

**Figure 200-14 — RANGE LAND GRASS DRILL**

## **SECTION 280. TEMPORARY EROSION AND SEDIMENT CONTROL**

The Department is committed to protecting waterways in and adjacent to our project limits from the effects of erosion and sedimentation that may occur during construction. This commitment is documented in policies and procedures which are discussed in this section.

The following principles guide the Department's overall approach to erosion and sediment control:

- Soil disturbance should be kept at a minimum and remain within the construction limits.
- When appropriate to protect sensitive resources, use staged construction operations to minimize the amount of area exposed at any given time.
- Divert "clear" water flowing through the construction site away from disturbed areas.
- Intercept and contain sediment close to its source.
- Contain all project-related sediment on the project site.
- Construct erosion and sediment controls as quickly as practical.
- Pay for all properly installed work required for proper erosion and sediment control; and ensure it is maintained in effective operating condition.

## 280.01 DESCRIPTION

While Article 280.01 focuses on work to construct, maintain, remove, and dispose of temporary erosion control systems, there are several procedures the Resident must complete prior to implementing Section 280.

### 280.01-1 BACKGROUND

For projects disturbing 1 or more acres (0.4 hectares), an ILR10 General National Pollutant Discharge Elimination (NPDES) permit for Storm Water Discharges from Construction Site Activities is required by the Illinois Environmental Protection Agency (IEPA) to comply with Section 402 of the Clean Water Act of 1972. Compliance begins in the Design phase and ends when the Construction phase is completed.

The Department complies with the ILR10 permit by utilizing the following:

- [Form BDE 2342 Storm Water Pollution Prevention Plan \(SWPPP\)](#) and [Form BDE 2342A Contractor Certification Statement](#);
- Erosion and Sediment Control Plan (ESCP);
- Requirements discussed Section 280 of the Standard Specifications for Road and Bridge Construction;
- [Form BC 2259: Storm Water Prevention Plan Erosion Control Inspection Report](#);
- Standard 2800001-07 Temporary Erosion Control Systems; and
- Project Plan commitments (when applicable)

Additional guidance can be found in the following other manuals:

- Illinois BDE Manual;
- Illinois Drainage Manual; and
- Erosion and Sediment Control Filed Guide for Construction Inspection

Note: As required by Section 107.23, for situations not addressed by the above, it is still the Resident's responsibility to ensure the Contractor implements measures to prevent sediment from leaving the project site into waterbodies in or adjacent to the project site. In addition, the lack of pay items does not relieve the Resident of responsibility for erosion and sediment control. When sufficient pay items are not included, the Resident can pay for necessary measures in accordance with Article 109.04

## 280.01-2 POLICY

Typically, projects that involve no land disturbing or earth moving activities can be exempt from erosion and sediment control measures. Examples of earth moving activities include, but is not limited to, clearing or grubbing, excavation, stockpiling of topsoil, soil covering waste sites, borrow site excavations, construction of embankment, etc.)

Projects that involve only isolated excavation for the installation of lighting, signing, traffic signals, guardrail or woody plant materials may also be exempt from erosion and sediment control measures. Typically, these projects disturb less than one or more acres. However, if there are multiple project sites under that same contract that require an acre or more of land disturbance, compliance with the ILR10 permit is required.

## 280.01-3 PROCEDURES FOR ILR10 PERMIT

The following forms are utilized to satisfy the ILR10 NPDES Permit. Additional information regarding each is discussed after the figure.

**Figure 200-16 — EROSION CONTROL FORMS**

FORM	RESPONSIBILITY	WHEN	WHERE TO SEND
Storm Water Pollution Prevention Plan (SWPPP) (Form BDE 2342))	Designer (Phase II consultant)/Resident	During Design/ Construction	IEPA as part of Notice of Intent (NOI) Project Erosion Control File
Contractor Certification Statement (Form BDE 2342A)	Contractor and all Subcontractors involved in Erosion Control	At Preconstruction Meeting	Project Erosion Control File
Notice of Intent (NOI)	Supervising Field Engineer	Before construction begins (IEPA has 30 days to review prior to land disturbing activities)	IEPA Post at Jobsite Project Erosion Control File
NPDES/Erosion Control Inspection Report (Form BC 2259)	Resident/Inspector	Weekly and after more than 0.5 in. rainfall or 6 in. snowfall throughout the full duration of the project (including Winter shutdown)	Project Erosion Control File Copy to Contractor
Incidence of Non-Compliance (ION) (Form WPC 624)	Resident	Within 5 days of incident	IEPA Copy to Contractor Copy to Project Erosion Control File

**Figure 200-16 — EROSION CONTROL FORMS Continued**

<b>FORM</b>	<b>RESPONSIBILITY</b>	<b>WHEN</b>	<b>WHERE TO SEND</b>
Notice of Termination (NOT) (Form WPC 621)	Supervising Field Engineer	When all permanent erosion control measures are in place and functioning properly and 70% vegetative cover is established for the entire project site	IEPA Copy to Project Erosion Control File

