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November 15, 2016

Via Electronic Filing

Ms. Barcy McNeal
Public Utilities Commission of Ohio
Administration/Docketing
180 East Broad Street, 11th Floor
Columbus, OH 43215-3793

**Re: Hardin Wind Energy LLC,
Case Nos. 09-479-EL-BGN**

Dear Ms. McNeal:

The March 22, 2010 Opinion, Order, and Certificate ("Certificate") approving Hardin Wind Energy LLC's ("Hardin Wind Energy") Certificate of Environmental Compatibility and Public Need established a set of conditions as part of the Certificate. On April 29, 2011 in Case No. 11-3446-EL-BGA, the Ohio Power Siting Board ("OPSB") approved an amendment ("Amended Certificate") to Hardin Wind Energy's Certificate, which also established an additional set of conditions.

Within this set of conditions, **Certificate Condition No. 54** requires that:

At least 30 days before the preconstruction conference, Hardin shall submit to staff, for review, a fire protection and medical emergency plan, to be developed in consultation with the fire department having jurisdiction over the area.

In compliance with Certificate Condition No. 54, attached is a copy of the Stormwater Pollution Prevention Plan for the 2016 phase of construction of which only eight (8) turbine sites will be excavated.

If you have any questions please call at the number listed above.

Sincerely,

Sally W. Bloomfield

Attachment

cc: Derek Collins (w/Attachment)
Andrew Conway (w/Attachment)

Construction Storm Water Pollution Prevention Plan (SWP3)

Hardin Wind Energy LLC

Prepared for
Hardin Wind Energy LLC

October, 2016



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General Project Information

Project name: Hardin Wind Energy LLC

Project location: Hardin County, outside of the town of McGuffey

Latitude/Longitude of approximate centroid of project:

Latitude: 40.692181° Longitude: -83.831658°

Method used to collect: Google Earth

Project size: Total number of acres to be disturbed: Maximum 28.39 *(tenths of an acre)*

Total new impervious surface:	8.40 (only if gravel roads are going to be constructed)
Pre-construction acres of impervious surface:	<u>0</u>
Post-construction acres of impervious surface:	8.40 (only if gravel roads are going to be constructed)

Construction timeline:

Start date: December 1, 2016 Estimated completion date: January 10, 2016

Contact information:

Operator / Owner:

Name of firm or organization: Hardin Wind Energy LLC

Mailing address: One South Wacker Drive; Suite 1900

City: Chicago State: IL Zip code: 60606

Contact name: Raquel Justa Title: Project Manager

Contact phone: 312-638-8479 E-mail: RJusta@invenergyllc.com

Fax Number: 321-506-1455



Operator / General Contractor:

Name of firm or organization: The Boldt Company

Mailing address: 2525 North Roemer Rd. PO Box 419

City: Appleton State: WI Zip code: 54812

Contact name: Matt Hussin Title: _____

Contact phone: 920-739-6321 E-mail: Matt.hussin@boldt.com

Hardin Wind Energy LLC

October, 2016

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1.0 Introduction

(OHC000004 III.A) A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for subsequent phases. SWP3s shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants in storm water discharges during construction and pollutants associated with post-construction activities to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

Hardin Wind Energy LLC is planning to construct the Hardin County Wind Project. The proposed Hardin County Wind Project is located on rural farmland in Hardin County, Ohio, outside of the town of McGuffey (Figure1).

The proposed Hardin County Wind Project will be completed in two phases:

1. Phase 1 will be completed in fall/winter of 2016 and will involve construction of permanent access roads, excavation, pouring of concrete mud mats, and backfilling for 8 foundations.
2. Phase 2 is tentatively scheduled to be completed in 2017 and will involve, further excavations, laydown yards, access roads and turbine delivery and installation.

This SWP3 is completed for Phase 1 of the project only. A separate SWP3 will be developed and a separate NOI will be submitted for Phase 2 of the project.

2.0 Site Description

2.1 Construction Activity

(OHC000004 III.G.1.a) A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);

Phase 1 will be completed in fall/winter of 2016 and will involve excavation, pouring of concrete mud mat, and backfilling for 8 turbine foundations. Additionally, the Phase 1 might include construction of permanent gravel access roads, depending on the weather. Figure 3-1 and 3-2 shows turbine locations and potential access roads and Table 2-1 contains the geographic coordinates of each turbine location. Information is provided for 26 potential turbine location. However, for Phase 1, only 8 turbine locations will be selected. At this moment, it is not determined which 8 out of 25 proposed turbine locations will be selected. The SWP3 will be amended once turbine locations are selected.

If needed, permanent gravel access roads through agricultural fields will be constructed. It is expected that construction of permanent access roads will be completed within 5 weeks.

The materials removed from each excavation will be stockpiled in a horseshoe formation surrounding the excavation for future use. The soil base is protected against damage by installing a flowable concrete mud mat after the final excavation. Following the installation of the mud mats, the foundations will be filled and compacted using the stockpiled native material. Excavation at each turbine location will be completed within 5-10 days. Typical construction phasing at each location will consist of the following:

1. installation of construction entrance
2. installation of sediment control practices, as needed
3. clearing, grubbing or stripping, as needed
4. construction of permanent access roads, as needed
5. construction of vegetated swales along roadsides, as needed
6. excavation and stockpiling
7. dewatering and pumping, as needed
8. installation of mud mat
9. backfilling excavation
10. grading site to its pre-construction grade
11. site stabilization

The potential access roads and turbines sites are located in agricultural fields. The majority of the site lies in the Scioto Marsh area which is a very flat area of former marsh land that formed in the glacial lake basin and resulted in approximately 2 to 10 feet of peat overlying the underlying lacustrine clay. Natural and man-made drainage waterways are located in low-lying areas of the site.

Table 2-1: Proposed turbine locations

Proposed Turbine Location #	Latitude	Longitude
2	40.69825	-83.83769
3	40.694643	-83.837501
4	40.69135	-83.833516
5	40.701533	-83.828326
6	40.698947	-83.827282
16	40.684653	-83.829824
17	40.681965	-83.829628
18	40.679435	-83.828491
19	40.676806	-83.827351
20	40.687645	-83.838577
21	40.685353	-83.836906
33	40.67139	-83.84541
35	40.67087	-83.836528
37	40.654941	-83.844746
38	40.656427	-83.837453
101	40.687223	-83.7534
103	40.685484	-83.74662
104	40.684627	-83.743309
105	40.683572	-83.739927
106	40.682579	-83.736586
113	40.706361	-83.705153
114	40.702052	-83.705298
115	40.700656	-83.698756
116	40.698438	-83.696926
121	40.686522	-83.749928

2.2 Site Area

(OHC000004 III.G.1.b) Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);

During Phase 1 of the project, permanent gravel access roads through agricultural fields will be constructed if needed. If constructed, it is expected that construction of permanent access roads will be completed within 5 weeks. Total area of disturbance for construction of access roads will be 10.51 acres. Table 2-2 contains the information about area of disturbance for each access road.

Table 2-2: Proposed permanent access road area of disturbance

Proposed Turbine Location #	Road Length (feet)	Area of Disturbance (acre)
2	1,240	1.31
3	1,280	1.35
4	825	0.87
5	870	0.92
6	1,880	1.99
16	5760	6.08
17	4735	5.00
18	3470	3.66
19	2210	2.33
20	890	0.94
21	1,420	1.50
33	1195	1.26
35	1912	2.02
37	2,565	2.71
38	2710	2.86
101	6195	6.54
103	4130	4.36
104	3082	3.25
105	2130	2.25

Proposed Turbine Location #	Road Length (feet)	Area of Disturbance (acre)
106	1605	1.69
113	1025	1.08
114	525	0.55
115	1850	1.95
116	2135	2.25
121	5110	5.40
Maximum Area of Disturbance		24.26

Additionally, 8 out of 25 turbine location will be selected and foundations for these 8 turbines will be excavated. The size of each excavation will be approximately 63 feet wide, 63 feet long, and up to 11 feet deep. Equipment used will include a backhoe or similar excavator, and trucks to transport personnel and equipment. During the project it will be necessary to excavate and temporarily stockpile soil. Subsoil and topsoil will be segregated into separate piles and returned to their original locations upon completion of the work. No off-site borrow areas of expected to occur.

The excavation extent work area at each location which has the potential for soil disturbance is a 75 foot setback in all directions from the center of the turbine (see Figures 4-1 to 4-37) resulting in total disturbance of 180,000 square feet (4.13 acres). Areas surrounding the excavation may be used for parking, stockpiling, material storage, etc.

Maximum area disturbed by the project will be 28.39 acres.

2.3 Impervious Area

(OHC000004 III.G.1.c) An estimate of the impervious area and percent imperviousness created by the construction activity;

If weather conditions are favorable and an equipment can access the site safely, no impervious area will be created by the project.

However, a permanent gravel access roads through agricultural fields will be constructed if needed to access the selected turbine locations. Each road will be 16 feet wide and the road length will vary. The construction of access roads will result in maximum impervious area of approximately 8.40 acres. Table 2-3 contains information regarding the impervious area that will possibly be created for each access road. See Figure 3-1 and 3-2 and Figures 4-4 through 4-37.

If permanent roads will be constructed, the SWP3 will be amended and road design together with post-construction stormwater management design will be included in the SWP3, prior construction of the roads commence.

Table 2-3: Proposed permanent access road impervious area

Proposed Turbine Location #	Created Impervious Area
2	0.44
3	0.46
4	0.26
5	0.32
6	0.69
16	2.12
17	1.74
18	1.27
19	0.81
20	0.35
21	0.53
33	0.43
35	0.51
37	0.92

Proposed Turbine Location #	Created Impervious Area
38	0.48
101	2.28
103	1.52
104	1.13
105	0.78
106	0.59
113	0.38
114	0.19
115	0.68
116	0.78
121	1.88
Maximum impervious area created if access roads are constructed	8.40

2.4 Runoff Coefficients

(OHC000004 III.G.1.d) A calculation of the runoff coefficients for both the pre-construction and post construction site conditions;

Runoff coefficient for cultivated area with average infiltration is 0.4 and runoff coefficient for access roads is approximately 0.8 (Source: ASCE, 1960).

If permanent roads will be constructed, a vegetated swale will be constructed along roadside and will be designed to treat the water quality volume (WQv) as specified in the Permit.

2.5 Storm Water Discharges

(OHC000004 III.G.1.e) Existing data describing the soil and, if available, the quality of any discharge from the site;

The proposed turbines sites are located in agricultural fields. The majority of the site lies in the Scioto Marsh area which is a very flat area of former marsh land that formed in the glacial lake basin and resulted in approximately 2 to 10 feet of peat overlying the underlying lacustrine clay. Natural and man-made drainage waterways are located in low-lying areas of the site.

Table 2-4: Soil Data

Proposed Turbine Location #	Map Unit	Kf factor	Hydrologic group	% Sand	% Silt	% Clay
2 through 6 16 through 21	McGuffey muck	-----	C/D	0	-----	-----
33 35 37 38	Pewamo silty clay loam, 0 to 1 % slope	0.24	C/D	15	50	35
37	Blount silt loam, ground moraine, 0 to 2% slopes	0.37	D	22	56	22
101 103 105 106 121	Milford silty clay loam	0.24	B/D	18.5	44	37.5
104	Kibbie loam, 0 to 3 percent slopes	0.28	C/D	45.2	38	16.8
113 114 115 116	Blount silt loam, end moraine, 2 to 4 percent slopes	0.37	D	21.5	54.4	24

Current water discharges are typical of agricultural fields.

2.6 Prior Land Use

(OHC000004 III.G.1.f) A description of prior land uses at the site;

The area is used as a farmed field. Upon completion of Phase 1, the excavation area will be stabilized with seed, mulched and fenced and the rest of the construction area around the excavation will be returned to pre-existing conditions until Phase 2 can be completed.

Additionally, 16 feet wide permanent access roads will potentially be constructed within the farm fields as described above.

2.7 Implementation Schedule

(OHC000004 III.G.1.g) An implementation schedule which describes the sequence of major construction operations (i.e., designation of vegetative preservation areas, grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;

Phase 1 will be completed in fall/winter of 2016 and will involve excavation, pouring of the mud mats, and backfilling for 8 turbine foundations. Additionally, the Phase 1 might include construction of permanent gravel access roads, depending on the weather. Construction of permanent access roads will be completed within a 5 week period and work at each turbine location will be completed within 5-10 days period within the 5 week window.

Typical construction phasing at each location will consist of the following:

1. installation of construction entrance
2. installation of sediment control practices, as needed
3. clearing, grubbing or stripping, as needed
4. construction of permanent access roads, as needed
5. construction of vegetated swales along roadsides, as needed
6. excavation and stockpiling
7. dewatering and pumping, as needed
8. installation of mud mat
9. backfilling excavation
10. grading site to its pre-construction grade
11. site stabilization

2.8 Receiving Waters and Wetlands

(OHC000004 III.G.1.h) The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the state shall be indicated;

Table 2-5: Receiving Waters and Wetlands

Proposed Turbine Location #	Receiving Surface Waters
2	The closest drainage ditch is located ~700' to the north. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
3	The closest drainage ditch is located ~1,300' to the east. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
4	The closest drainage ditch is located ~250' to the east. There is approximately 50' of an agricultural field between construction limits and 100' grassy buffer protecting the drainage ditch. Additionally, ditch is vegetated and there is a small berm on the waterway bank and terrain is very flat.
5	The closest drainage ditch is located ~1,180' to the west. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
6	The closest drainage ditch is located ~1,500' to the west. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
16	The closest drainage ditch is located ~750' to the west. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.

Proposed Turbine Location #	Receiving Surface Waters
17	The closest drainage ditch is located ~750' to the west. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
18	Twin Branches is located ~1,700 to the south. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
19	Twin Branches is located ~700 to the south. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
20	The closest drainage ditch is located ~1,600' to the east. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
21	The closest drainage ditch is located ~1,200' to the east. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
33	The closest drainage ditch is located ~400' to the southeast. It is not expected that any discharge from construction area will reach this waterway considering flat terrain.
35	The unnamed tributary to Twin Branch Ditch is located to the southeast. A 50-foot undisturbed buffer will be preserved between the tributary and the construction limit if feasible. Additionally, ditch is vegetated and there is a small berm on the waterway bank and terrain is very flat. It is not expected that this waterway will receive any discharge from construction area and if it does, it is vegetated so it will help filter the sediment.
37	The closest drainage ditch is located ~860' to the south. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
38	The closest wetland is located ~940' to the southeast. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
101	Scioto River is located ~1,000' to the north and northwest. Unnamed drainage ditch is located ~840' to the southwest. It is not expected that any discharge from construction area will reach these waterways considering flat terrain and that the site is surrounded with an agricultural field.
103	Scioto River is located ~1,100' to the north. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
104	Scioto River is located ~1,100' to the north. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.

Proposed Turbine Location #	Receiving Surface Waters
105	Scioto River is located ~1,100' to the north. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
106	The closest wetland Scioto River are located ~1,050' to the north. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.
113	Wetland is located~400' to the north. It is not expected that any discharge from construction area will reach wetland considering flat terrain and that the site is surrounded with an agricultural field.
114	A ditch is located~1,000' to the southwest. It is not expected that any discharge from construction area will reach wetland considering flat terrain and that the site is surrounded with an agricultural field.
115	A ditch is located~1,150' to the southeast. It is not expected that any discharge from construction area will reach wetland considering flat terrain and that the site is surrounded with an agricultural field.
116	A ditch is located~1,700' to the west. It is not expected that any discharge from construction area will reach wetland considering flat terrain and that the site is surrounded with an agricultural field.
121	Scioto River is located ~990' to the north. It is not expected that any discharge from construction area will reach this waterway considering flat terrain and that the site is surrounded with an agricultural field.

2.9 Standard Erosion and Sediment Control Practices

(OHC000004 III.G.1.i) For subdivided developments where the SWP3 does not call for a centralized sediment control capable of controlling multiple individual lots, a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices.

This does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones;

(OHC000004 II.A) You shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls shall be designed, installed and maintained to:

- 1. Control storm water volume and velocity within the site to minimize soil erosion;*
- 2. Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;*
- 3. Minimize the amount of soil exposed during construction activity;*
- 4. Minimize the disturbance of steep slopes;*
- 5. Minimize sediment discharges from the site. The design, installation and maintenance*

6. *of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;*
7. *If feasible, provide and maintain a 50-foot undisturbed natural buffer around surface waters of the state, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration. If it is infeasible to provide and maintain an*
8. *undisturbed 50-foot natural buffer, you shall comply with the stabilization requirements found in Part II.B for areas within 50 feet of a surface water; and*
9. *Minimize soil compaction and, unless infeasible, preserve topsoil.*
10. Each excavation location will be treated as a separate construction project and will have erosion and sediment controls installed as appropriate. Refer to Section 3 and Figures 4-1 through 4-37 for more details.

Each excavation location and associated access will be treated as a separate construction project and will have erosion and sediment controls installed as appropriate. Refer to Section 3 and Figures 4-1 through 4-37 for more details.

2.10 Asphalt and Concrete Plant Storm Water Discharges

(OHC000004 III.G.1.j) Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;

Wastewater from washout of concrete is prohibited unless managed by an appropriate control. Concrete washout will be within excavations and no runoff will occur from concrete washout areas.

2.11 Grading and Stabilization Activities

(OHC000004 III.G.1.m) A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and

All grading and stabilization activities will be documented in the Appendix C.

All SWP3 amendments will be documented in the Appendix D: Record of SWP3 Amendments.

2.12 Site Maps

The site maps attached to this SWP3 meet the requirements of OHC000004.

Table 2-6: Site Map Features

Requirement	Figure
Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;	Figures 4-1 through 4-37
Soils types for all areas of the site, including locations of unstable or highly erodible soils;	Figure 2
Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;	Figures 4-1 through 4-37
Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;	Figure 3-1 and 3-2 and Figures 4-1 through 4-37
Existing and planned locations of buildings, roads, parking facilities and utilities;	Figure 3-1 and 3-2 and Figures 4-1 through 4-37
The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development;	Figures 4-1 through 4-37
Sediment and storm water management basins noting their sediment settling volume and contributing drainage area. Ohio EPA recommends the use of data sheets (see ODNR's Rainwater and Land Development manual for examples) to provide data for all sediment traps, sediment basins and storm water management treatment practices noting important inputs to design and resulting parameters such as their contributing drainage area, disturbed area, water quality volume, sedimentation volume, practice surface area, facility discharge and dewatering time, outlet type and dimensions;	na
The location of permanent storm water management practices to be used to control pollutants in storm water after construction operations have been completed;	na (SWP3 will be amended if permanent access roads will be constructed)
Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;	na (SWP3 will be amended once these locations are determined)
The location of designated construction entrances where the vehicles will access the construction site; and	Figure 3-1 and 3-2
The location of any in-stream activities including stream crossings.	na

3.0 Controls

(OHC000004 III.G.2) In accordance with Part II.A, the SWP3 shall contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) shall implement such controls. The SWP3 shall clearly describe for each major construction activity identified in Part III.G.1.g: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3.

The primary site operator (Owner) will review the SWP3 with the primary contractor, prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred. Refer to Appendix E: SWP3 Training Log.

Construction Activity	Contractor Responsible For Implementation
Installation of construction entrance, installation of sediment control practices, clearing, grubbing or stripping, construction of permanent access roads if needed, construction of vegetated swales along roadsides if needed, excavation and stockpiling, dewatering and pumping, as needed, installation of mud mat, backfilling excavation, grading site to its pre-construction grade and site stabilization	The Boldt Company

3.1 Non-Structural Preservation Methods

(OHC000004 III.G.2.a) The SWP3 shall make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time and designation of tree preservation areas or other protective clearing or grubbing practices. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water.

