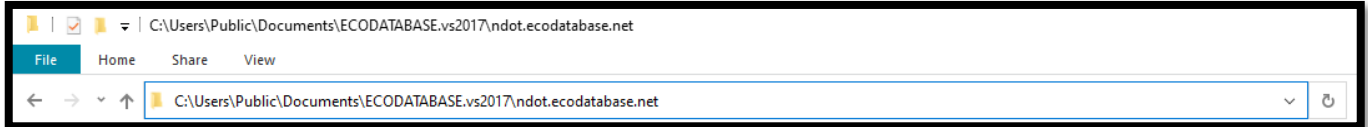
FOR MORE INFORMATION

Contact Roadside Development and Compliance Unit at 402-479-4499

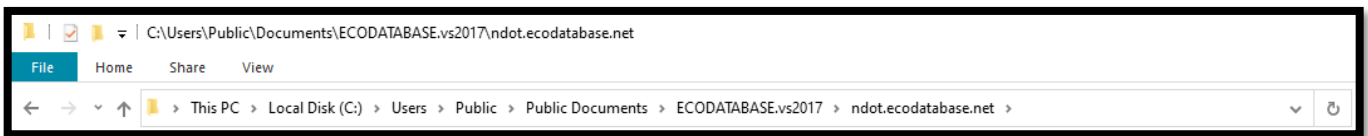
ECODatabase Inspection Tool – Update Instructions

If you are experiencing problems with your ECOD system not “syncing” correctly, or if you recently received a new computer and ECOD no longer recognizes your credentials when you try to log in, please use the following instructions to resolve the issue.

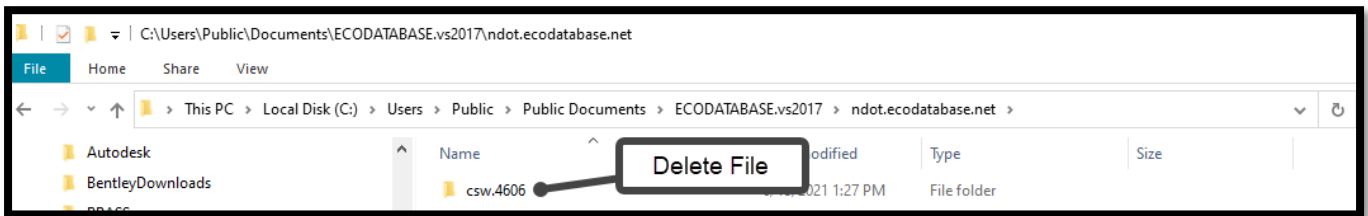
- **Step 1:** Restart your computer.
- **Step 2:** Open File Explorer  and navigate to the following location to remove the existing local ECOD database:
 - A) C:\Users\Public\Documents\ECODATABASE.vs2017\ndot.ecodatabase.net\



OR



- B) Locate folder **cs.w.4606** and you must **delete it** (Note - This will remove inspections that have been started but not completed. For example, if the “Environmental Commitment Checklist” has been started, print off prior to doing this process so inputs can be re-entered)



- **Step 3:** Click and open \\dots\TempPublic\ECOD . Right click on cs.w.4606 and select “copy”.
- **Step 4:** Navigate back to the location outlined in STEP 2 and “paste” the new cs.w.4606 file there to replace the file you deleted.
- **Step 5:** Open ECOD and Login with your username and password. You should get to the “Projects List” page relatively quickly and the “Sync Status” should be closer to the current date. You will need to let it finish the final sync until you see the current date in the upper right-hand corner. This may take a couple hours.



If you experience any issues getting to the Project List page, try closing ECOD and restarting your machine. Then login again and see if that helps.



FOR MORE INFORMATION

Contact Gabe Robertson at (402) 479-4685 or gabe.robertson@nebraska.gov