**BDE 2342 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

Prior to the start of construction, the Resident must familiarize themselves with the SWPPP and the ESCP. (Section 41-4 of the BDE Manual discusses the preparation of SWPPP.) After reviewing the SWPPP, the Resident should take special note of the following:

- The locations of sensitive resources such as wetlands, floodplains, and/or threatened or endangered species;
- Potentially erosive areas;
- 303(d) listed (i.e. classified as impaired by the IEPA) waterways, especially those impaired by Total Suspended Solids (TSS), Turbidity, or Siltation;
- Waterways with a Total Maximum Daily Load (TMDL) for sediment, TSS, turbidity or siltation in the project area;
- Pollutants of concern;
- Proper use of best management practices (BMPs); and
- Installation of any permanent stormwater management practices.

At the preconstruction meeting, for projects requiring an ILR10 permit, the Resident must:

- Ensure the Contractor and subcontractor have complied with section G. Contractor Required Submittals of the BDE 2342 (SWPPP).
- Have the Contractor and all subcontractors complete and sign BDE 2342A Contractor Certification Statement

**NOTICE OF INTENT (NOI)**

The Supervising Field Engineer/Area Supervisor shall submit the Notice of Intent (NOI) to the IEPA as soon as possible after contract execution in one of the following manners:

- File electronically with digital signature at the following website address: <http://dataservices.epa.illinois.gov/SWConstructionPermit/bowLogIn.aspx>

Note: Registration specific to the permittee is required in order to file electronically.

- Submit complete signed NOI and SWPPP to the following email address: [epa.constilr10swppp@illinois.gov](mailto:epa.constilr10swppp@illinois.gov). and send by registered or certified mail, return receipt requested, to IEPA at the address below:

Illinois Environmental Protection Agency  
Division of Water Pollution Control, Mail Code #15 Attention: Permit Section  
1021 North Grand Avenue East  
Post Office Box 19276  
Springfield, Illinois 62794-9276

Note: NOIs that are hand delivered shall be delivered to and receipted for by an authorized person employed in the Permit Section of the Agency's Division of Water Pollution Control.

As stated in the ILR10, The IEPA has 30 days to review the NOI prior to the start of construction. Starting construction before the 30-day review period is a violation of the permit.

The Resident may need to adapt the SWPPP to accommodate the Contractor's intended sequence of construction operations and any anticipated non-storm water discharges. Such modifications should be documented in the SWPPP.

**PRECONSTRUCTION MEETING:**

At the preconstruction meeting, the Resident should discuss the following with Contractor:

- The plan's BMPs for erosion and sediment control
- The sequence of construction operations
- Any project-specific concerns or problem areas
- Arrangements for a field review of erosion and sediment control aspects
- Construction site management measures (i.e. good housekeeping)

As previously indicated, for projects requiring an ILR10 permit, the Resident must:

- Ensure the Contractor and subcontractor have complied with section G. Contractor Required Submittals of the BDE 2342 (SWPPP).

- Have the Contractor and all subcontractors complete and sign BDE 2342A Contractor Certification Statement

The Resident shall reflect this discussion in the preconstruction conference minutes.

### **FIELD REVIEW:**

The Resident should conduct a field review with the prime Contractor and any Subcontractors. The purpose of the field review is to determine the timing and placement of erosion and sediment control BMPs before earthwork begins and as earthwork progresses. Additional field reviews will be required as work progresses. The Resident should record the date of each field review, including the subjects discussed during the field review and the names and position titles of the individuals in attendance in the diary.

If the Resident determines that erosion and sediment control BMPs are different from those in the plans and are not covered by contract pay items, consult the project Designer or Consultants (if applicable) to ensure that any alterations will comply with permit requirements.

### **EROSION AND SEDIMENT CONTROL FILE:**

The Resident must maintain a project erosion and sediment control file. At a minimum, the file should contain:

- The SWPPP ([Form BDE 2342](#)) and signed Contractor's Certification Statement ([Form BDE 2342A](#))
- The Erosion and Sediment Control Plan (ESCP)
- Field review documentation
- A copy of, Notice of Intent (NOI) ([Form WPC 623](#) when used)
- A copy of each Incident of Non-compliance (ION) ([Form WPC 624](#), when applicable)
- A copy of each [Form BC 2259](#): Storm Water Pollution Prevention Plan Erosion Control Inspection Report

The Resident shall make the erosion and sediment control plan information available for inspection by regulatory agencies or the public upon request.

The Contractor shall complete permanent erosion control measures as soon as practical after the completion of grading. Temporary measures shall be installed and maintained until permanent measures are established. Temporary seeding may be applied by a variety of methods as provided in the *Standard Specifications* or contract Special Provisions. The level of required site grading and seed coverage is dependent on the specific pay item(s) involved. The intent is to provide quick coverage to exposed areas to prevent erosion problems before they occur.