Phase 1 of this project covered under this SWP3 will include excavation, pouring of the mud mats, and backfilling for 8 turbine foundations. Additionally, the Phase 1 might include construction of permanent gravel access roads, depending on the weather. Construction area is not immediately adjacent to surface waters of the state.

At proposed turbine location 35, a 50-foot undisturbed natural buffer around unnamed tributary to

Twin Branches Ditch will be preserved if feasible (see Figure 4-22).

All ground disturbance will be limited to the construction area. Dust control will be used when conditions require it, such as on windy and dry days when soils are exposed. Water trucks or other types of dust controls can be used depending on the site needs.

A good housekeeping practices will be implemented through:

- gathering up and removing debris to keep the work site orderly
- keeping the work area and all equipment tidy
- loose or light materials will be secured
- and other practices.

If needed, agricultural fields and compacted or rutted areas will be tilled to loosen compacted soils.

3.2 Erosion Control Practices

(OHC000004 III.G.2.b) The SWP3 shall make use of erosion controls that are capable of providing cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to re-stabilize disturbed areas after grading or construction shall be included in the SWP3. The SWP3 shall provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, and use of construction entrances and the use of alternative ground cover.

Where vehicle traffic leaves any part of the site and enters public roadways or areas unchecked by effective sediment controls construction entrance will be installed to minimize tracking of sediment from the construction areas. Construction entrance BMPs that may be used include:

- rock / aggregate pads
- mud mats pads
- slash mulch pads
- wood chip pads
- concrete or steel wash racks
- other equivalent systems

If such vehicle tracking BMPs are not adequate to prevent sediment from being tracked onto the paved road, the street sweeping will also be employed. Refer to Figure 3-1 and 3-2 for location of construction entrances for each site location and Appendix F for construction entrance specifications.

3.2.1 Stabilization

(OHC000004 III.G.2.b.i) Disturbed areas shall be stabilized in accordance with Table 1 (Permanent Stabilization) and Table 2 (Temporary Stabilization) in Part II.B of this permit.

Table 1 (Permanent Stabilization)

<i>Area requiring permanent stabilization</i>	<i>Time frame to apply erosion controls</i>
<i>Any areas that will lie dormant for one year or more</i>	<i>Within seven days of the most recent disturbance</i>
<i>Any areas within 50 feet of a surface water of the state and at final grade</i>	<i>Within two days of reaching final grade</i>
<i>Any other areas at final grade</i>	<i>Within seven days of reaching final grade within that area</i>

Table 2 (Temporary Stabilization)

<i>Area requiring temporary stabilization</i>	<i>Time frame to apply erosion controls</i>
<i>Any disturbed areas within 50 feet of a surface water of the state and not at final grade</i>	<i>Within two days of the most recent disturbance if the area will remain idle for more than 14 days</i>
<i>For all construction activities, any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state</i>	<i>Within seven days of the most recent disturbance within the area. For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).</i>
<i>Disturbed areas that will be idle over winter</i>	<i>Prior to the onset of winter weather</i>

Stabilization practices may include temporarily seeding, permanent seeding, mulching, rolled erosion control products, sod stabilization, vegetative buffer strips, preservation of mature vegetation, staged or staggered development, and other appropriate measures. Seeding (temporary or permanent), mulching or application of rolled erosion control products will be conducted in accordance with the practice standards located in Appendix F.

All disturbed areas including soil stockpiles that will be dormant for more than 14 days, and are not within 50 feet of a surface water of the state will be stabilized within 7 days of the most recent disturbing activities:

- If disturbed area will be left dormant for less than one year it will be temporary stabilized.
- If disturbed area will be left dormant for more than one year or at final grade it will be permanently stabilized.

All disturbed areas including soil stockpiles that will be dormant for more than 14 days, and are within 50 feet of a surface water of the state will be stabilized within 2 days of the most recent disturbing activities:

- If disturbed area will be left dormant for less than one year it will be temporary stabilized.
- If disturbed area will be left dormant for more than one year or at final grade it will be permanently stabilized.

If disturbed areas will be idle over winter, it will be stabilized prior to the onset of winter weather. If disturbing activities are completed between November 1 and February 29 only mulch or dormant seeding will be used for stabilization. See Appendix F for more details regarding dormant seeding.

3.2.2 Permanent Stabilization of Conveyance Channels

(OHC000004 III.G.2.b.ii) Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the most current edition of the Rainwater and Land Development manual and included in Appendix F), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

All conveyance channels, if present, will be stabilized with seed and erosion control matting (see Appendix F).

3.3 Runoff Control Practices

(OHC000004 III.G.2.c) The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.

Construction entrances, with culverts to facilitate drainage of the road side ditches, will be constructed. If discharge velocity from these culverts is high enough to erode receiving area, velocity dissipation devices will be placed at discharge locations to provide non-erosive flow velocity from the culvert to the roadside ditch.

3.4 Sediment Control Practices

(OHC000004 III.G.2.d) The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, silt fences, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

The SWP3 shall contain detail drawings for all structural practices.

The construction is planned to be completed in fall/winter of 2016. Construction of access roads, if needed will be completed within 5 weeks. Work at each turbine location will be completed within 5-10 days over a 5-week window. If a disturbed area, including soil piles, will remain disturbed for more than 14 days, sediment controls will be established on all downgradient perimeters prior grading activity and within 7 days of grubbing activities. Runoff from each site will accrue as sheet flow. Sediment controls that may be used are:

- silt fence
- filter berm
- filter sock
- other equivalent measures

See Appendix F for the above sediment control product specifications.

3.4.1 Timing

(OHC000004 III.G.2.d.i) Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the up slope development area is re-stabilized. As construction progresses and the topography is altered, appropriate controls shall be constructed or existing controls altered to address the changing drainage patterns.

The construction is planned to be completed in fall/winter of 2016. Construction of access roads, if needed will be completed within 5 weeks. Work at each turbine location will be completed within 5-10 days over a 5-week window. If any area will remain disturbed for more than 14 days, sediment controls will be established on all downgradient perimeters prior grading activity and within 7 days of grubbing activities.

3.4.2 Sediment Settling Ponds

(OHC000004 III.G.2.d.ii) A sediment settling pond is required for any one of the following conditions:

- Concentrated storm water runoff (e.g., storm sewer or ditch);
- Runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers;
- Runoff from drainage areas that exceed the design capacity of inlet protection; or
- Runoff from common drainage locations with 10 or more acres of disturbed land.

There will be no concentrated storm water runoff. Runoff from drainage areas will not exceed the design capacity of silt fence or other sediment barriers. There will be no runoff from common drainage locations with 10 acres of disturbed land and there will be no inlets to protect. This section is not applicable.

3.4.3 Silt Fence and Diversions

(OHC000004 III.G.2.d.iii) Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow.

Placing silt fence in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Such devices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

The construction is planned to be completed in fall/winter of 2016. Construction of access roads, if needed will be completed within 5 weeks. Work at each turbine location will be completed within 5-10 days over a 5-week window. If any area will remain disturbed for more than 14 days, silt fence will be established on all downgradient perimeters prior grading activity and within 7 days of grubbing activities.

If needed, silt fence will be placed on the level contour of the land, so that flows are dissipated into uniform sheet flow that has less energy for transporting sediment. Silt fence will not concentrate runoff.

Silt fence will be installed in accordance with the most current edition of the Rainwater and Land Development manual (see Appendix F). The following condition regarding silt fence maximum drainage area will be satisfied:

Maximum drainage area (in acres) to 100 linear feet of silt fence	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	>= 2% but < 20%
0.125	>= 20% but < 50%

3.4.4 Inlet Protection

(OHC000004 III.G.2.d.iv) Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems, unless the storm drain system drains to a sediment settling pond. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.

There are no inlets receiving runoff. This section is not applicable.

3.4.5 Surface Waters of the State Protection

(OHC000004 III.G.2.d.v) If construction activities disturb areas adjacent to surface waters of the state, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the state from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the state. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water. Where impacts within this buffer area are unavoidable, due to the nature of the construction (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the buffer area are minimized.

Construction activities will not disturb areas adjacent to surface waters of the state.

3.4.6 Modifying Controls

(OHC000004 III.G.2.d.vi) If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee shall replace or modify the control for site conditions.

If the inspection reveals that a control practice is in need of repair or maintenance, it shall be repaired or maintained within 3 days of the inspection.

If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 will be amended and the new control practice will be installed within 10 days of the inspection.

If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.g of this permit, the control practice shall be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record shall contain a statement of explanation as to why the control practice is not needed.

3.5 Post-Construction Storm Water Management Requirements

Construction activities that do not include the installation of any impervious surface (e.g., soccer fields), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects, (e.g., pipeline or utility line installation), which do not result in the installation of additional impervious surface, are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects shall be designed to minimize the number of stream crossings and the width of disturbance and achieve final stabilization of the disturbed area as defined in Part VII.J.1.

If weather conditions are favorable and an equipment can access the site safely, no impervious area will be created by the project.

However, a permanent gravel access roads through agricultural fields will be constructed if needed to access the turbine location. Each road will be 16 feet wide and the road length will vary. The construction of access roads will result in total impervious are of approximately 3.16 acres. Table 2-3 contains information regarding the impervious area that will be created for each access road. Vegetated swales will be constructed in compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1, along access roads and they will be sized to treat the water quality volume (WQv) as specified in the Permit. See Figure 3-1 and 3-2 and Figures 4-4 through 4-37.

If permanent roads will be constructed, the SWP3 will be amended and road design together with post-construction stormwater management design (vegetated swale) will be included in the SWP3, prior construction of the roads commence.

Additionally, culverts within a road side ditches will be installed at construction entrances. If discharge velocity from these culverts are high enough to erode receiving area, velocity dissipation devices will be placed at discharge locations to provide non-erosive flow velocity from the culvert to the roadside ditch.

3.6 Surface Water Protection

(OHC000004 III.G.2.f) If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state isolated wetland permit requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state isolated wetland permit requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee shall contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

During Phase 1, no work will be conducted within wetlands or waterways.

3.7 Other Controls

3.7.1 Non-Sediment Pollutant Controls

(OHC000004 III.G.2.g.i) In accordance with Part II.E, no solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. The permittee must implement all necessary BMPs to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the state. Under no circumstance shall wastewater from the washout of concrete trucks, stucco, paint, form release oils, curing compounds, and other construction materials be discharged directly into a drainage channel, storm sewer or surface waters of the state. Also, no pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the state. No exposure of storm water to waste materials is recommended. The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, storm water runoff, and snow melt. In accordance with Part II.D.3, the SWP3 shall include measures to prevent and respond to chemical spills and leaks. You may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses conditions of this permit condition and a copy of such plan is maintained on site.

Equipment and vehicle washing is not expected to occur at this site. No wheel wash water or other wash waters are expected at the site. This section of the SWP3 will be updated if vehicle washing occurs.

If present, building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site will be stored under cover (e.g., plastic sheeting, temporary roofs, or in weather-proof containers) to prevent discharge of pollutants through minimization of contact with stormwater. All containers, if any (e.g., dumpsters, drums) used disposal of debris, trash, hazardous or petroleum wastes will be covered and leak-proof. Additionally, all of the above will be stored away from drainage ditches, field drains, or other storm water drainage areas.

The contractor is responsible for developing a detailed plan on how to prevent and respond to spills and leaks.

Equipment and vehicle fueling is not expected to occur at this site. If needed, the contractor will fuel equipment in designated areas only, which will be identified on Figure 3-1 and 3-2 once these areas are selected. Contractors will have spill kits sized for the amount of refueling taking place, with spill kits located at designated fueling areas (if any).

In order to reduce the likelihood of a spill event, the following practices have been implemented for portable fueling operations:

- The equipment operator must be present, in addition to the fuel truck operator
- A spill kit will be staged at all fueling operations
- Fueling truck dispensing nozzle is equipped with an automatic shutoff
- Oil sheens that accumulate in portable containment or drip trays will be cleaned with oil absorbing pads or rags prior to draining water. Rags/pads must be disposed of according to state and federal rules.

The contractor is responsible for contacting, Ohio EPA (at 1-800-282-9378), the local fire department, and the local emergency planning committee (LEPC) within 30 minutes of a spill of 25 or more gallons. For details regarding release reporting requirements see Appendix H.

If any, process wastewaters (e.g., equipment washing, leachate associated with on-site waste disposal, and concrete wash-outs) will be collected and disposed of properly (e.g., to a publicly-owned treatment works).

Stationary fuel tanks shall meet industry standards (designed to hold fuel type, properly maintained, not illegally modified, not missing leak indicator floats for double walled tanks, etc....) or be removed from the work area.

3.7.2 Off-site Traffic

(OHC000004 III.G.2.g.ii) Off-site vehicle tracking of sediments and dust generation shall be minimized. In accordance with Part II.D.1, the SWP3 shall include methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. No detergents may be used to wash vehicles. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.

Dust control will be used when conditions require it, such as on windy and dry days when soils are exposed. Water trucks or other types of dust controls can be used depending on the site needs.

If sediment is being tracked onto the paved road, the street sweeping will be employed.

Equipment and vehicle washing is not expected to occur at this site. This section of the SWP3 will be updated if vehicle washing occurs. Detergents and other cleaners are not allowed to be discharge and therefore will not be used.

3.7.3 Compliance with Other Requirements

(OHC000004 III.G.2.g.iii) The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations, including provisions prohibiting waste disposal by open burning and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.

All work will be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

3.7.4 Trench and Ground Water Control

(OHC000004 III.G.2.g.iv) In accordance with Part II.C, there shall be no turbid discharges to surface waters of the state resulting from dewatering activities. If trench or ground water contains sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.

If needed, dewatering will be conducted at this site and water will be discharged via filter bag in an upland area. If discharge from the filter bag is still turbid, the filter bag will be placed within straw bale dewatering structure with two layers of geotextile fabric. The straw bale structure will be adequately-sized and constructed. Discharge points will be adequately protected from erosion and scour.

3.7.5 Contaminated Sediment

(OHC000004 III.G.2.g.v) Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (is not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in storm water discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this permit. Appropriate BMPs include, but are not limited to:

- *The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges;*
- *Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility; and*

- *Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material.*

Operators should consult with Ohio EPA Division of Surface Water prior to seeking permit coverage.

It is not expected to encounter contamination. However, if any contaminated soil is encountered it will be treated and/or disposed in Ohio EPA approved solid waste management facilities or hazardous waste treatment, storage or disposal facilities (TSDFs).

3.8 Maintenance

(OHC000004 III.G.2.h) All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.

Maintenance of the following areas and BMPs will be performed as necessary based on the following requirements:

- If a control practice is in need of repair or maintenance it will be repaired or maintained within 3 days of the inspection. Examples:
 - Silt fence: sediment removal after sediment reaches 1/2 of the height of the device
 - Construction entrance: periodic top dressing with additional stone or the washing and reworking of existing stone
- If a control practice fails to perform its intended function and it needs to be replaced with new control practice, a new control practice will be installed within 10 days of the inspection.
- Tracked sediment from all roadways and storm drains will be removed immediately.

3.9 Inspections

A “qualified inspection personnel” will conduct inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented or whether additional control measures are required.

3.9.1 Inspection Records

Following each inspection, a checklist will be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report shall include:

- i. the inspection date;
- ii. names, titles, and qualifications of personnel making the inspection;
- iii. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;

- iv. weather information and a description of any discharges occurring at the time of the inspection;
- v. location(s) of discharges of sediment or other pollutants from the site;
- vi. location(s) of BMPs that need to be maintained;
- vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
- viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
- ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

Refer to Appendix J for the: Construction Site Inspection Checklist.

3.9.2 Inspection Frequency

A “qualified inspection personnel” will routinely inspect the entire construction site:

- at least once every 7 days during active construction
- within 24 hours after a rainfall event greater than 0.5 inches in 24 hours
 - Following an inspection that occurs within 24 hours after a rainfall event, the next inspection must be conducted within 7 days after the rainfall event (Part IV.E.1 of Attachment A)

The inspection frequency may be reduced to at least once every month if land disturbance activities have been suspended and:

- the entire site is temporarily stabilized or
- runoff is unlikely due to weather conditions (e.g., site is covered with snow, ice, or the ground is frozen).

“Temporary stabilization” means the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.

A waiver of inspection requirements is available until one month before thawing conditions are expected to result in a discharge if all of the following conditions are met: the project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month); land disturbance activities have been suspended; and the beginning and ending dates of the waiver period are documented in the SWP3.

3.9.3 Record Retention

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection:

- names(s) and qualifications of personnel making the inspection
- the date(s) of the inspection
- major observations relating to the implementation of the SWP3 and

-
- a certification as to whether the facility is in compliance with the SWP3 and the permit
 - and identify any incidents of non-compliance

The record and certification shall be signed in accordance with Part V.G. of this permit.

4.0 Approved State or Local Plans

(OHC000004 III.G.3) All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee shall certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.

There are no other requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities for this project.

An Assistant County Engineer, Luke Underwood was consulted to ensure that the culvert at the construction entrance are designed properly.

5.0 Contractors

(OHC000004 III.E) The permittee shall inform all contractors and subcontractors not otherwise defined as "operators" in Part VII of this general permit who will be involved in the implementation of the SWP3 of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created and signatures shall be obtained prior to commencement of work on the construction site.

Construction Activity	Contractor Responsible For Implementation
Installation of construction entrance, installation of sediment control practices, clearing, grubbing or stripping, construction of permanent access roads if needed, construction of vegetated swales along roadsides as needed, excavation and stockpiling, dewatering and pumping, as needed, installation of mud mat, backfilling excavation, grading site to its pre-construction grade and site stabilization	The Boldt Company

Refer to Appendix E, SWP3 training log.

6.0 Signature and Review

(OHC000004 III.C)

1. Plan Signature and Retention On-Site. The SWP3 shall include the certification in Part V.H, be signed in accordance with Part V.G., and be retained on site during working hours.

Refer to Appendix G: Certification.

2. Plan Availability
 - a. On-site: The plan will be made available immediately upon request of the director or his authorized representative and MS4 operators or their authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit will also be made available at the site.
 - b. By written request: The permittee must provide the most recent copy of the SWP3 within 10 days upon written request by any of the following:
 - i. The director or the director's authorized representative;
 - ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or
 - iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.
 - c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.
3. Plan Revision. The director or authorized representative may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director or authorized representative (or as otherwise provided in the notification), the permittee shall make the required changes to the SWP3 and, if requested, shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

7.0 Plan Amendments

(OHC000004 III.D) The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

Refer to Appendix D: Record of SWP3 Amendments.

8.0 Notice of Termination Requirements

A. Failure to notify.

The terms and conditions of this permit will remain in effect until a signed Notice of Termination (NOT) form is submitted.

B. When to submit an NOT.

1. *Permittees wishing to terminate coverage under this permit shall submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance agreement in place to ensure all post construction BMPs will be maintained in perpetuity.*
2. *All permittees shall submit an NOT form within 45 days of completing all permit requirements. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:*
 - a. *Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);*
 - b. *Another operator(s) has assumed control over all areas of the site that have not been finally stabilized.*
 - c. *For residential construction only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner. (Note: For individual lots without housing, which are sold by the developer, the individual lot permittee shall implement final stabilization prior to the individual lot permittee terminating permit coverage.); or*
 - d. *An exception has been granted under Part III.G.4.*

"Final stabilization" means that either:

- All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or
- For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the state and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria described above.

The project area is used as a farmed field. Upon completion of Phase 1, the excavation area will be stabilized with seed and mulch and fenced and the rest of the construction area will be returned to pre-existing conditions until Phase 2 can be completed. Additionally, 16 feet wide permanent access roads will be constructed within the farm fields.

NOT will be submitted when:

- seeded area achieves at least 70 percent vegetative cover,
- all areas that will not be seeded or covered by permanent access road is constructed are returned to its pre-construction agricultural use, and
- all temporary synthetic and structural erosion prevention and sediment control BMPs have been removed

C. How to submit an NOT.

Permittees shall use Ohio EPA's approved NOT form. The form shall be completed and mailed according to the instructions and signed in accordance with Part V.G of this permit.

Refer to Appendix I: Notice of Termination (NOT) Form Instructions.

Appendix A

Ohio Construction Storm Water General Permit OHC000004

OHIO E.P.A.

APR 11 2013

ENTERED DIRECTOR'S JOURNAL

Issuance Date: April 11, 2013

Effective Date: April 21, 2013

Expiration Date: April 20, 2018

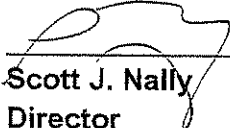
OHIO ENVIRONMENTAL PROTECTION AGENCY

**GENERAL PERMIT AUTHORIZATION FOR STORM WATER DISCHARGES ASSOCIATED
WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT
DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et. seq. hereafter referred to as "the Act") and the Ohio Water Pollution Control Act [Ohio Revised Code ("ORC") Chapter 6111], dischargers of storm water from sites where construction activity is being conducted, as defined in Part I.B of this permit, are authorized by the Ohio Environmental Protection Agency, hereafter referred to as "Ohio EPA," to discharge from the outfalls at the sites and to the receiving surface waters of the state identified in their Notice of Intent ("NOI") application form on file with Ohio EPA in accordance with the conditions specified in Parts I through VII of this permit.

It has been determined that a lowering of water quality of various waters of the state associated with granting coverage under this permit is necessary to accommodate important social and economic development in the state of Ohio. In accordance with OAC 3745-1-05, this decision was reached only after examining a series of technical alternatives, reviewing social and economic issues related to the degradation, and considering all public and intergovernmental comments received concerning the proposal.

This permit is conditioned upon payment of applicable fees, submittal of a complete NOI application form and written approval of coverage from the director of Ohio EPA in accordance with Ohio Administrative Code ("OAC") Rule 3745-38-02.



Scott J. Nally
Director

**I certify this to be a true and accurate copy of the
official documents as filed in the records of the Ohio
Environmental Protection Agency.**

By: Jonh Lassiter Date: 4-11-13

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PART I. COVERAGE UNDER THIS PERMIT

A. Permit Area.

This permit covers the entire State of Ohio.

B. Eligibility.

1. Construction activities covered. Except for storm water discharges identified under Part I.B.2, this permit may cover all new and existing discharges composed entirely of storm water discharges associated with construction activity that enter surface waters of the state or a storm drain leading to surface waters of the state.

For the purposes of this permit, construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb the threshold acreage described in the next paragraph. Discharges from trench dewatering are also covered by this permit as long as the dewatering activity is carried out in accordance with the practices outlined in Part III.G.2.g.iv of this permit.

Construction activities disturbing one or more acres of total land, or will disturb less than one acre of land but are part of a larger common plan of development or sale that will ultimately disturb one or more acres of land will be eligible for coverage under this permit. The threshold acreage includes the entire area disturbed in the larger common plan of development or sale.

This permit also authorizes storm water discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:

- a. The support activity is directly related to a construction site that is required to have NPDES permit coverage for discharges of storm water associated with construction activity;
 - b. The support activity is not a commercial operation serving multiple unrelated construction projects and does not operate beyond the completion of the construction activity at the site it supports;
 - c. Appropriate controls and measures are identified in a storm water pollution prevention plan (SWP3) covering the discharges from the support activity; and
 - d. The support activity is on or contiguous with the property defined in the NOI (offsite borrow pits and soil disposal areas, which serve only one project, do not have to be contiguous with the construction site).
2. Limitations on coverage. The following storm water discharges associated with construction activity are not covered by this permit:
 - a. Storm water discharges that originate from the site after construction activities have been completed, including any temporary support activity, and the site has achieved

final stabilization. Industrial post-construction storm water discharges may need to be covered by an NPDES permit;

- b. Storm water discharges associated with construction activity that the director has shown to be or may reasonably expect to be contributing to a violation of a water quality standard; and
 - c. Storm water discharges authorized by an individual NPDES permit or another NPDES general permit;
3. Waivers. After March 10, 2003, sites whose larger common plan of development or sale have at least one, but less than five acres of land disturbance, which would otherwise require permit coverage for storm water discharges associated with construction activities, may request that the director waive their permit requirement. Entities wishing to request such a waiver must certify in writing that the construction activity meets one of the two waiver conditions:
- a. Rainfall Erosivity Waiver. For a construction site to qualify for the rainfall erosivity waiver, the cumulative rainfall erosivity over the project duration must be five or less and the site must be stabilized with a least a 70 percent vegetative cover or other permanent, non-erosive cover. The rainfall erosivity must be calculated according to the method in U.S. EPA Fact Sheet 3.1 Construction Rainfall Erosivity Waiver dated January 2001 and be found at: http://epa.ohio.gov/portals/35/permits/USEPAfact3-1_s.pdf. If it is determined that a construction activity will take place during a time period where the rainfall erosivity factor is less than five, a written waiver certification must be submitted to Ohio EPA at least 21 days before construction activity is scheduled to begin. If the construction activity will extend beyond the dates specified in the waiver certification, the operator must either: (a) recalculate the waiver using the original start date with the new ending date (if the R factor is still less than five, a new waiver certification must be submitted) or (b) submit an NOI application form and fee for coverage under this general permit at least seven days prior to the end of the waiver period; or
 - b. TMDL (Total Maximum Daily Load) Waiver. Storm water controls are not needed based on a TMDL approved or established by U.S. EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, and equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The pollutant(s) of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. The operator must certify to the director of Ohio EPA that the construction activity will take place, and storm water discharges will occur, within the drainage area addressed by the TMDL or equivalent analysis. A written waiver certification must be submitted to Ohio EPA at least 21 days before the construction activity is scheduled to begin.

4. Prohibition on non-storm water discharges. All discharges covered by this permit must be composed entirely of storm water with the exception of the following: discharges from firefighting activities; fire hydrant flushings; potable water sources including waterline flushings; irrigation drainage; lawn watering; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; springs; uncontaminated ground water from trench or well point dewatering and foundation or footing drains where flows are not contaminated with process materials such as solvents. Dewatering activities must be done in compliance with Part II.C and Part III.G.2.g.iv of this permit. Discharges of material other than storm water or the authorized non-storm water discharges listed above must comply with an individual NPDES permit or an alternative NPDES general permit issued for the discharge.

Except for flows from firefighting activities, sources of non-storm water listed above that are combined with storm water discharges associated with construction activity must be identified in the SWP3. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

5. Spills and unintended releases (Releases in excess of Reportable Quantities). This permit does not relieve the permittee of the reporting requirements of Title 40 of the Code of Federal Regulations ("CFR") Part 117 and 40 CFR Part 302. In the event of a spill or other unintended release, the discharge of hazardous substances in the storm water discharge(s) from a construction site must be minimized in accordance with the applicable storm water pollution prevention plan for the construction activity and in no case, during any 24-hour period, may the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

40 CFR Part 117 sets forth a determination of the reportable quantity for each substance designated as hazardous in 40 CFR Part 116. The regulation applies to quantities of designated substances equal to or greater than the reportable quantities, when discharged to surface waters of the state. 40 CFR Part 302 designates under section 102(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, those substances in the statutes referred to in section 101(14), identifies reportable quantities for these substances and sets forth the notification requirements for releases of these substances. This regulation also sets forth reportable quantities for hazardous substances designated under section 311(b)(2)(A) of the Clean Water Act (CWA).

C. Requiring an individual NPDES permit or an alternative NPDES general permit.

1. The director may require an alternative permit. The director may require any operator eligible for this permit to apply for and obtain either an individual NPDES permit or coverage under an alternative NPDES general permit in accordance with OAC Rule 3745-38-04. Any interested person may petition the director to take action under this paragraph.

The director will send written notification that an alternative NPDES permit is required. This notice shall include a brief statement of the reasons for this decision, an application

form and a statement setting a deadline for the operator to file the application. If an operator fails to submit an application in a timely manner as required by the director under this paragraph, then coverage, if in effect, under this permit is automatically terminated at the end of the day specified for application submittal.

2. Operators may request an individual NPDES permit. Any owner or operator eligible for this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner or operator shall submit an individual application with reasons supporting the request to the director in accordance with the requirements of 40 CFR 122.26. If the reasons adequately support the request, the director shall grant it by issuing an individual NPDES permit.
3. When an individual NPDES permit is issued to an owner or operator otherwise subject to this permit or the owner or operator is approved for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit, whichever the case may be.

D. Permit requirements when portions of a site are sold

If an operator obtains a permit for a development, and then the operator (permittee) sells off lots or parcels within that development, permit coverage must be continued on those lots until a Notice of Termination (NOT) in accordance with Part IV.B is submitted. For developments which require the use of centralized sediment and erosion controls (i.e., controls that address storm water runoff from one or more lots) for which the current permittee intends to terminate responsibilities under this permit for a lot after sale of the lot to a new owner and such termination will either prevent or impair the implementation of the controls and therefore jeopardize compliance with the terms and conditions of this permit, the permittee will be required to maintain responsibility for the implementation of those controls. For developments where this is not the case, it is the permittee's responsibility to temporarily stabilize all lots sold to individual lot owners unless an exception is approved in accordance with Part III.G.4. In cases where permit responsibilities for individual lot(s) will be terminated after sale of the lot, the permittee shall inform the individual lot owner of the obligations under this permit and ensure that the Individual Lot NOI application is submitted to Ohio EPA.

E. Authorization

1. Obtaining authorization to discharge. Operators that discharge storm water associated with construction activity must submit an NOI application form in accordance with the requirements of Part I.F of this permit to obtain authorization to discharge under this general permit. As required under OAC Rule 3745-38-06(E), the director, in response to the NOI submission, will notify the applicant in writing that he/she has or has not been granted general permit coverage to discharge storm water associated with construction activity under the terms and conditions of this permit or that the applicant must apply for an individual NPDES permit or coverage under an alternate general NPDES permit as described in Part I.C.1.
2. No release from other requirements. No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations. Other permit requirements commonly associated with construction activities

include, but are not limited to, section 401 water quality certifications, isolated wetland permits, permits to install sanitary sewers or other devices that discharge or convey polluted water, permits to install drinking water lines, single lot sanitary system permits and disturbance of land which was used to operate a solid or hazardous waste facility (i.e., coverage under this NPDES general permit does not satisfy the requirements of OAC Rule 3745-27-13 or ORC Section 3734.02(H)). The issuance of this permit is subject to resolution of an antidegradation review. This permit does not relieve the permittee of other responsibilities associated with construction activities such as contacting the Ohio Department of Natural Resources, Division of Water, to ensure proper well installation and abandonment of wells.

F. Notice of Intent Requirements

1. Deadlines for notification.
 - a. Initial coverage: Operators who intend to obtain initial coverage for a storm water discharge associated with construction activity under this general permit must submit a complete and accurate NOI application form and appropriate fee at least 21 days prior to the commencement of construction activity. If more than one operator, as defined in Part VII of this general permit, will be engaged at a site, each operator shall seek coverage under this general permit. Coverage under this permit is not effective until an approval letter granting coverage from the director of Ohio EPA is received by the applicant. Where one operator has already submitted an NOI prior to other operator(s) being identified, the additional operator shall request modification of coverage to become a co-permittee. In such instances, the co-permittees shall be covered under the same facility permit number. No additional permit fee is required.
 - b. Individual lot transfer of coverage: Operators must each submit an individual lot notice of intent (Individual Lot NOI) application form (no fee required) to Ohio EPA at least seven days prior to the date that they intend to accept responsibility for permit requirements for their portion of the original permitted development from the previous permittee. The original permittee may submit an Individual Lot NOT at the time the Individual Lot NOI is submitted. Transfer of permit coverage is not granted until an approval letter from the director of Ohio EPA is received by the applicant.
2. Failure to notify. Operators who fail to notify the director of their intent to be covered and who discharge pollutants to surface waters of the state without an NPDES permit are in violation of ORC Chapter 6111. In such instances, Ohio EPA may bring an enforcement action for any discharges of storm water associated with construction activity.
3. Where to submit an NOI. Operators seeking coverage under this permit must submit a signed NOI form, provided by Ohio EPA, to the address found in the associated instructions.
4. Additional notification. NOIs and SWP3s are considered public documents and shall be made available to the public in accordance with Part III.C.2. The permittee shall make NOIs and SWP3s available upon request of the director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or storm water management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator

that discharges to an NPDES permitted MS4 shall provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.

5. Re-notification. Existing permittees having coverage under the previous generations of this general permit (OHC000003, OHC000002 and OHR100000) shall have continuing coverage under OHC000004 with the submittal of a timely renewal application. Existing permittees will receive a renewal application and instructions for how to continue coverage under OHC000004. Within 90 days of receiving a renewal application from Ohio EPA, existing permittees shall submit the completed renewal application expressing their intent for continued coverage. In accordance with Ohio Administrative Code (OAC) 3745-38-02(E)(2)(a)(i), a renewal application fee will only apply to existing permittees having general permit coverage for 5 or more years as of the effective date of this general permit. Permit coverage will be terminated if Ohio EPA does not receive the renewal application within this 90 day period.

Part II. NON-NUMERIC EFFLUENT LIMITATIONS

You shall comply with the following non-numeric effluent limitations for discharges from your site and/or from construction support activities. Part III of this permit contains the specific design criteria to meet the objectives of the following non-numeric effluent limitations.

- A. **Erosion and Sediment Controls**. You shall design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls shall be designed, installed and maintained to:
 1. Control storm water volume and velocity within the site to minimize soil erosion;
 2. Control storm water discharges, including both peak flowrates and total storm water volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
 3. Minimize the amount of soil exposed during construction activity;
 4. Minimize the disturbance of steep slopes;
 5. Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls shall address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting storm water runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
 6. If feasible, provide and maintain a 50-foot undisturbed natural buffer around surface waters of the state, direct storm water to vegetated areas to increase sediment removal and maximize storm water infiltration. If it is infeasible to provide and maintain an undisturbed 50-foot natural buffer, you shall comply with the stabilization requirements found in Part II.B for areas within 50 feet of a surface water; and
 7. Minimize soil compaction and, unless infeasible, preserve topsoil.

- B. Soil Stabilization.** Stabilization of disturbed areas shall, at a minimum, be initiated in accordance with the time frames specified in the following tables.

Table 1: Permanent Stabilization

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within two days of reaching final grade
Any other areas at final grade	Within seven days of reaching final grade within that area

Table 2: Temporary Stabilization

Area requiring temporary stabilization	Time frame to apply erosion controls
Any disturbed areas within 50 feet of a surface water of the state and not at final grade	Within two days of the most recent disturbance if the area will remain idle for more than 14 days
For all construction activities, any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state	Within seven days of the most recent disturbance within the area For residential subdivisions, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over winter	Prior to the onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. Permanent and temporary stabilization are defined in Part VII.

- C. Dewatering.** Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.
- D. Pollution Prevention Measures.** Design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:
1. Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;

2. Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to storm water; and
3. Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.

E. Prohibited Discharges. The following discharges are prohibited:

1. Wastewater from washout of concrete, unless managed by an appropriate control;
2. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and
4. Soaps or solvents used in vehicle and equipment washing.

F. Surface Outlets. When discharging from sediment basins utilize outlet structures that withdraw water from the surface, unless infeasible. (Note: Ohio EPA believes that the circumstances in which it is infeasible to design outlet structures in this manner are rare. Exceptions may include time periods with extended cold weather during winter months. If you have determined that it is infeasible to meet this requirement, you shall provide documentation in your SWP3 to support your determination.)

PART III. STORM WATER POLLUTION PREVENTION PLAN (SWP3)

A. Storm Water Pollution Prevention Plans.

A SWP3 shall be developed for each site covered by this permit. For a multi-phase construction project, a separate NOI shall be submitted when a separate SWP3 will be prepared for subsequent phases. SWP3s shall be prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and storm water management practices addressing all phases of construction. The SWP3 shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with construction activities. The SWP3 shall be a comprehensive, stand-alone document, which is not complete unless it contains the information required by Part III.G of this permit. In addition, the SWP3 shall describe and ensure the implementation of best management practices (BMPs) that reduce the pollutants in storm water discharges during construction and pollutants associated with post-construction activities to ensure compliance with ORC Section 6111.04, OAC Chapter 3745-1 and the terms and conditions of this permit.

B. Timing

A SWP3 shall be completed prior to the timely submittal of an NOI and updated in accordance with Part III.D. Upon request and good cause shown, the director may waive the requirement to have a SWP3 completed at the time of NOI submission. If a waiver has been granted, the

SWP3 must be completed prior to the initiation of construction activities. The SWP3 must be implemented upon initiation of construction activities.

If you wish to continue coverage from the previous generations of this permit (OHR100000, OHC000002 and OHC000003) you shall review and update your SWP3 to ensure that this permit's requirements are addressed within 180 days after the effective date of this permit. If it is infeasible for you to comply with a specific requirement in this permit because (1) the provision was not part of the permit you were previously covered under (OHR100000, OHC000002 and OHC000003), and (2) because you are prevented from compliance due to the nature or location of earth disturbances that commenced prior to the effective date of this permit, you shall include documentation within your SWP3 of the reasons why it is infeasible for you to meet the specific requirement. (Note: Ohio EPA believes examples of OHC000004 permit conditions that would be infeasible for permittees renewing coverage to comply with include: (1) Post-Construction Storm Water Management requirements, if general permit coverage was obtained prior to April 21, 2003, and (2) Sediment settling pond design requirements, if the general permit coverage was obtained prior to the effective date of this permit and the sediment settling pond has been installed.)

C. SWP3 Signature and Review.

1. Plan Signature and Retention On-Site. The SWP3 shall include the certification in Part V.H, be signed in accordance with Part V.G., and be retained on site during working hours.
2. Plan Availability
 - a. On-site: The plan shall be made available immediately upon request of the director or his authorized representative and MS4 operators or their authorized representative during working hours. A copy of the NOI and letter granting permit coverage under this general permit also shall be made available at the site.
 - b. By written request: The permittee must provide the most recent copy of the SWP3 within 10 days upon written request by any of the following:
 - i. The director or the director's authorized representative;
 - ii. A local agency approving sediment and erosion plans, grading plans or storm water management plans; or
 - iii. In the case of a storm water discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system.
 - c. To the public: All NOIs, general permit approval for coverage letters, and SWP3s are considered reports that shall be available to the public in accordance with the Ohio Public Records law. The permittee shall make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, the permittee may claim to Ohio EPA any portion of an SWP3 as confidential in accordance with Ohio law.

3. Plan Revision. The director or authorized representative may notify the permittee at any time that the SWP3 does not meet one or more of the minimum requirements of this part. Within 10 days after such notification from the director or authorized representative (or as otherwise provided in the notification), the permittee shall make the required changes to the SWP3 and, if requested, shall submit to Ohio EPA the revised SWP3 or a written certification that the requested changes have been made.