**SITE INSPECTION(S):**

As required by the ILR10, all disturbed areas, Best Management Practices (BMPs), vehicle entrance/exit locations, and any other areas subject to erosion shall be inspected at least once every seven days and within 24 hours of the end of each 0.5-in. or greater rainfall or equivalent snowfall (6.0 in.). The findings of these inspections shall be documented using [Form BC 2259: Storm Water Pollution Prevention Plan Erosion Control Inspection Report](#). By copy of the Form, the Contractor shall be directed to perform any repairs, maintenance or implementation of additional measures determined necessary. The date(s) of corrective action taken by the Contractor in response to the inspection report must be noted on the Form.

See the IDOT [Erosion and Sediment Control Field Guide for Construction Inspection](#) for additional guidance on inspecting BMPs.

**INCIDENCES OF NONCOMPLIANCE (ION):**

In general, erosion and sediment control non-compliance may be related to sediment discharges, erosion and sediment control failures, and inadequate or improperly installed or maintained BMPs. Potential non-compliance on the Department's projects must be reported regardless of who holds the permit. Potential non-compliance should be documented immediately with photographs, correspondence and/or in the Project Diary.

**DEFICIENCY DEDUCTION:**

See Section 105.03-2 Erosion and Sediment Control

**NOTICE OF TERMINATION:**

When all permanent erosion control measures are in place and functioning properly and 70% vegetative cover is established for the entire project site, the Supervising Field Engineer/Area Supervisor will complete and submit to IEPA a Notice of Termination (NOT), [Form WPC 621](#). Generally, this Form will be processed as a part of the final documentation for closing out the project.

**280.01-4 PROCEDURES FOR ILR40 (MS4 - MUNICIPAL SEPARATE STORMWATER SEWER SYSTEM) PERMIT**

In addition to the ILR10 permit, the Department is required to obtain coverage for the ILR40 permit. This coverage is maintained by the Bureau of Design and Environment and requires the Department (or any ILR40 permit holder) to follow six minimum control measures. The measures are:

1. Public education and outreach on storm water impacts
2. Public involvement/participation
3. Illicit discharge detection and elimination
4. Construction site storm water runoff control
5. Post- construction storm water management in new development and redevelopment
6. Pollution prevention/good housekeeping for municipal operations

Of the six control measures listed above, only the last three (numbers four, five, and six), require Resident involvement. These controls are discussed in more detail below.

### **CONSTRUCTION SITE STORM WATER RUNOFF CONTROL:**

This minimum control measure is met through the implementation of temporary erosion and sediment control practices. The ILR40 permit requirements essentially match what is required by the IRL10. The IEPA made the decision to require the Department to obtain both permits (ILR40 and ILR10) due to the presence of roadside ditches; which in their view function like a separate storm water drainage system as used in some municipalities.

### **POST- CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT**

The implementation of this minimum control measure is not common. In addition to being a requirement of the ILR40 permit, it is also a requirement of the ILR10 permit. It is also discussed in the SWPPP. However, there is no hard requirement for this control measure.

Currently designed vegetated ditches by default include the infiltration capacity to meet this measure which in the permits is described as “required to maximum extent practicable.” The focus of this control measure is to control the volume and velocity of storm water runoff coming off impervious surfaces, which for the Department are our roadways.

When deemed necessary these BMPs will be implemented through Special Provisions. Examples of these BMPs and closest guidance include:

- Infiltration trenches (similar to a French Drain as described in Section 601 of the Standard Specifications)
- Permanent sediment basins (similar to Sediment Traps and Basins described in Section 41-304 of the BDE Manual)
- bioswales (Section 41-2.04 of the BDE Manual and Bioretention facility in the Illinois Urban Manual)

### **POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS**

The principles behind this minimum control measure are to keep potential pollutants from leaving the project site, control of chemicals and waste, and controlling spills. The following addresses these concerns.

- Section 105.03 Conformity with Contract;
- Article 107.36 Dust Control;
- Section 41-3.06 Entrance/Exit Control of the BDE Manual

## 280.04 TEMPORARY EROSION CONTROL SYSTEMS

The maintenance of temporary ditch checks is not paid for unless a rain event exceeds the  $Q_{25}$  storm event.

Aggregate ditch checks (See Section 41-3.03(a) of the BDE Manual) are not recommended for slopes greater than 20%. When steeper than 20%, stabilize channels and drain to a sediment control basin (See Section 41-3.04 of the IDOT BDE Manual).

See Figures 200-17 and 200-18 for a temporary ditch check.

**Figure 200-17 — GEOTECHNICAL DITCH CHECKS**



**Figure 200-158 —AGGREGATE DITCH CHECK**



**SECTION 282. FILTER FABRIC**

See Figure 200-19.

**Figure 200-19 — FILTER FABRIC INSTALLATION**



**SECTION 284. GABIONS AND SLOPE MATTRESS**

See Figure 200-20.

**Figure 200-20 — MATTRESS INSTALLATIONS**

(Gabions)



(Slope Mattress)