D. Amendments

The permittee shall amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters of the state or if the SWP3 proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity. Amendments to the SWP3 may be reviewed by Ohio EPA in the same manner as Part III.C.

E. Duty to inform contractors and subcontractors

The permittee shall inform all contractors and subcontractors not otherwise defined as “operators” in Part VII of this general permit who will be involved in the implementation of the SWP3 of the terms and conditions of this general permit. The permittee shall maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document shall be created and signatures shall be obtained prior to commencement of work on the construction site.

F. Total Maximum Daily Load (TMDL) allocations

If a TMDL is approved for any waterbody into which the permittee’s site discharges and requires specific BMPs for construction sites, the director may require the permittee to revise his/her SWP3.

G. SWP3 Requirements

Operations that discharge storm water from construction activities are subject to the following requirements and the SWP3 shall include the following items:

1. Site description. Each SWP3 shall provide:
 - a. A description of the nature and type of the construction activity (e.g., low density residential, shopping mall, highway, etc.);
 - b. Total area of the site and the area of the site that is expected to be disturbed (i.e., grubbing, clearing, excavation, filling or grading, including off-site borrow areas);
 - c. An estimate of the impervious area and percent imperviousness created by the construction activity;

- d. A calculation of the runoff coefficients for both the pre-construction and post-construction site conditions;
- e. Existing data describing the soil and, if available, the quality of any discharge from the site;
- f. A description of prior land uses at the site;
- g. An implementation schedule which describes the sequence of major construction operations (i.e., designation of vegetative preservation areas, grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence;
- h. The name and/or location of the immediate receiving stream or surface water(s) and the first subsequent named receiving water(s) and the areal extent and description of wetlands or other special aquatic sites at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project. For discharges to an MS4, the point of discharge to the MS4 and the location where the MS4 ultimately discharges to a stream or surface water of the state shall be indicated;
- i. For subdivided developments where the SWP3 does not call for a centralized sediment control capable of controlling multiple individual lots, a detail drawing of a typical individual lot showing standard individual lot erosion and sediment control practices.

This does not remove the responsibility to designate specific erosion and sediment control practices in the SWP3 for critical areas such as steep slopes, stream banks, drainage ways and riparian zones;
- j. Location and description of any storm water discharges associated with dedicated asphalt and dedicated concrete plants covered by this permit and the best management practices to address pollutants in these storm water discharges;
- k. A copy of the permit requirements (attaching a copy of this permit is acceptable);
- l. A cover page or title identifying the name and location of the site, the name and contact information of all construction site operators, the name and contact information for the person responsible for authorizing and amending the SWP3, preparation date, and the estimated dates that construction will start and be complete;
- m. A log documenting grading and stabilization activities as well as amendments to the SWP3, which occur after construction activities commence; and
- n. Site map showing:

- i. Limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3;
 - ii. Soils types for all areas of the site, including locations of unstable or highly erodible soils;
 - iii. Existing and proposed contours. A delineation of drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres;
 - iv. Surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA;
 - v. Existing and planned locations of buildings, roads, parking facilities and utilities;
 - vi. The location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development;
 - vii. Sediment and storm water management basins noting their sediment settling volume and contributing drainage area. Ohio EPA recommends the use of data sheets (see ODNR's Rainwater and Land Development manual for examples) to provide data for all sediment traps, sediment basins and storm water management treatment practices noting important inputs to design and resulting parameters such as their contributing drainage area, disturbed area, water quality volume, sedimentation volume, practice surface area, facility discharge and dewatering time, outlet type and dimensions;
 - viii. The location of permanent storm water management practices to be used to control pollutants in storm water after construction operations have been completed;
 - ix. Areas designated for the storage or disposal of solid, sanitary and toxic wastes, including dumpster areas, areas designated for cement truck washout, and vehicle fueling;
 - x. The location of designated construction entrances where the vehicles will access the construction site; and
 - xi. The location of any in-stream activities including stream crossings.
2. Controls. In accordance with Part II.A, the SWP3 shall contain a description of the controls appropriate for each construction operation covered by this permit and the operator(s) shall implement such controls. The SWP3 shall clearly describe for each

major construction activity identified in Part III.G.1.g: (a) appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented; and (b) which contractor is responsible for implementation (e.g., contractor A will clear land and install perimeter controls and contractor B will maintain perimeter controls until final stabilization). The SWP3 shall identify the subcontractors engaged in activities that could impact storm water runoff. The SWP3 shall contain signatures from all of the identified subcontractors indicating that they have been informed and understand their roles and responsibilities in complying with the SWP3. Ohio EPA recommends that the primary site operator review the SWP3 with the primary contractor prior to commencement of construction activities and keep a SWP3 training log to demonstrate that this review has occurred.

Ohio EPA recommends that the erosion, sediment, and storm water management practices used to satisfy the conditions of this permit should meet the standards and specifications in the most current edition of Ohio's Rainwater and Land Development (see definitions) manual or other standards acceptable to Ohio EPA. The controls shall include the following minimum components:

- a. Non-Structural Preservation Methods. The SWP3 shall make use of practices which preserve the existing natural condition as much as feasible. Such practices may include: preserving existing vegetation and vegetative buffer strips, phasing of construction operations in order to minimize the amount of disturbed land at any one time and designation of tree preservation areas or other protective clearing or grubbing practices. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water.
- b. Erosion Control Practices. The SWP3 shall make use of erosion controls that are capable of providing cover over disturbed soils unless an exception is approved in accordance with Part III.G.4. A description of control practices designed to restabilize disturbed areas after grading or construction shall be included in the SWP3. The SWP3 shall provide specifications for stabilization of all disturbed areas of the site and provide guidance as to which method of stabilization will be employed for any time of the year. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances and the use of alternative ground cover.
 - i. **Stabilization.** Disturbed areas shall be stabilized in accordance with Table 1 (Permanent Stabilization) and Table 2 (Temporary Stabilization) in Part II.B of this permit.
 - ii. **Permanent stabilization of conveyance channels.** Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include seeding, dormant seeding (as defined in the most current edition of the Rainwater and Land Development manual), mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

- c. Runoff Control Practices. The SWP3 shall incorporate measures which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include rock check dams, pipe slope drains, diversions to direct flow away from exposed soils and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.
- d. Sediment Control Practices. The plan shall include a description of structural practices that shall store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days. Such practices may include, among others: sediment settling ponds, silt fences, earth diversion dikes or channels which direct runoff to a sediment settling pond and storm drain inlet protection. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond.

The SWP3 shall contain detail drawings for all structural practices.

- i. **Timing.** Sediment control structures shall be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers shall be implemented prior to grading and within seven days from the start of grubbing. They shall continue to function until the up slope development area is restabilized. As construction progresses and the topography is altered, appropriate controls shall be constructed or existing controls altered to address the changing drainage patterns.
- ii. **Sediment settling ponds.** A sediment settling pond is required for any one of the following conditions:
- Concentrated storm water runoff (e.g., storm sewer or ditch);
 - Runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers;
 - Runoff from drainage areas that exceed the design capacity of inlet protection; or
 - Runoff from common drainage locations with 10 or more acres of disturbed land.

The permittee may request approval from Ohio EPA to use alternative controls if the permittee can demonstrate the alternative controls are equivalent in effectiveness to a sediment settling pond.

In accordance with Part II.F, if feasible, sediment settling ponds shall be dewatered at the pond surface using a skimmer or equivalent device. The sediment settling pond volume consists of both a dewatering zone and a sediment storage zone. The volume of the dewatering zone shall

be a minimum of 1800 cubic feet (ft³) per acre of drainage (67 yd³/acre) with a minimum 48-hour drain time for sediment basins serving a drainage area over 5 acres. The volume of the sediment storage zone shall be calculated by one of the following methods:

Method 1: The volume of the sediment storage zone shall be 1000 ft³ per disturbed acre within the watershed of the basin. OR

Method 2: The volume of the sediment storage zone shall be the volume necessary to store the sediment as calculated with RUSLE or a similar generally accepted erosion prediction model.

The accumulated sediment shall be removed from the sediment storage zone once it's full. When determining the total contributing drainage area, off-site areas and areas which remain undisturbed by construction activity shall be included unless runoff from these areas is diverted away from the sediment settling pond and is not co-mingled with sediment-laden runoff. The depth of the dewatering zone shall be less than or equal to five feet. The configuration between inlets and the outlet of the basin shall provide at least two units of length for each one unit of width (> 2:1 length:width ratio); however, a length to width ratio of 4:1 is recommended. When designing sediment settling ponds, the permittee shall consider public safety, especially as it relates to children, as a design factor for the sediment basin and alternative sediment controls shall be used where site limitations would preclude a safe design. The use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal is encouraged.

- iii. **Silt Fence and Diversions.** Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area. This permit does not preclude the use of other sediment barriers designed to control sheet flow runoff. The relationship between the maximum drainage area to silt fence for a particular slope range is shown in the following table:

Silt Fence Maximum Drainage Area Based on Slope

Maximum drainage area (in acres) to 100 linear feet of silt fence	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	≥ 2% but < 20%
0.125	≥ 20% but < 50%

Placing silt fence in a parallel series does not extend the size of the drainage area. Storm water diversion practices shall be used to keep runoff away from disturbed areas and steep slopes where practicable. Such devices, which include swales, dikes or berms, may receive storm water runoff from areas up to 10 acres.

- iv. **Inlet Protection.** Other erosion and sediment control practices shall minimize sediment laden water entering active storm drain systems, unless the storm drain system drains to a sediment settling pond. All inlets receiving runoff from drainage areas of one or more acres will require a sediment settling pond.
- v. **Surface Waters of the State Protection.** If construction activities disturb areas adjacent to surface waters of the state, structural practices shall be designed and implemented on site to protect all adjacent surface waters of the state from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) shall be used in a surface water of the state. For all construction activities immediately adjacent to surface waters of the state, the permittee shall comply with the buffer non-numeric effluent limitation in Part II.A.6, as measured from the ordinary high water mark of the surface water. Where impacts within this buffer area are unavoidable, due to the nature of the construction (e.g., stream crossings for roads or utilities), the project shall be designed such that the number of stream crossings and the width of the disturbance within the buffer area are minimized.
- vi. **Modifying Controls.** If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, the permittee shall replace or modify the control for site conditions.
- e. **Post-Construction Storm Water Management Requirements.** So that receiving stream's physical, chemical and biological characteristics are protected and stream functions are maintained, post-construction storm water practices shall provide perpetual management of runoff quality and quantity. To meet the post-construction requirements of this permit, the SWP3 shall contain a description of the post-construction BMPs that will be installed during construction for the site and the rationale for their selection. The rationale shall address the anticipated impacts on the channel and floodplain morphology, hydrology, and water quality. Post-construction BMPs cannot be installed within a surface water of the state (e.g., wetland or stream) unless it's authorized by a CWA 401 water quality certification, CWA 404 permit, or Ohio EPA non-jurisdictional wetland/stream program approval. Note: localities may have more stringent post-construction requirements.

Detail drawings and maintenance plans shall be provided for all post-construction BMPs. Maintenance plans shall be provided by the permittee to the post-construction operator of the site (including homeowner associations) upon completion of construction activities (prior to termination of permit coverage). For sites located within a community with a regulated municipal separate storm sewer system (MS4), the permittee, land owner, or other entity with legal control of the property may be required to develop and implement a maintenance plan to comply with the requirements of the MS4. Maintenance plans shall ensure that pollutants collected within structural post-construction practices, be disposed of in accordance with local, state, and federal regulations. To ensure that storm water management systems function as they were designed and constructed, the post-construction operation and maintenance plan shall be a stand-alone

document, which contains: (1) a designated entity for storm water inspection and maintenance responsibilities; (2) the routine and non-routine maintenance tasks to be undertaken; (3) a schedule for inspection and maintenance; (4) any necessary legally binding maintenance easements and agreements; and (5) a map showing all access and maintenance easements. Permittees are not responsible under this permit for operation and maintenance of post-construction practices once coverage under this permit is terminated.

Post-construction storm water BMPs that discharge pollutants from point sources once construction is completed, may in themselves, need authorization under a separate NPDES permit (one example is storm water discharges from regulated industrial sites).

Construction activities that do not include the installation of any impervious surface (e.g., soccer fields), abandoned mine land reclamation activities regulated by the Ohio Department of Natural Resources, stream and wetland restoration activities, and wetland mitigation activities are not required to comply with the conditions of Part III.G.2.e of this permit. Linear construction projects, (e.g., pipeline or utility line installation), which do not result in the installation of additional impervious surface, are not required to comply with the conditions of Part III.G.2.e of this permit. However, linear construction projects shall be designed to minimize the number of stream crossings and the width of disturbance and achieve final stabilization of the disturbed area as defined in Part VII.J.1.

Large Construction Activities. For all large construction activities (involving the disturbance of five or more acres of land or will disturb less than five acres, but is a part of a larger common plan of development or sale which will disturb five or more acres of land), the post construction BMP(s) chosen shall be able to detain storm water runoff for protection of the stream channels, stream erosion control, and improved water quality. The BMP(s) chosen must be compatible with site and soil conditions. Structural post-construction storm water treatment practices shall be incorporated into the permanent drainage system for the site. The BMP(s) chosen must be sized to treat the water quality volume (WQ_v) and ensure compliance with Ohio's Water Quality Standards in OAC Chapter 3745-1. The WQ_v shall be equivalent to the volume of runoff from a 0.75-inch rainfall and shall be determined according to the following equation:

$$WQ_v = C * P * A / 12$$

where:

WQ_v = water quality volume in acre-feet

C = runoff coefficient appropriate for storms less than 1 inch

(Either use the following formula: $C = 0.858i^3 - 0.78i^2 + 0.774i + 0.04$,

where i = fraction of post-construction impervious surface or use Table 1)

P = 0.75 inch precipitation depth

A = area draining into the BMP in acres

Table 1
Runoff Coefficients Based on the Type of Land Use

Land Use	Runoff Coefficient
Industrial & Commercial	0.8
High Density Residential (>8 dwellings/acre)	0.5
Medium Density Residential (4 to 8 dwellings/acre)	0.4
Low Density Residential (<4 dwellings/acre)	0.3
Open Space and Recreational Areas	0.2

Where the land use will be mixed, the runoff coefficient should be calculated using a weighted average. For example, if 60% of the contributing drainage area to the storm water treatment structure is Low Density Residential, 30% is High Density Residential, and 10% is Open Space, the runoff coefficient is calculated as follows $(0.6)(0.3) + (0.3)(0.5) + (0.1)(0.2) = 0.35$.

An additional volume equal to 20 percent of the WQ_v shall be incorporated into the BMP for sediment storage. Ohio EPA recommends that BMPs be designed according to the methodology included in the most current edition of the Rainwater and Land Development manual or in another design manual acceptable for use by Ohio EPA.

The BMPs listed in Table 2 below shall be considered standard BMPs approved for general use. However communities with a regulated MS4 may limit the use of some of these BMPs. BMPs shall be designed such that the drain time is long enough to provide treatment, but short enough to provide storage for successive rainfall events and avoid the creation of nuisance conditions. The outlet structure for the post-construction BMP shall not discharge more than the first half of the WQ_v or extended detention volume (EDv) in less than one-third of the drain time. The EDv is the volume of storm water runoff that must be detained by a structural post-construction BMP. The EDv is equal to 75 percent of the WQ_v for wet extended detention basins, but is equal to the WQ_v for all other BMPs listed in Table 2.

Table 2
Structural Post-Construction BMPs & Associated
Drain (Drawdown) Times

Best Management Practice	Drain Time of WQv
Infiltration Basin or Trench ¹	48 hours
Permeable Pavement – Infiltration ¹	48 hours
Permeable Pavement – Extended Detention	24 hours
Dry Extended Detention Basin ²	48 hours
Wet Extended Detention Basin ³	24 hours
Constructed Wetland (above permanent pool) ⁴	24 hours
Sand & Other Media Filtration ⁵	24 hours
Bioretention Area/Cell ^{5,6}	24 hours
Pocket Wetland ⁷	24 hours

¹ Practices that are designed to fully infiltrate the WQv (basin, trench, permeable pavement) shall empty within 48 hours to provide storage for the subsequent storm events.

² Dry basins must include forebay and micropool each sized at 10% of the WQv.

³ Provide both a permanent pool and an EDv above the permanent pool, each sized at 0.75 WQv.

⁴ Extended detention shall be provided for the WQv above the permanent water pool.

⁵ The surface ponding area (WQv) shall completely empty within 24 hours so that there is no standing water. Shorter drawdown times are acceptable as long as design criteria in Ohio's Rainwater and Land Development manual have been met.

⁶ This would include Grassed Linear Bioretention which was previously called Enhanced Water Quality Swale.

⁷ Pocket wetlands must have a wet pool equal to the WQv, with 25% of the WQv in a pool and 75% in marshes. The EDv above the permanent pool must be equal to the WQv.

The permittee may request approval from Ohio EPA to use alternative structural post-construction BMPs if the permittee can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 2 above.

Construction activities shall be exempt from this condition if it can be demonstrated that the WQv is provided within an existing structural post-construction BMP that is part of a larger common plan of development or if structural post-construction BMPs are addressed in a regional or local storm water management plan. A municipally operated regional storm water BMP can be used as a post-construction BMP provided that the BMP can detain the WQv from its entire drainage area and release it over a 24 hour period.

Transportation Projects. The construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, or villages) may implement post-construction BMPs in compliance with the current version (as of the effective date of this permit) of the Ohio Department of Transportation's "Location and Design Manual, Volume Two Drainage Design" that has been accepted by Ohio EPA as an alternative to the conditions of this permit.

Offsite Mitigation of Post-Construction. Ohio EPA may authorize the offsite mitigation of the post-construction requirements of Part III.G.2.e of this permit on a case by case basis provided the permittee clearly demonstrates the BMPs listed in Table 2 are not feasible and the following criteria is met: (1) a maintenance agreement or policy is established to ensure operations and treatment in perpetuity; (2) the offsite location discharges to the same HUC-14 watershed unit; and (3) the mitigation ratio of the WQv is 1.5 to 1 or the WQv at the point of retrofit, whichever is greater. Requests for offsite mitigation must be received prior to receipt of the NOI applications.

Redevelopment Projects Sites that have been previously developed where no post-construction BMPs were installed shall either ensure a 20 percent net reduction of the site impervious area, provide for treatment of at least 20 percent of the WQv, or a combination of the two. A one-for-one credit towards the 20 percent net reduction of impervious area can be obtained through the use of green roofs. Where projects are a combination of new development and redevelopment, the total WQv that must be treated shall be calculated by a weighted average based on acreage, with the new development at 100 percent WQv and redevelopment at 20 percent WQv.

Non-Structural Post-Construction BMPs The size of the structural post-construction can be reduced by incorporating non-structural post-construction BMPs into the design. Practices such as preserving open space will reduce the runoff coefficient and, thus, the WQv. Ohio EPA encourages the implementation of riparian and wetland setbacks. Practices which reduce storm water runoff include green roofs, rain barrels, conservation development, smart growth, low-impact development, and other site design techniques. For examples, see the Ohio Lake Erie Commission's Balanced Growth Program at <http://balancedgrowth.ohio.gov/>.

In order to promote the implementation of such practices, the Director may consider the use of non-structural practices to demonstrate compliance with Part III.G.2.e of this permit for areas of the site not draining into a common drainage system of the site, i.e., sheet flow from perimeter areas such as the rear yards of residential lots, for low density development scenarios, or where the permittee can demonstrate that the intent of pollutant removal and stream protection, as required in Part III.G.2.e of this permit is being addressed through non-structural post-construction BMPs based upon review and approval by Ohio EPA.

Use of Alternative Post-Construction BMPs This permit does not preclude the use of innovative or experimental post-construction storm water management technologies. However, the Director may require these practices to be tested using the protocol outlined in the Technology Acceptance Reciprocity Partnership's (TARP) Protocol for Stormwater Best Management Practice Demonstrations or other approvable protocol. For guidance, see the following:

- <http://www.njstormwater.org>
- <http://www.mastep.net/>

The Director may require discharges from such structures to be monitored to ensure compliance with Part III.G.2.e of this permit. Permittees shall request

approval from Ohio EPA to use alternative post-construction BMPs if the permittee can demonstrate that the alternative BMPs are equivalent in effectiveness to those listed in Table 2 above. To demonstrate this equivalency, the permittee shall show that the alternative BMP has a minimum total suspended solids (TSS) removal efficiency of 80 percent under both laboratory and field conditions. Tests shall be conducted by an independent, third party tester. Also, the WQv discharge rate from the practice shall be reduced to prevent stream bed erosion and protect the physical and biological stream integrity unless there will be negligible hydrological impact to the receiving surface water of the state. The discharges will have a negligible impact if the permittee can demonstrate that one of the following four conditions exist:

- i. The entire WQv is recharged to groundwater;
- ii. The larger common plan of development or sale will create less than one acre of impervious surface;
- iii. The project is a redevelopment project within an ultra-urban setting (i.e., a downtown area or on a site where 100 percent of the project area is already impervious surface and the storm water discharge is directed into an existing storm sewer system); or
- iv. The storm water drainage system of the development discharges directly into a large river (fourth order or greater) or to a lake and where the development area is less than 5 percent of the watershed area upstream of the development site, unless a TMDL identified water quality problems into the receiving surface waters of the state.

The Director shall only consider the use of alternative BMPs on projects where the permittee can demonstrate that the implementation of the BMPs listed in Table 2 is infeasible due to physical site constraints that prevent the ability to provide functional BMP design. Alternative practices may include, but are not limited to, underground detention structures, vegetated swales and vegetated filter strips designed using water quality flow, natural depressions, rain barrels, green roofs, rain gardens, catch basin inserts, and hydrodynamics separators. The Director may also consider non-structural post-construction approaches where no local requirements for such practices exist.

Small Construction Activities For all small land disturbance activities (which disturb one or more, but less than five acres of land and is not a part of a larger common plan of development or sale which will disturb five or more acres of land), a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed must be included in the SWP3. Structural measures should be placed on upland soils to the degree attainable. Such practices may include, but are not limited to: storm water detention structures (including wet basins); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems (which combine several practices). The SWP3 shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels.

- f. Surface Water Protection. If the project site contains any streams, rivers, lakes, wetlands or other surface waters, certain construction activities at the site may be regulated under the CWA and/or state isolated wetland permit requirements. Sections 404 and 401 of the Act regulate the discharge of dredged or fill material into surface waters and the impacts of such activities on water quality, respectively. Construction activities in surface waters which may be subject to CWA regulation and/or state isolated wetland permit requirements include, but are not limited to: sewer line crossings, grading, backfilling or culverting streams, filling wetlands, road and utility line construction, bridge installation and installation of flow control structures. If the project contains streams, rivers, lakes or wetlands or possible wetlands, the permittee shall contact the appropriate U.S. Army Corps of Engineers District Office. (CAUTION: Any area of seasonally wet hydric soil is a potential wetland - please consult the Soil Survey and list of hydric soils for your County, available at your county's Soil and Water Conservation District. If you have any questions about Section 401 water quality certification, please contact the Ohio Environmental Protection Agency, Section 401 Coordinator.)

U.S. Army Corps of Engineers (Section 404 regulation):

- Huntington, WV District (304) 399-5210 (Muskingum River, Hocking River, Scioto River, Little Miami River, and Great Miami River Basins)
- Buffalo, NY District (716) 879-4330 (Lake Erie Basin)
- Pittsburgh, PA District (412) 395-7155 (Mahoning River Basin)
- Louisville, KY District (502) 315-6686 (Ohio River)

Ohio EPA 401/404 and non-jurisdictional stream/wetland coordinator can be contacted at (614) 644-2001 (all of Ohio)

Concentrated storm water runoff from BMPs to natural wetlands shall be converted to diffuse flow before the runoff enters the wetlands. The flow should be released such that no erosion occurs downslope. Level spreaders may need to be placed in series, particularly on steep sloped sites, to ensure non-erosive velocities. Other structural BMPs may be used between storm water features and natural wetlands, in order to protect the natural hydrology, hydroperiod, and wetland flora. If the applicant proposes to discharge to natural wetlands, a hydrologic analysis shall be performed. The applicant shall attempt to match the pre-development hydroperiods and hydrodynamics that support the wetland. The applicant shall assess whether their construction activity will adversely impact the hydrologic flora and fauna of the wetland. Practices such as vegetative buffers, infiltration basins, conservation of forest cover, and the preservation of intermittent streams, depressions, and drainage corridors may be used to maintain wetland hydrology.

- g. Other controls.

- i. **Non-Sediment Pollutant Controls.** In accordance with Part II.E, no solid (other than sediment) or liquid waste, including building materials, shall be discharged in storm water runoff. The permittee must implement all necessary BMPs to prevent the discharge of non-sediment pollutants to the drainage system of the site or surface waters of the state. Under

no circumstance shall wastewater from the washout of concrete trucks, stucco, paint, form release oils, curing compounds, and other construction materials be discharged directly into a drainage channel, storm sewer or surface waters of the state. Also, no pollutants from vehicle fuel, oils, or other vehicle fluids can be discharged to surface waters of the state. No exposure of storm water to waste materials is recommended. The SWP3 must include methods to minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, and sanitary waste to precipitation, storm water runoff, and snow melt. In accordance with Part II.D.3, the SWP3 shall include measures to prevent and respond to chemical spills and leaks. You may also reference the existence of other plans (i.e., Spill Prevention Control and Countermeasure (SPCC) plans, spill control programs, Safety Response Plans, etc.) provided that such plan addresses conditions of this permit condition and a copy of such plan is maintained on site.

- ii. **Off-site traffic.** Off-site vehicle tracking of sediments and dust generation shall be minimized. In accordance with Part II.D.1, the SWP3 shall include methods to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. No detergents may be used to wash vehicles. Wash waters shall be treated in a sediment basin or alternative control that provides equivalent treatment prior to discharge.
- iii. **Compliance with other requirements.** The SWP3 shall be consistent with applicable State and/or local waste disposal, sanitary sewer or septic system regulations, including provisions prohibiting waste disposal by open burning and shall provide for the proper disposal of contaminated soils to the extent these are located within the permitted area.
- iv. **Trench and ground water control.** In accordance with Part II.C, there shall be no turbid discharges to surface waters of the state resulting from dewatering activities. If trench or ground water contains sediment, it shall pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag or comparable practice. Ground water which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging ground water to ensure that it does not become pollutant-laden by traversing over disturbed soils or other pollutant sources.
- v. **Contaminated Sediment.** Where construction activities are to occur on sites with contamination from previous activities, operators shall be aware that concentrations of materials that meet other criteria (is not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in storm water discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized by this permit. Appropriate BMPs include, but are not limited to:

- The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges;
- Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility; and
- Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material.

Operators should consult with Ohio EPA Division of Surface Water prior to seeking permit coverage.

- h. Maintenance. All temporary and permanent control practices shall be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control practices must be maintained in a functional condition until all up slope areas they control are permanently stabilized. The SWP3 shall be designed to minimize maintenance requirements. The applicant shall provide a description of maintenance procedures needed to ensure the continued performance of control practices.
- i. Inspections. At a minimum, procedures in an SWP3 shall provide that all controls on the site are inspected at least once every seven calendar days and within 24 hours after any storm event greater than one-half inch of rain per 24 hour period. The inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized or runoff is unlikely due to weather conditions (e.g., site is covered with snow, ice, or the ground is frozen). A waiver of inspection requirements is available until one month before thawing conditions are expected to result in a discharge if all of the following conditions are met: the project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month); land disturbance activities have been suspended; and the beginning and ending dates of the waiver period are documented in the SWP3. Once a definable area is finally stabilized, the area may be marked on the SWP3 and no further inspection requirements apply to that portion of the site. The permittee shall assign "qualified inspection personnel" to conduct these inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule proposed in Part III.G.1.g of this permit or whether additional control measures are required.

Following each inspection, a checklist must be completed and signed by the qualified inspection personnel representative. At a minimum, the inspection report shall include:

- i. the inspection date;
- ii. names, titles, and qualifications of personnel making the inspection;
- iii. weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
- iv. weather information and a description of any discharges occurring at the time of the inspection;

- v. location(s) of discharges of sediment or other pollutants from the site;
- vi. location(s) of BMPs that need to be maintained;
- vii. location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
- viii. location(s) where additional BMPs are needed that did not exist at the time of inspection; and
- ix. corrective action required including any changes to the SWP3 necessary and implementation dates.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of or the potential for pollutants entering the drainage system. Erosion and sediment control measures identified in the SWP3 shall be observed to ensure that those are operating correctly. Discharge locations shall be inspected to ascertain whether erosion and sediment control measures are effective in preventing significant impacts to the receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site vehicle tracking.

The permittee shall maintain for three years following the submittal of a notice of termination form, a record summarizing the results of the inspection, names(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWP3 and a certification as to whether the facility is in compliance with the SWP3 and the permit and identify any incidents of non-compliance. The record and certification shall be signed in accordance with Part V.G. of this permit.

- i. **When practices require repair or maintenance.** If the inspection reveals that a control practice is in need of repair or maintenance, with the exception of a sediment settling pond, it shall be repaired or maintained within 3 days of the inspection. Sediment settling ponds shall be repaired or maintained within 10 days of the inspection.
- ii. **When practices fail to provide their intended function.** If the inspection reveals that a control practice fails to perform its intended function and that another, more appropriate control practice is required, the SWP3 shall be amended and the new control practice shall be installed within 10 days of the inspection.
- iii. **When practices depicted on the SWP3 are not installed.** If the inspection reveals that a control practice has not been implemented in accordance with the schedule contained in Part III.G.1.g of this permit, the control practice shall be implemented within 10 days from the date of the inspection. If the inspection reveals that the planned control practice is not needed, the record shall contain a statement of explanation as to why the control practice is not needed.

- 3. Approved State or local plans. All dischargers regulated under this general permit must comply, except those exempted under state law, with the lawful requirements of municipalities, counties and other local agencies regarding discharges of storm water from construction activities. All erosion and sediment control plans and storm water

management plans approved by local officials shall be retained with the SWP3 prepared in accordance with this permit. Applicable requirements for erosion and sediment control and storm water management approved by local officials are, upon submittal of a NOI form, incorporated by reference and enforceable under this permit even if they are not specifically included in an SWP3 required under this permit. When the project is located within the jurisdiction of a regulated municipal separate storm sewer system (MS4), the permittee shall certify that the SWP3 complies with the requirements of the storm water management program of the MS4 operator.

4. Exceptions. If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this permit or site specific conditions are such that implementation of any erosion and sediment control practices contained in this permit will result in no environmental benefit, then the permittee shall provide justification for rejecting each practice based on site conditions. Exceptions from implementing the erosion and sediment control standards contained in this permit will be approved or denied on a case-by-case basis.

The permittee may request approval from Ohio EPA to use alternative methods to satisfy conditions in this permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

PART IV. NOTICE OF TERMINATION REQUIREMENTS

A. Failure to notify.

The terms and conditions of this permit shall remain in effect until a signed Notice of Termination (NOT) form is submitted. Failure to submit an NOT constitutes a violation of this permit and may affect the ability of the permittee to obtain general permit coverage in the future.

B. When to submit an NOT.

1. Permittees wishing to terminate coverage under this permit shall submit an NOT form in accordance with Part V.G. of this permit. Compliance with this permit is required until an NOT form is submitted. The permittee's authorization to discharge under this permit terminates at midnight of the day the NOT form is submitted. Prior to submitting the NOT form, the permittee shall conduct a site inspection in accordance with Part III.G.2.i of this permit and have a maintenance agreement in place to ensure all post-construction BMPs will be maintained in perpetuity.
2. All permittees shall submit an NOT form within 45 days of completing all permit requirements. Enforcement actions may be taken if a permittee submits an NOT form without meeting one or more of the following conditions:
 - a. Final stabilization (see definition in Part VII) has been achieved on all portions of the site for which the permittee is responsible (including, if applicable, returning agricultural land to its pre-construction agricultural use);
 - b. Another operator(s) has assumed control over all areas of the site that have not been finally stabilized;

- c. For residential construction only, temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner. (Note: For individual lots without housing, which are sold by the developer, the individual lot permittee shall implement final stabilization prior to the individual lot permittee terminating permit coverage.); or
- d. An exception has been granted under Part III.G.4.

C. How to submit an NOT.

Permittees shall use Ohio EPA's approved NOT form. The form shall be completed and mailed according to the instructions and signed in accordance with Part V.G of this permit.

PART V. STANDARD PERMIT CONDITIONS.

A. Duty to comply.

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of ORC Chapter 6111 and is grounds for enforcement action.

Ohio law imposes penalties and fines for persons who knowingly make false statements or knowingly swear or affirm the truth of a false statement previously made.

B. Continuation of an expired general permit.

An expired general permit continues in force and effect until a new general permit is issued.

C. Need to halt or reduce activity not a defense.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to mitigate.

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Duty to provide information.

The permittee shall furnish to the director, within 10 days of written request, any information which the director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the director upon request copies of records required to be kept by this permit.

F. Other information.

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI, SWP3, NOT or in any other report to the director, he or she shall promptly submit such facts or information.

G. Signatory requirements.

All NOIs, NOTs, SWP3s, reports, certifications or information either submitted to the director or that this permit requires to be maintained by the permittee, shall be signed.

1. These items shall be signed as follows:
 - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or
 - ii. The manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
 - b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
 - c. For a municipality, State, Federal or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (1) the chief executive officer of the agency or (2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).
2. All reports required by the permits and other information requested by the director shall be signed by a person described in Part V.G.1 of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Part V.G.1 of this permit and submitted to the director;

- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator of a well or well field, superintendent, position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - c. The written authorization is submitted to the director.
3. Changes to authorization. If an authorization under Part V.G.2 of this permit is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part V.G.2 of this permit must be submitted to the director prior to or together with any reports, information or applications to be signed by an authorized representative.

H. Certification.

Any person signing documents under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

I. Oil and hazardous substance liability.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under section 311 of the CWA or 40 CFR Part 112. 40 CFR Part 112 establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable surface waters of the state or adjoining shorelines.

J. Property rights.

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

K. Severability.

The provisions of this permit are severable and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

L. Transfers.

Ohio NPDES general permit coverage is transferable. Ohio EPA must be notified in writing sixty days prior to any proposed transfer of coverage under an Ohio NPDES general permit. The transferee must inform Ohio EPA it will assume the responsibilities of the original permittee transferor.

M. Environmental laws.

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

N. Proper operation and maintenance.

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of SWP3s. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee only when necessary to achieve compliance with the conditions of the permit.

O. Inspection and entry.

The permittee shall allow the director or an authorized representative of Ohio EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment); and
4. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

P. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

Q. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

R. Bypass

The provisions of 40 CFR Section 122.41(m), relating to "Bypass," are specifically incorporated herein by reference in their entirety. For definition of "Bypass," see Part VII.C.

S. Upset

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "Upset," see Part VII.GG.

T. Monitoring and Records

The provisions of 40 CFR Section 122.41(j), relating to "Monitoring and Records," are specifically incorporated herein by reference in their entirety.

U. Reporting Requirements

The provisions of 40 CFR Section 122.41(l), relating to "Reporting Requirements," are specifically incorporated herein by reference in their entirety.

PART VI. REOPENER CLAUSE

If there is evidence indicating potential or realized impacts on water quality due to any storm water discharge associated with construction activity covered by this permit, the permittee of such discharge may be required to obtain coverage under an individual permit or an alternative general permit in accordance with Part I.C of this permit or the permit may be modified to include different limitations and/or requirements.

Permit modification or revocation will be conducted according to ORC Chapter 6111.

PART VII. DEFINITIONS

- A. "Act" means Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117 and Pub. L. 100-4, 33 U.S.C. 1251 et. seq.
- B. "Best management practices (BMPs)" means schedules of activities, prohibitions of practices, maintenance procedures and other management practices (both structural and non-structural) to prevent or reduce the pollution of surface waters of the state. BMP's also include treatment requirements, operating procedures and practices to control plant and/or construction site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.
- C. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- D. "Commencement of construction" means the initial disturbance of soils associated with clearing, grubbing, grading, placement of fill, or excavating activities or other construction activities.

- E. “Concentrated storm water runoff” means any storm water runoff which flows through a drainage pipe, ditch, diversion or other discrete conveyance channel.
- F. “Director” means the director of the Ohio Environmental Protection Agency.
- G. “Discharge” means the addition of any pollutant to the surface waters of the state from a point source.
- H. “Disturbance” means any clearing, grading, excavating, filling, or other alteration of land surface where natural or man-made cover is destroyed in a manner that exposes the underlying soils.
- I. “Drainage watershed” means for purposes of this permit the total contributing drainage area to a BMP, i.e., the “watershed” directed to the practice. This would also include any off-site drainage.
- J. “Final stabilization” means that either:
 - 1. All soil disturbing activities at the site are complete and a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover for the area has been established on all unpaved areas and areas not covered by permanent structures or equivalent stabilization measures (such as the use of mulches, rip-rap, gabions or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion; or
 - 2. For individual lots in residential construction by either:
 - a. The homebuilder completing final stabilization as specified above or
 - b. The homebuilder establishing temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for and benefits of, final stabilization. (Homeowners typically have an incentive to put in the landscaping functionally equivalent to final stabilization as quick as possible to keep mud out of their homes and off sidewalks and driveways.); or
 - 3. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were previously used for agricultural activities, such as buffer strips immediately adjacent to surface waters of the state and which are not being returned to their pre-construction agricultural use, must meet the final stabilization criteria in (1) or (2) above.
- K. “Individual Lot NOI” means a Notice of Intent for an individual lot to be covered by this permit (see Part I of this permit).

- L. "Larger common plan of development or sale"- means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan.
- M. "MS4" means municipal separate storm sewer system which means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains) that are:
1. Owned or operated by the federal government, state, municipality, township, county, district(s) or other public body (created by or pursuant to state or federal law) including special district under state law such as a sewer district, flood control district or drainage districts or similar entity or a designated and approved management agency under section 208 of the act that discharges into surface waters of the state; and
 2. Designed or used for collecting or conveying solely storm water,
 3. Which is not a combined sewer and
 4. Which is not a part of a publicly owned treatment works.
- N. "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits and enforcing pretreatment requirements, under sections 307, 402, 318 and 405 of the CWA. The term includes an "approved program."
- O. "NOI" means notice of intent to be covered by this permit.
- P. "NOT" means notice of termination.
- Q. "Operator" means any party associated with a construction project that meets either of the following two criteria:
1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
 2. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with an SWP3 for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).
- As set forth in Part I.F.1, there can be more than one operator at a site and under these circumstances, the operators shall be co-permittees.
- R. "Ordinary high water mark" means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
- S. "Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

- T. “Permanent stabilization” means the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one year.
- U. “Percent imperviousness” means the impervious area created divided by the total area of the project site.
- V. “Point source” means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or the floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.
- W. “Qualified inspection personnel” means a person knowledgeable in the principles and practice of erosion and sediment controls, who possesses the skills to assess all conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.
- X. “Rainwater and Land Development” is a manual describing construction and post-construction best management practices and associated specifications. A copy of the manual may be obtained by contacting the Ohio Department of Natural Resources, Division of Soil & Water Conservation.
- Y. “Riparian area” means the transition area between flowing water and terrestrial (land) ecosystems composed of trees, shrubs and surrounding vegetation which serve to stabilize erodible soil, improve both surface and ground water quality, increase stream shading and enhance wildlife habitat.
- Z. “Runoff coefficient” means the fraction of total rainfall that will appear at the conveyance as runoff.
- AA. “Sediment settling pond” means a sediment trap, sediment basin or permanent basin that has been temporarily modified for sediment control, as described in the latest edition of the Rainwater and Land Development manual.
- BB. “State isolated wetland permit requirements” means the requirements set forth in Sections 6111.02 through 6111.029 of the ORC.
- CC. “Storm water” means storm water runoff, snow melt and surface runoff and drainage.
- DD. “Steep slopes” means slopes that are 15 percent or greater in grade. Where a local government or industry technical manual has defined what is to be considered a “steep slope,” this permit’s definition automatically adopts that definition.
- EE. “Surface waters of the state” or “water bodies” means all streams, lakes, reservoirs, ponds, marshes, wetlands or other waterways which are situated wholly or partially within the boundaries of the state, except those private waters which do not combine or effect a junction with natural surface or underground waters. Waters defined as

sewerage systems, treatment works or disposal systems in Section 6111.01 of the ORC are not included.

- FF. "SWP3" means storm water pollution prevention plan.
- GG. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- HH. "Temporary stabilization" means the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.
- II. "Water Quality Volume (WQ_v)" means the volume of storm water runoff which must be captured and treated prior to discharge from the developed site after construction is complete. WQ_v is based on the expected runoff generated by the mean storm precipitation volume from post-construction site conditions at which rapidly diminishing returns in the number of runoff events captured begins to occur.

Appendix B-1

Notice of Intent (NOI) Instructions



Instructions - Notice of Intent (NOI) Application form
For Requesting Coverage Under An Ohio Environmental Protection
Agency General Permit

**** IMPORTANT ****

DO NOT COMPLETE THE NOI WITHOUT FIRST READING THESE INSTRUCTIONS.

What is a NOI Application Form?

NOI stands for Notice of Intent. It is a one-page application form to request initial coverage or to renew coverage under a general permit. The applicant must certify their intention to comply with a general permit by submitting a complete NOI. The application shall be submitted to Ohio EPA's Central Office.

Who Must File a NOI Application Form?

Any discharge of water, with certain exceptions for storm water, from a point source must be covered by a permit from Ohio EPA. Federal regulations at 40 CFR 122 and the Ohio Revised Code at section 6111.04 prohibit point source discharges to waters of the state without first obtaining a National Pollutant Discharge Elimination System (NPDES) permit. This includes point source discharges of storm water associated with industrial and construction activity and certain municipal separate storm sewer systems (MS4s).

There are two types of NPDES permits: 1) individual permits and 2) general permits. A facility with a discharge must apply for one of these permits using either this NOI application form (for general permit coverage, assuming a general permit exists for the type of discharge) **OR** Form 1 and the appropriate supplementary forms (for an individual permit, which can be written for any type of discharge). If a facility applies for coverage under a general permit, and if all of the eligibility requirements of the general permit are not met, the facility will be required to submit an application for an individual permit. If a facility is eligible to be covered under the general permit and has additional waste streams that are not covered by the general permit, it is preferred that all discharges be covered by one permit (i.e., the individual permit).

Each applicant must meet the requirements found in the general permits regarding eligibility and applicability. **Do not** submit the NOI application form unless you meet **all** of those requirements.

These instructions may be used for coverage under the following general permits. Please note that these names are shortened versions of the actual names on the general permits.

General Permit Authorization to Discharge:

1. Coal Surface Mining Activities
2. Construction Site Storm Water
3. Construction Site SW - Big Darby Cr Watershed
4. Construction Site SW - Olentangy R Watershed
5. Geothermal System Discharges
6. Hydrostatic Test Water
7. Marina Storm Water
8. Non-contact Cooling Water
9. Bulk Fuel Storage Facilities
10. Petroleum-related Corrective Actions

General Permit Number:

OHM000003
OHC000004
OHCD00002
OHCO00002
OHO000001
OHH000002
OHRM00002
OHN000004
OHB000002
OHU000005

11. Small MS4	OHQ000003
12. Small Sanitary Dischargers	OHS000004
13. Small Sanitary Dischargers (not BADCT)	OHV000003
14. Temporary Wastewater Discharges	OHT000002
15. Water Treatment Plants	OHW000003

Where to file NOI Application Form

NOIs must be sent to the following address:

Ohio Environmental Protection Agency
Office of Fiscal Administration
P.O. Box 1049
Columbus, OH 43216-1049

**** IMPORTANT ****

Responses must be typewritten or printed legibly in the spaces provided. NOIs transmitted by FAX will not be accepted. Incomplete NOI application forms, including those submitted without the application fee, will be returned to the applicant for resubmission.

Completing the Form

All responses must be type written or printed legibly in the appropriate areas only. Please place each character slightly above the appropriate line on the NOI application form. If necessary, abbreviate to stay within the space allowed for each item. Use only one space for breaks between words. If the requested information does not apply to your facility, leave it blank. Do not include any symbols or punctuation marks unless otherwise noted in these instructions. Each NOI application form must be accompanied by a check for payment of the proper application fee. **Be sure to read the instructions printed at the top of NOI application form before completing the form.**

I. Applicant Information/Mailing Address

Company Name: Fill in the legal name of the firm, person, public organization, or other entity that operates the facility or site described in this application. The name of the operator may or may not be the same as the facility. The company name is the name of the responsible party that is the legal entity that controls the facility's operation rather than the plant or site manager. For construction activities, the responsible party is the operator (e.g., owner or general contractor).

Mailing Address: Enter the complete mailing address; including street address, city, state, and zip code. The permit and any correspondence will be mailed to this address.

Contact Person: Give the name of a contact person who is responsible for addressing NPDES requirements.

Phone and Fax: Provide the contact person's phone and fax numbers as: area code exchange numbers.

E-Mail Address: Enter the contact person's e-mail address, if available.

II. Facility/Site Location Information

Facility Name: Enter the facility or site's official or legal name. The facility/site is the location of the operation and discharge to be covered by the general permit. Do not use a colloquial name.

Facility Address/Location: Do **NOT** enter P.O. Box numbers. Do **ONE** of the following:

1. Enter the facility's or site's complete physical address, including number and street, city/township, state, zip code, county, **OR**
2. If the facility lacks a street address, indicate the quarter, sections, county, township, and range (to the nearest quarter section) of the approximate center of the facility. If a site is located in more than one township and/or section, please list all townships/sections. The first listed township/section should be the one that contains the main entrance to the facility. (If there is not adequate space provided on the NOI form, please provide an additional sheet of paper with this information.)

Facility Contact Person: Give the name of the person who is responsible for the facility/site.

Phone and Fax: Provide facility contact person's phone and fax numbers as: area code exchange numbers.

Facility Contact E-mail Address: Provide the facility contact person's e-mail address, if available.

Latitude/Longitude: Construction Activities and Coal Surface Mining Operations must provide the latitude and longitude of their site on the NOI form. Your coordinates should be taken from the approximate center of the site. The latitude and longitude must be provided in decimal format (6 decimals) as indicated in the following example (i.e., Latitude: 39.958832, Longitude: -83.001022). These coordinates can be determined through the use of global positioning system (GPS) receivers and web-based tools. An example of a web-based tool to determine your site's latitude and longitude is Google Maps. Here are instructions for Google Maps:

1. Go to <http://maps.google.com>
2. Zoom the map to the location of your site.
3. Right-click on the map at the approximate center of your site.
4. Select "What's here?" from the context menu.
5. Left-click on the green arrow. The latitude and longitude of your site will be displayed in the box.

IN THE CASE OF CONSTRUCTION ACTIVITY, attach an 8 1/2" x 11" site map to each NOI. The map shall clearly show the location of the project with its perimeter outlined and existing adjacent identifiable roads. The perimeters of the project are the boundaries that ground disturbance will occur within and for which a storm water pollution prevention plan has been developed. Provide the facility contact person and project name on the map.

IN THE CASE OF COAL SURFACE MINING OPERATIONS, attach to NOIs an 8 1/2" x 11" site map [using 7.5 min. United States Geological Survey (USGS) topo map]; the map shall clearly show the affected area and location of treatment ponds with outfalls labeled 001, 002, etc. Also, the map shall indicate whether the ponds are existing or proposed. The map shall be labeled with its USGS topo map name. For proposed ponds at new mine sites, the NOI will serve as a Permit-to-Install application. USGS maps are available from:

1. Map Distribution, US Geological Survey, Building 41, Box 25286, Federal Center, Denver, Colorado 80225;
2. Their website at <http://mapping.usgs.gov>
3. By calling USGS at 1 (888) ASK-USGS
4. Commercial map dealers, which would be listed in the phone book; or
5. A public library.

Receiving Stream or MS4: If a facility discharges directly to receiving water(s), enter the name of the receiving water. If the initial receiving water(s) does not have a name, then write as "unnamed tributary to" first subsequent water that has a name. It is important that the name of the receiving water body where the discharge directly goes is listed. If a facility discharges to more than one receiving stream, list all receiving streams (if necessary, attach a separate sheet of paper). An MS4 is defined as "a conveyance that is owned or operated by a state, city, town, township, county, district, association, or other public entity that is designed or used for collecting or conveying storm water." If you discharge storm water to an MS4, then enter the name of the operator of the municipal separate storm sewer system (MS4) (e.g. municipality name, county name,...).

III. General Permit Information

General Permit Number: Enter the general permit number for which coverage is being sought (i.e. in the case of renewing coverage, do not use your current general permit number). The first two spaces of the number are "OH". Please refer to the above section entitled "Who Must File a NOI Form?" (front page of these instructions) for a list of general permit names and associated permit numbers or select the permit from the drop-down list on the form if available. Do not enter any number in this space other than the general permit number for which coverage is being sought.

Initial/Renewal Coverage: The NOI form may be submitted to initiate first-time coverage under a general permit or to continue coverage under a renewed general permit. Place an "X" in the appropriate space.

Type of Activity: Enter the title of the general permit for which you are applying for coverage. Please refer to the above section entitled "Who Must File a NOI Form?" for a list of general permits names and numbers or select an activity from the drop-down list on the form if available. Please note the names listed in that section are shortened versions of the actual names on the general permits.

1. Petroleum corrective actions: According to Part I.C.4. of this general permit, the applicant may request a waiver from the "limitations of coverage" if the applicant has an effluent monitoring requirement or limitation in their individual permit that is not in the applicable general permit. In order to request a waiver, enter "WAIVER REQUESTED" after the title of the general permit. Otherwise, as stated under Part I.C.2. of the permits, an applicant is not eligible for general permit coverage.

SIC Code(s): Industrial applicants must list (excluding construction activity storm water discharges), in descending order of significance, up to four 4-digit standard industrial classification (SIC) codes that best describe the principal product or services provided at the facility identified in Section II of this application. For storm water discharges defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi) that do not have SIC codes that accurately describe the principal products produced or services provided, leave the space blank. SIC code numbers may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget. This text may be found in a public library or may be ordered from the US Government Printing Office, 200 North High Street, Columbus, Ohio 43215, (614) 469-6955. Another source is the following website provided by the Occupational Health and Safety Administration:
<http://www.osha.gov/oshstats/sicser.html>

Existing NPDES Permit Number(s): If the facility identified in Section II of this application has ever been issued an individual NPDES permit and/or general permit coverage(s), enter the (facility specific) permit number(s) here. In the case of an individual NPDES permit, give the permit

number (e.g. 3IA00555*AD). In the case where general permit coverage is being renewed, it is *extremely important* to give the individual Ohio EPA general permit identification number assigned in the previous approval for coverage letter received from Ohio EPA. Examples of such numbers are: 0GQ009876 (Small MS4) and 0GN009876 (non-contact cooling water).

ODNR Coal Surface Mining Application Number: For coal surface mining activity general permit applicants only. Enter the Ohio Department of Natural Resources coal mining permit application number here. You must obtain this number from ODNR before submitting this application.

Outfall: This item does not apply to construction or small MS4 general permit applicants. List the numbers of the outfalls for which you desire permit coverage. Please enter the outfall numbers as three digits (e.g. 001, 002, etc.). If you have five or more outfalls, please list the additional outfalls on an additional sheet. An outfall is the point source discharge of wastewater leaving your site that will be entering a surface water body and does not enter a sewer system tributary to a publicly-owned sewage treatment plant. An outfall could be a pipe, ditch, channel, or other conveyance leaving your site.

Design Flow: This item does not apply to construction, small MS4, or coal surface mining general permit applicants. For the corresponding outfall, please indicate in million gallons per day (MGD) the average design flow of each outfall or each outfall's treatment system (e.g. 100,000 gallons per day (gpd) = 0.1 million gallons per day (MGD); in this case, enter 0.1 in the space provided). Facilities applying for coverage under the small sanitary general permit shall submit their design flow and an estimated sewage flow rate in gallons per day. The sewage flow rate should be estimated, using OAC 3745-42-05, and entered on the NOI form on the line directly underneath the design flow.

Effluent Table: This item does not apply to construction, small MS4, or coal surface mining general permit applicants. Select the appropriate effluent table for each outfall to be covered under the general permit. For example, applicants seeking coverage under the small sanitary general permit (OHS000003) for a non-lagoon sanitary discharge greater than 5,000 gallons per day to the Ohio River should select Table 002 – Non-lagoons, Ohio R. direct, flow 5,000 gpd or greater. See the list below or select a table from the drop-down list on the form if available.

OHB000002 – Table 001, Type A or Type B facilities	OHS000004 – Table 005, Non-lagoons, not Ohio R., flow 1-1,499 gpd
OHB000002 – Table 002, Type C facilities	OHS000004 – Table 006, Non-lagoons, Ohio R. direct, flow 1-1,499 gpd
OHH000002 – Table 001, Discharge from new/unused pipes & tanks	OHS000004 – Table 001, Continuous Discharge Lagoons
OHH000002 – Table 002, Discharge from used pipes & tanks	OHT000002 – Table 001
OHK000002 – Table A.1, Non-lake Erie dischargers	OHU000005 – Table 001, Low to medium hardness watersheds
OHK000002 – Table A.2, Lake Erie direct dischargers	OHU000005 – Table 002, Medium to high hardness watersheds
OHN000004 – Table 001, Flow 1-9,999 gpd	OHV000003 – Table 001
OHN000004 – Table 002, Flow 10,000 – 99,999 gpd	OHW000003 – Table 001, Plain Purification, Ohio R.
OHN000004 – Table 003, Flow 100,000 gpd or more	OHW000003 – Table 002, Plain Purification, non-Ohio R., low flow stream
OHO000001 – Table 001	OHW000003 – Table 003, Plain Purification, non-Ohio R., high flow
OHS000004 – Table 001, Non-lagoons, not Ohio R., flow 5,000 gpd or more	OHW000003 – Table 004, Lime-soda, low flow stream
OHS000004 – Table 002, Non-lagoons, Ohio R. direct, flow 5,000 gpd or more	OHW000003 – Table 005, Lime-soda, high flow stream
OHS000004 – Table 003, Non-lagoons, not Ohio R., flow 1,500-4,999 gpd	OHW000003 – Table 006, Iron & Manganese, low flow stream
OHS000004 – Table 004, Non-lagoons, Ohio R. direct, flow 1,500-4,999 gpd	OHW000003 – Table 007, Iron & Manganese, high flow stream

Latitude/Longitude: This item does not apply to construction or small MS4 general permit applicants. Please indicate the latitude and longitude of the point of discharge (outfall). Provide coordinates as: degrees minutes seconds using 2 digits in each space; e.g. latitude 40 15 35, longitude 80 41 22; do not use symbols. You can follow the instructions provided above (see “Section II. Facility/Site Location Information, Latitude/Longitude on p. 3 of these instructions) to determine your outfall’s coordinates.

Other DSW Permits Required: Identify other Division of Surface Water (DSW) permits that are either pending with DSW or for which you are aware that you need to apply for the facility/site identified on the NOI. This is of particular importance for construction storm water sites. For each type of permit (PTI, 401 Water Quality Certification, Isolated Wetland, Army Corps Nationwide, and Individual NPDES) indicate whether it's not applicable ("no") or applicable ("yes - approved", "yes - pending", "yes - yet to apply").

Project Start/Completion Dates: For construction activity and coal surface mining applicants, enter the project approximate start date and estimated completion date for the entire development plan or for final bond release. Provide dates as: month day year using two digits in each space (e.g. September 28, 1994 = 09 28 94); do not use symbols or letters. Applicants for coverage under the small sanitary discharge general permit should include the date that the facility commenced discharging in the space entitled "Project Start Date."

Total Land Disturbance (Acres): For construction activity and coal surface mining applicants only, provide an estimate of the total number of acres of land that will be disturbed during the life of the project. In the case of construction activity, the total area disturbed is to be addressed by the storm water pollution prevention plan which is to have been developed by the time the NOI is submitted to Ohio EPA. Disturbed land is land in which vegetation has been cleared and soils are exposed to storm water.

MS4 Drainage Area (square miles): For MS4 general permit applicants only, provide, in square miles, the area served by the MS4. This information will be used to determine an MS4 operator's annual discharge fee (which will be due annually starting January 30, 2004). The fee is \$100 per square mile of MS4 permitted with a maximum fee of \$10,000 [per Ohio Revised Code 3745.11(L)(6)]. Ohio will send an annual notification regarding an MS4's specific fee prior to it being due.

IV. Payment Information

A check made payable to "Treasurer, State of Ohio" must accompany all NOI applications. The check number, check amount, and check date must be on the NOI to ensure complete processing. Provide dates as: month day year using two digits in each space (e.g. September 28, 1994 = 09 28 94); do not use symbols. For the appropriate NOI application fee, see Attachment B below.

Certification

Type or print the name and title of the person who will sign the form. Next, sign and date the form. Federal and State statutes provide for severe penalties for submitting false information on this application form. In the case of co-permittees, attach a separate sheet of paper re-stating then NOI certification statement and each co-permittee is to provide the individual's name, title, name of the entity represented, signature, and date. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or (2) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit

application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: by a general partner or the proprietor; respectively, or

For a municipality, state, or other public facility: by either a principal executive officer, the ranking elected official, or other duly authorized employee.

For facilities applying for coverage under the Small Sanitary General permit attach, on a separate sheet of paper, a list of the parameters and limits included in the existing individual NPDES permit. Also, indicate the type of treatment used at the facility (extended aeration, lagoon (controlled or continuous discharge) etc.) and whether or not the facility has a requirement to be under the supervision of a certified operator.

Facilities applying for coverage under either small MS4 general permit are required to submit the original NOI and a copy of their storm water management program (SWMP) to Ohio EPA's Central Office, Office of Fiscal Administration, P.O. Box 1049, Columbus, Ohio 43216- 1049 and a copy of the NOI and SWMP to the Ohio EPA at the appropriate district office, DSW - Storm Water (see page 8 for the appropriate district office and mailing address).

Operators applying for coverage under the Construction Activity Located within the Big Darby Creek Watershed general permit (OHCD00002) or Construction Activity Located within Portions of the Olentangy River Watershed general permit (OHCO00002) are required to include a copy of their storm water pollution prevention plan (SWPPP) with NOI submittal for approval at least 45 days prior to the commencement of construction activity.



CDO Central District Office
50 West Town Street, Suite 700
Columbus, Ohio 43215
(614) 728-3778

SEDO Southeast District Office
2195 Front Street
Logan, Ohio 43138
(740) 385-8501

NEDO Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087
(330) 963-1200

SWDO Southwest District Office
401 East Fifth Street
Dayton, Ohio 45402
(937) 285-6357

NWDO Northwest District Office 347
North Dunbridge Road
Bowling Green, Ohio 43402
(419) 352-8461

Attachment B

As of July 1, 2001, the industrial storm water NOI fee is \$350. All construction storm water NOI fee is \$200 plus \$20 per whole disturbed acre (do not round-up) above 5 whole acres, with a maximum disturbed acreage fee of \$300. Under this fee schedule, site with twenty or more disturbed acres would pay the maximum fee of \$500. These fees can be found in paragraph (S)(1) of Ohio Revised Code (ORC) Section 3745.11.

GENERAL PERMIT NOI FEES					
Industrial Storm Water NOI			Total Fee Due = \$350.00		
Marina Storm Water			Total Fee Due = \$350.00		
All Construction Storm Water NOI Fees					
	Disturbed Acreage	Base Fee	Additional Acreage Fee	Total Fee Due	
	1 - 5.99 acres	\$200	\$0	\$200	
	6 - 6.99 acres	200	20	220	
	7 - 7.99 acres	200	40	240	
	8 - 8.99 acres	200	60	260	
	9 - 9.99 acres	200	80	280	
	10 - 10.99 acres	200	100	300	
	11 - 11.99 acres	200	120	320	
	12 - 12.99 acres	200	140	340	
	13 - 13.99 acres	200	160	360	
	14 - 14.99 acres	200	180	380	
	15 - 15.99 acres	200	200	400	
	16 - 16.99 acres	200	220	420	
	17 - 17.99 acres	200	240	440	
	18 - 18.99 acres	200	260	460	
	19 - 19.99 acres	200	280	480	
	20 acres and up	200	300	500	MAXIMUM FEE
All other NOIs			Total Fee Due = \$200.00		

Appendix B-2

Notice of Intent (NOI) Form and Supplemental Documentation



Division of Surface Water - Notice of Intent (NOI) For Coverage Under Ohio Environmental Protection Agency General NPDES Permit

(Read accompanying instructions carefully before completing this form.)

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized to discharge into state surface waters under Ohio EPA's NPDES general permit program. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. Complete all required information as indicated by the instructions. Do not use correction fluid on this form. Forms transmitted by fax will not be accepted. A check for the proper amount must accompany this form and be made payable to "Treasurer, State of Ohio." (See the fee table in Attachment C of the NOI instructions for the appropriate processing fee.)

I. Applicant Information/Mailing Address

Company (Applicant) Name: Hardin Wind Energy LLC

Mailing (Applicant) Address: One South Wacker Drive; Suite 1800

City: Chicago

State: IL

Zip Code: 60606

Contact Person: Raquel Justa (behalf of B. Schueler)

Phone: 312-638-8479

Fax: 321-506-1455

Contact E-mail Address: RJusta@inveneryllc.com

II. Facility/Site Location Information

Facility Name: Hardin Wind Energy LLC

Facility Address/Location: see attached Site Location Table

City: na

State: Ohio

Zip Code: Click here.

County(ies): Hardin

Township(s): Click here to enter text.

Facility Contact Person: Raquel Justa

Phone: 312-638-8479

Fax: 321-506-1455

Facility Contact E-mail Address: RJusta@inveneryllc.com

(For Construction & Coal, must complete lat/long & attach map)

Latitude: 41.158567°

Longitude: -90.296145°

Receiving Stream or MS4: na

III. General Permit Information

General Permit Number: OHC000004 Construction Storm Water

Initial Coverage: ☒ Renewal Coverage: ☐

Type of Activity: All Construction Storm Water - 14 to 14.99 acres
disturbed Fee = \$380

SIC Code(s): Click here to enter text.

Existing NPDES Permit Number:

ODNR Coal Mining Application Number:

If Household Sewage Treatment System, is system for: ☐ new home construction or ☐ replacement of failed

Outfall:	Design Flow	Associated Permit Effluent Table:	Latitude:	Longitude:
#.	Flow.	Choose an item.	Click here.	Click here.

Are These Permits

PTI No

Individual 401 Water Quality Certification No

Isolated Wetland No

USACE Nationwide
Permit No

Individual NPDES No

Proposed Project Start Date: 11/15/2016

Estimated Completion Date: 12/30/2016

Total Land Disturbance (Acres): 13.19

MS4 Drainage Area (Sq. Miles):

IV. Payment Information

Check #: 966924

Check Amount: 420

Date of Check: 10/18/2016

For Ohio EPA Use Only

Check ID (OFA): _____ ORG #: _____

Rev ID: _____ DOC #: _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Applicant Name: Bryan Schueler, Hardin Wind Energy LLC

Title: Vice President

Applicant Signature: 

Date: 10/25/16



Division of Surface Water

Co-Permittee Notice of Intent (NOI) for Coverage Under Ohio EPA Construction Storm Water General Permit

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized by Ohio's NPDES general permit for storm water associated with construction activity. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. NOTE: All necessary information must be provided on this form. Read the accompanying instructions carefully before completing the form. Do not use correction fluid on this form. Forms transmitted by fax will not be accepted. There is no fee associated with submitting this form.

I. Applicant Information/Mailing Address

Company (Applicant) Name: The Boldt Company

Mailing (Applicant) Address: 2525 North Roemer Rd. PO Box 419

City: Appleton

State: WI

Zip Code: 54912

Contact Person: Matt Hussin

Phone: 920-739-6321

Fax: 920-739-4409

Contact E-mail Address: matt.hussin@boldt.com

II. Facility/Site Location Information

Existing Ohio EPA Facility Permit Number: Click here to enter text - Required.

Initial Permittee Name: Matt Hussin

Facility/Site Name: Hardin Wind Farm

City: Alger

State: Ohio

Zip Code: 45859

County(ies): Hardin County

Township: McGuffey

Facility Contact Person: Matt Hussin

Phone: 920-739-6321

Fax: 920-739-4409

Facility Contact E-mail Address: matt.hussin@boldt.com

III. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of the fine and imprisonment for knowing violations.

Applicant Name (printed or typed): Dave Sparapani

Title: Vice President

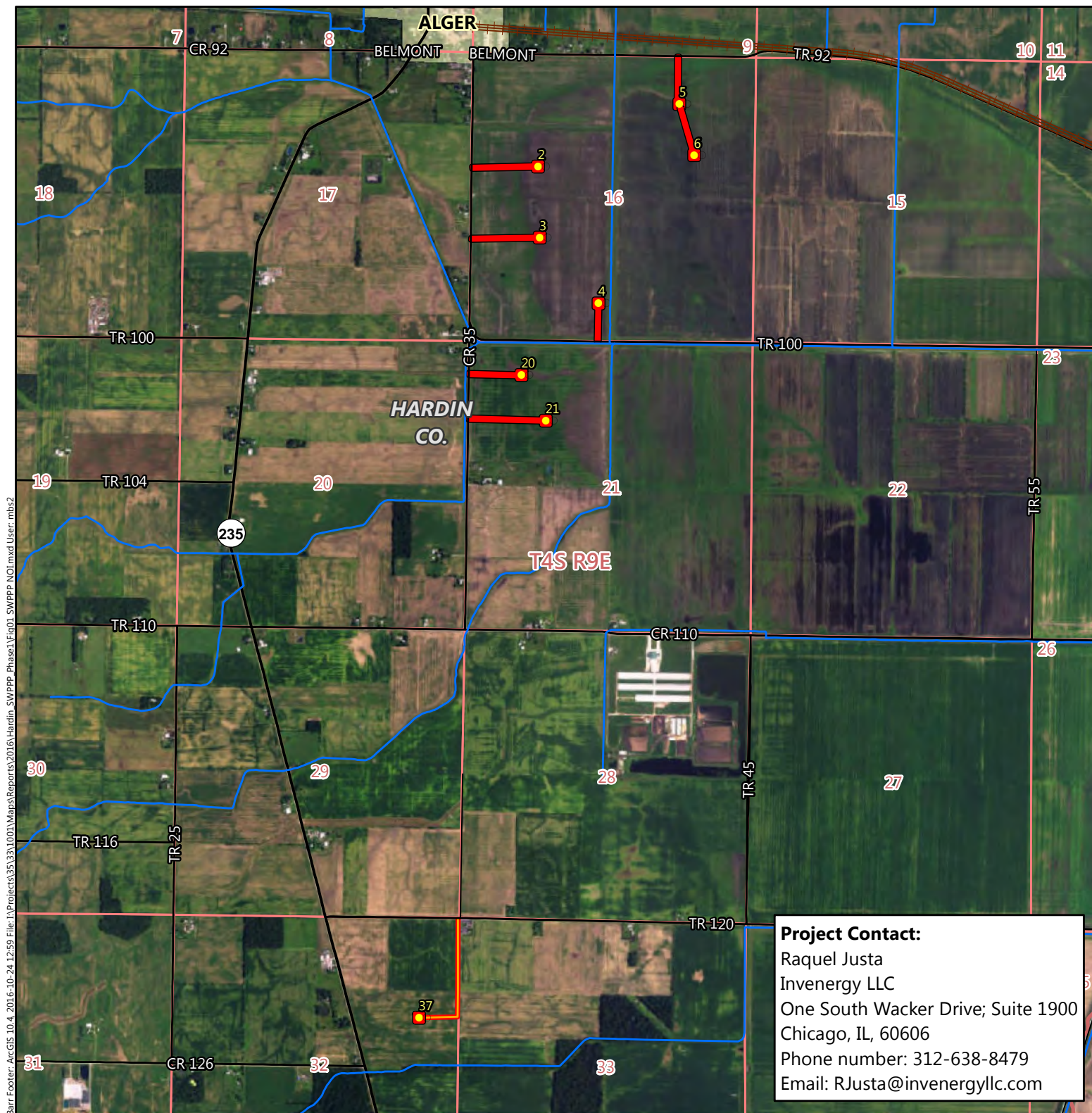
Signature:

Date:

Hardin County Wind Project

Site Location Table

Proposed Turbine Location #	Latitude	Longitude	Quarter	Sections	Township	Range
2	40.69825	-83.83769	NW	16	4S	9E
3	40.694643	-83.837501	SW	16	4S	9E
4	40.69135	-83.833516	SW	16	4S	9E
5	40.701533	-83.828326	NE	16	4S	9E
6	40.698947	-83.827282	NE	16	4S	9E
20	40.687645	-83.838577	NW	21	4S	9E
21	40.685353	-83.836906	NW	21	4S	9E
37	40.654941	-83.844746	NE	32	4S	9E



- Turbine Location (8/5/2016)
- Construction Work Area
(Area of expected ground disturbance)
- Access Road
- ~ USGS NHD Flowline
- City Boundary
- PLSS Section
- PLSS Township

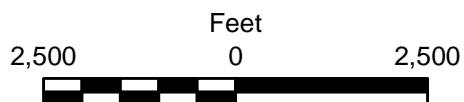


Figure 1

SWPPP OVERVIEW MAP
 Hardin County Wind Project
 Invenergy LLC
 Hardin County, Ohio

Amendment 1: NOI Supplemental Information

Hardin County Wind Project

Site Location Tables

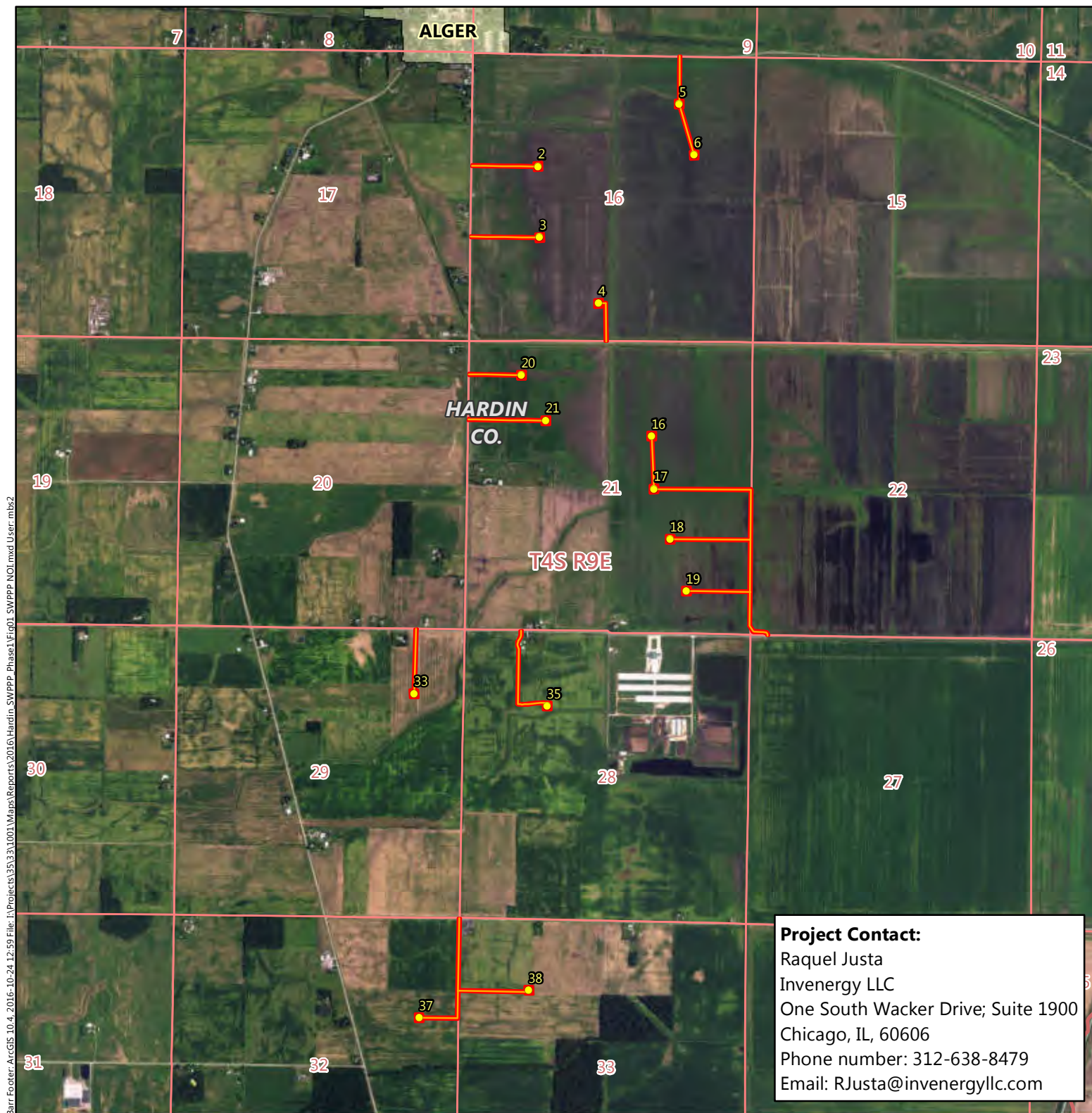
Table 1: Turbine Locations 2 through 38 and 113 through 116

Proposed Turbine Location #	Latitude	Longitude	Quarter	Sections	Township	Range
2	40.69825	-83.83769	NW	16	4S	9E
3	40.694643	-83.837501	SW	16	4S	9E
4	40.69135	-83.833516	SW	16	4S	9E
5	40.701533	-83.828326	NE	16	4S	9E
6	40.698947	-83.827282	NE	16	4S	9E
16	40.684653	-83.829824	NE	21	4S	9E
17	40.681965	-83.829628	NE/SE	21	4S	9E
18	40.679435	-83.828491	SE	21	4S	9E
19	40.676806	-83.827351	SE	21	4S	9E
20	40.687645	-83.838577	NW	21	4S	9E
21	40.685353	-83.836906	NW	21	4S	9E
33	40.67139	-83.84541	NE	29	4S	9E
35	40.67087	-83.836528	NW	28	4S	9E
37	40.654941	-83.844746	NE	32	4S	9E
38	40.656427	-83.837453	NW	33	4S	9E
113	40.706361	-83.705153	SW	10	4S	10E
114	40.702052	-83.705298	NW	15	4S	10E
115	40.700656	-83.698756	NE	15	4S	10E
116	40.698438	-83.696926	NE	15	4S	10E

Hardin County Wind Project

Table 2: Turbine Locations 101 through 106 and 121

Proposed Turbine Location #	Latitude	Longitude	First Division ID	First Division Type	First Division Name
101	40.687223	-83.7534	OH93Hardin	Lot	15026
103	40.685484	-83.74662	OH93Hardin	Lot	12291
104	40.684627	-83.743309	OH93Hardin	Lot	12291
105	40.683572	-83.739927	OH93Hardin	Lot	15569
106	40.682579	-83.736586	OH93Hardin	Lot	15569
121	40.686522	-83.749928	OH93Hardin	Lot	12291



- Turbine Location (8/5/2016)
- ~ USGS NHD Flowline
- Construction Work Area
(Area of expected ground disturbance)
- City Boundary
- PLSS Section
- PLSS Township



Figure 1-1
 Ammendment 1

SWPPP OVERVIEW MAP
 Hardin County Wind Project
 Invenergy LLC
 Hardin County, Ohio

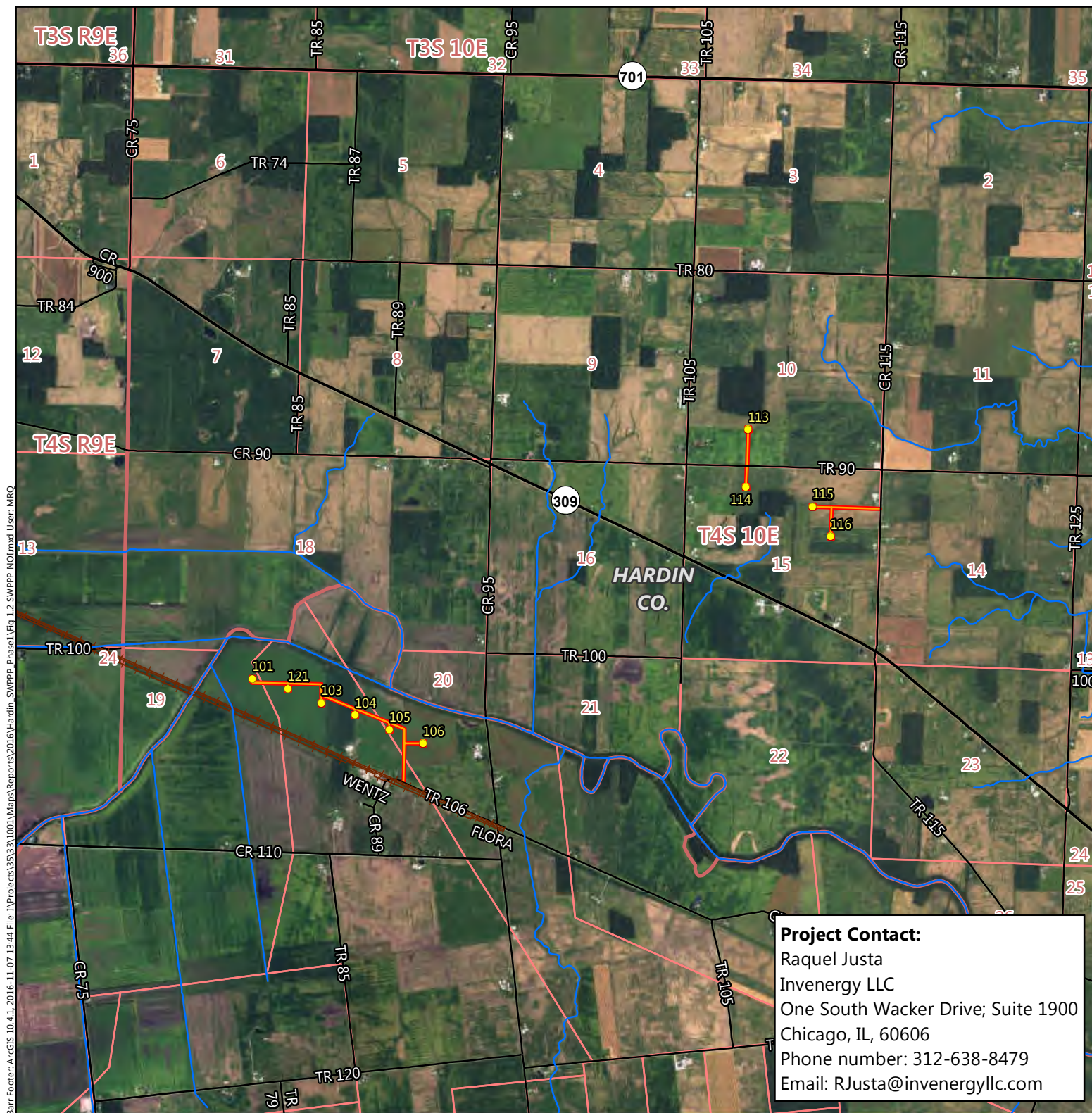
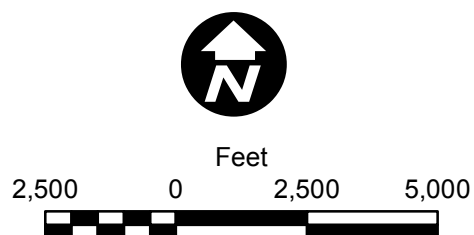


Figure 1-2
 Ammendment 1

SWPPP OVERVIEW MAP
 Hardin County Wind Project
 Invenergy LLC
 Hardin County, Ohio

- Turbine Location (8/5/2016)
- ~ USGS NHD Flowline
- Construction Work Area
 (Area of expected ground disturbance)
- City Boundary
- PLSS Section
- PLSS Township



Appendix C

Grading and Stabilization Activities Log

Hardin County Wind Project

Date	Description of Grading and Stabilization Activities and Notes

Appendix D

Record of SWP3 Amendments

Hardin County Wind Project

Number of Amendment	Date	Description of Amendment
I	11/7/2016	<ol style="list-style-type: none">1. Added contractor's information2. Added additional 17 turbine location. In this SWPPP 25 possible turbine locations are included. Work is still plant to take place at only 8 location that will be selected at a later date.

Appendix E

SWP3 Training Log

Hardin County Wind Project

SWP3 Training Log

I have reviewed and understand the conditions of the SWP3 and my role and responsibilities in complying with the SWP.

Name

Title

Signature

Date

Hardin County Wind Project

I have reviewed and understand the conditions of the SWP3 and my role and responsibilities in complying with the SWP.

Name

Title

Signature

Date

Hardin County Wind Project

I have reviewed and understand the conditions of the SWP3 and my role and responsibilities in complying with the SWP.

Name

Title

Signature

Date

Appendix F

BMP Specifications

7.4 Construction Entrance



Description

A construction entrance is a stabilized pad of stone underlain with a geotextile and is used to reduce the amount of mud tracked off-site with construction traffic. Located at points of ingress/egress, the practice is used to reduce the amount of mud tracked off-site with construction traffic.

Conditions Where Practice Applies

A construction entrance is applicable where:

- Construction traffic leaves active construction areas and enters public roadways or areas unchecked by effective sediment controls;
- Areas where frequent vehicle and equipment access is expected and likely to contribute sediment to runoff, such as at the entrance to individual building lots.

Planning Considerations

Construction entrances address areas that contribute significant amounts of mud to runoff by providing a stable area for traffic. Although they allow some mud to be removed from construction vehicle tires before they enter a public roads, they should not be the only practice relied upon to manage off-site tracking. Since most mud is flung from tires as they reach higher speeds, restricting traffic to stabilized construction roads, entrances and away from muddy areas is necessary.

If a construction entrance is not sufficient to remove the majority of mud from wheels or there is an especially sensitive traffic situation on adjacent roads, wheel wash areas may be necessary. This requires an extended width pad to avoid conflicts with traffic, a supply of wash water and sufficient drainage to assure runoff is captured in a sediment pond or trap.

Proper installation of a construction entrance requires a geotextile and proper drainage to insure construction site runoff does not leave the site. The use of geotextile under the stone helps to prevent potholes from developing and will save the amount of stone needed during the life of the practice. Proper drainage may include culverts to direct water under the roadway or water bars to direct muddy water off the roadway toward sediment traps or ponds.

Design Criteria

The area of the entrance must be cleared of all vegetation, roots, and other objectionable material. Geotextile will then be placed the full width and length of the entrance.

Stone shall be placed to a depth of at least 6 inches. Roads subject to heavy duty loads should be increased to a minimum of 10 inches. Surface water shall be conveyed under the entrance, through culverts, or diverted via a water bars or mountable berms (minimum 5:1 slopes) so as to convey sediment laden runoff to sediment control practices or to allow clean water to pass by the entrance.

The stabilized construction entrance shall meet the specifications that follow.

Maintenance

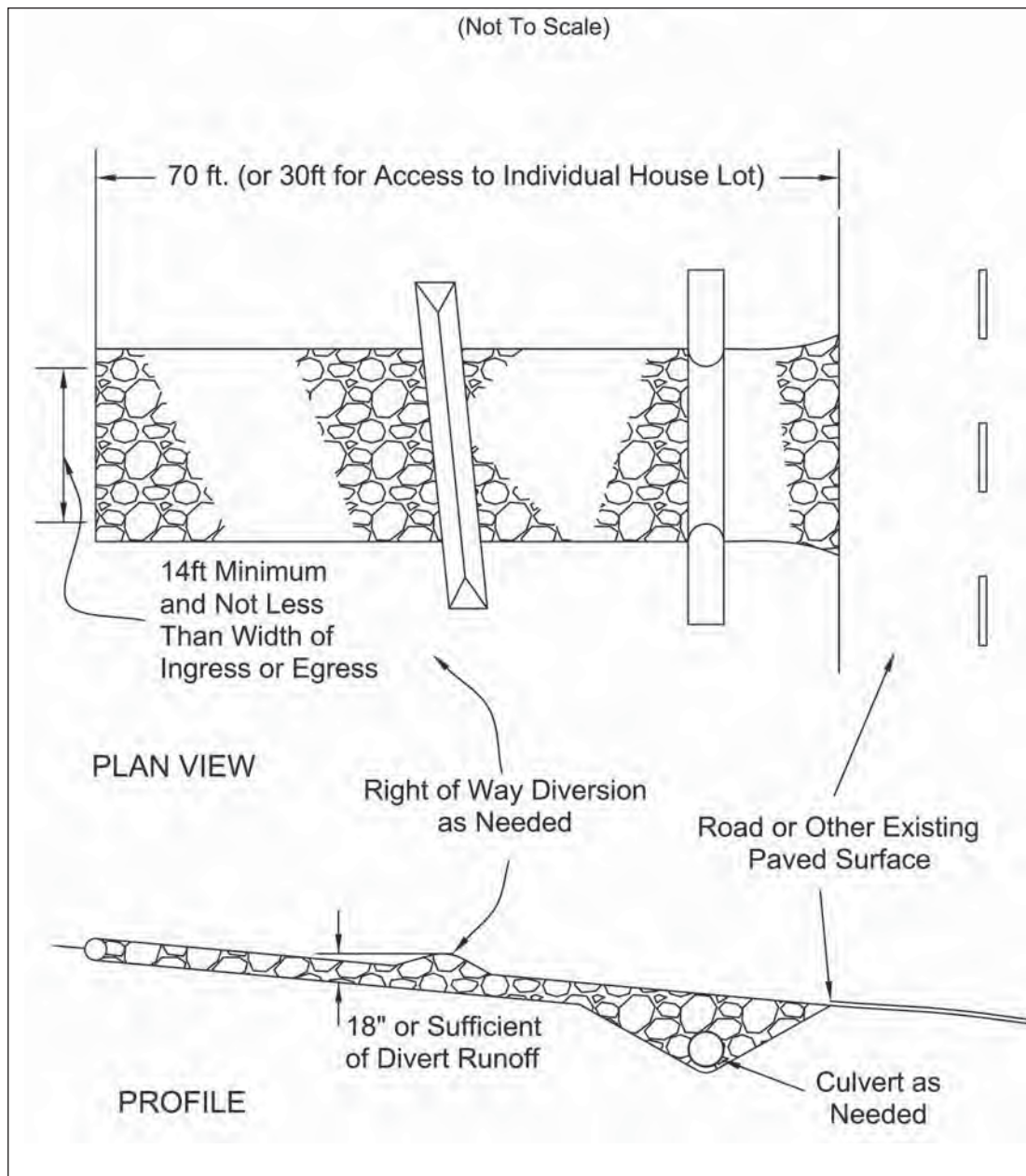
The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with additional stone or the washing and reworking of existing stone as conditions demand and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. The use of water trucks to remove materials dropped, washed, or tracked onto roadways will not be permitted under any circumstances.

Common Problems / Concerns

Mud is allowed to accumulate and is tracked on to public right-of-ways. The entrance and associated construction roads may need dressing with additional stone.

Soft depression areas develop in entrance area. Stone may not have been underlain with geotextile or insufficient stone base has been provided.

Specifications
for
Construction Entrance



Specifications for **Construction Entrance**

1. **Stone Size**—ODOT # 2 (1.5-2.5 inch) stone shall be used, or recycled concrete equivalent.
2. **Length**—The Construction entrance shall be as long as required to stabilize high traffic areas but not less than 70 ft. (exception: apply 30 ft. minimum to single residence lots).
3. **Thickness** -The stone layer shall be at least 6 inches thick for light duty entrances or at least 10 inches for heavy duty use.
4. **Width** -The entrance shall be at least 14 feet wide, but not less than the full width at points where ingress or egress occurs.
5. **Geotextile** -A geotextile shall be laid over the entire area prior to placing stone. It shall be composed of strong rot-proof polymeric fibers and meet the following specifications:
6. **Timing**—The construction entrance shall be installed as soon as is practicable before major grading activities.
7. **Culvert** -A pipe or culvert shall be constructed under the entrance if needed to prevent surface water from flowing across the entrance or to prevent runoff from being directed out onto paved surfaces.
8. **Water Bar** -A water bar shall be constructed as part of the construction entrance if needed to prevent surface runoff from flowing the length of the construction entrance and out onto paved surfaces.
9. **Maintenance** -Top dressing of additional stone shall be applied as conditions demand. Mud spilled, dropped, washed or tracked onto public roads, or any surface where runoff is not checked by sediment controls, shall be removed immediately. Removal shall be accomplished by scraping or sweeping.
10. Construction entrances shall not be relied upon to remove mud from vehicles and prevent off-site tracking. Vehicles that enter and leave the construction-site shall be restricted from muddy areas.
11. **Removal**—the entrance shall remain in place until the disturbed area is stabilized or replaced with a permanent roadway or entrance.

Figure 7.4.1

Geotextile Specification for Construction Entrance	
Minimum Tensile Strength	200 lbs.
Minimum Puncture Strength	80 psi.
Minimum Tear Strength	50 lbs.
Minimum Burst Strength	320 psi.
Minimum Elongation	20%
Equivalent Opening Size	EOS < 0.6 mm.
Permittivity	1×10 ⁻³ cm/sec.

7.8 Temporary Seeding



Description

Temporary seedings establish temporary cover on disturbed areas by planting appropriate rapidly growing annual grasses or small grains. Temporary seeding provides erosion control on areas in between construction operations. Grasses, which are quick growing, are seeded and usually mulched to provide prompt, temporary soil stabilization. It effectively minimizes the area of a construction site prone to erosion and should be used everywhere the sequence of construction operations allows vegetation to be established.

Conditions Where the Practice Applies

Temporary seeding should be applied on exposed soil where additional work (grading, etc.) is not scheduled for more than 21 days. Permanent seeding should be applied if the areas will be idle for more than one year.

Planning Considerations

This practice has the potential to drastically reduce the amount of sediment eroded from a construction site. Erosion control efficiencies greater than 90% will be achieved with proper applications of temporary seeding. Because practices used to trap sediment are usually much less effective, temporary seeding is to be used even on areas where runoff is treated by sediment trapping practices. Because temporary seeding is highly effective and practical on construction sites, its liberal use is highly recommended.

Design Criteria

Specifications follow these explanations of important aspects of temporary seeding.

Plant Selection: Select the plants appropriate from the table in the Specifications for Temporary seeding. Choose varieties of tall fescue that are endophyte free or have non-toxic endophytes. Seeding rates for dormant seedings are increased by 50 percent. More information on dormant seedings is given in the permanent seeding section.

The length of time the area will idle and the season in which seeding occurs should influence the selection of seeding species. For areas remaining idle for over a year, a mixture containing perennial ryegrass is recommended. Cereal grains (rye, oats and wheat) are included in some of the mixtures as cover crops. These are annual plants that will die after producing seed. Realize that oats will not over-winter and continue to grow as wheat and rye do.

Site preparation: Temporary seeding is best done on a prepared soil seedbed of loose pulverized soil. However, seedings should not be delayed, if additional grading operations are not possible. At a minimum, remove large rock or debris that will interfere with seeding operations. If the ground has become crusted, a disk or a harrow should be used to loosen the soil. Overall the best soil conditions will exist immediately after grading operations cease, when soils remain loose and moist.

Soil amendments: A soil test is necessary to adequately predict the need for lime and fertilizer. Seedings that are expected to be long lasting (over 1-3 months), should have lime and fertilizer applied as recommended by a soil test. In lieu of a soil test, fertilizer can be broadcast and worked into the top inch of soil at the rate of 6 pounds/1000 ft² or 250 pounds per acre of 10-10-10 or 12-12-12.

Seeding Methods: Seed shall be applied uniformly with a cyclone spreader, drill, culti-packer seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

Maintenance

Areas failing to establish vegetative cover adequate to prevent erosion shall be reseeded as soon as such areas are identified.

Seeding performed during hot and dry summer months shall be watered at a rate of 1 inch per week.

Common Problems / Concerns

- Insufficient topsoil or inadequately tilled, limed, and/ or fertilized seedbed results in poor establishment of vegetation.
- An overly high seeding rate of nurse crop (oat, rye or wheat) in the seed mixture results in over competition with the perennials.
- Seeding outside of seeding dates results in poor vegetation establishment and a decrease in plant hardiness.
- An inadequate rate of mulch results in poor germination and failure.

Specifications for **Temporary Seeding**

Table 7.8.1 Temporary Seeding Species Selection

Seeding Dates	Species	Lb./1000 ft2	Lb/Acre
March 1 to August 15	Oats	3	128 (4 Bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Perennial Ryegrass	1	40
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Annual Ryegrass	1.25	55
	Perennial Ryegrass	3.25	142
	Creeping Red Fescue	0.4	17
	Kentucky Bluegrass	0.4	17
	Oats	3	128 (3 bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
August 16th to November	Rye	3	112 (2 bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Wheat	3	120 (2 bushel)
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Perennial Rye	1	40
	Tall Fescue	1	40
	Annual Ryegrass	1	40
	Annual Ryegrass	1.25	40
	Perennial Ryegrass	3.25	40
	Creeping Red Fescue	0.4	40
	Kentucky Bluegrass	0.4	
November 1 to Feb. 29	Use mulch only or dormant seeding		

Note: Other approved species may be substituted.

1. Structural erosion and sediment control practices such as diversions and sediment traps shall be installed and stabilized with temporary seeding prior to grading the rest of the construction site.
2. Temporary seed shall be applied between construction operations on soil that will not be graded or reworked for 21 days or greater. These idle areas shall be seeded within 7 days after grading.
3. The seedbed should be pulverized and loose to ensure the success of establishing vegetation. Temporary seeding should not be postponed if ideal seedbed preparation is not possible.
4. Soil Amendments—Temporary vegetation seeding rates shall establish adequate stands of vegetation, which may require the use of soil amendments. Base rates for lime and fertilizer shall be used.
5. Seeding Method—Seed shall be applied uniformly with a cyclone spreader, drill, cultipacker seeder, or hydroseeder. When feasible, seed that has been broadcast shall be covered by raking or dragging and then lightly tamped into place using a roller or cultipacker. If hydroseeding is used, the seed and fertilizer will be mixed on-site and the seeding shall be done immediately and without interruption.

Specifications
for
Temporary Seeding

Mulching Temporary Seeding

1. Applications of temporary seeding shall include mulch, which shall be applied during or immediately after seeding. Seedings made during optimum seeding dates on favorable, very flat soil conditions may not need mulch to achieve adequate stabilization.
2. Materials:
 - Straw—If straw is used, it shall be unrotted small-grain straw applied at a rate of 2 tons per acre or 90 lbs./ 1,000 sq. ft. (2-3 bales)
 - Hydroseeders—If wood cellulose fiber is used, it shall be used at 2000 lbs./ ac. or 46 lb./ 1,000-sq.-ft.
 - Other—Other acceptable mulches include mulch mattings applied according to manufacturer's recommendations or wood chips applied at 6 ton/ ac.
3. Straw Mulch shall be anchored immediately to minimize loss by wind or water. Anchoring methods:
 - Mechanical—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but left to a length of approximately 6 inches.
 - Mulch Netting—Netting shall be used according to the manufacturers recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
 - Synthetic Binders—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Track or equivalent may be used at rates recommended by the manufacturer.
 - Wood-Cellulose Fiber—Wood-cellulose fiber binder shall be applied at a net dry wt. of 750 lb./ac. The wood-cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb. / 100 gal.

7.10 Permanent Seeding



Description

Perennial vegetation is established on areas that will not be re-disturbed for periods longer than 12 months. Permanent seeding includes site preparation, seedbed preparation, planting seed, mulching, irrigation and maintenance.

Permanent vegetation is used to stabilize soil, reduce erosion, prevent sediment pollution, reduce runoff by promoting infiltration, and provide stormwater quality benefits offered by dense grass cover.

Conditions Where Practice Applies

Permanent seeding should be applied to:

- Any disturbed areas or portions of construction sites at final grade. Permanent seeding should not be delayed on any one portion of the site at final grade while construction on another portion of the site is being completed. Permanent seeding shall be completed in phases, if necessary.
- Areas subject to grading activities but will remain dormant for a year or more.

Planning Considerations

Vegetation controls erosion by reducing the velocity and the volume of overland flow and protects bare soil surface from raindrop impact. A healthy, dense turf promotes infiltration and reduces the amount of runoff. The establishment of quality vegetation requires selection of the right plant materials for the site, adequate soil amendments, careful seedbed preparation, and maintenance.

Soil Compaction—Storm water quality and the amount of runoff both vary significantly with soil compaction. Non-compacted soils improve stormwater infiltration by promoting:

- dense vegetative growth;
- high soil infiltration & lower runoff rates;
- pollutant filtration, deposition & absorption; and
- beneficial biologic activity in the soil.

Construction activity creates highly compacted soils that restrict water infiltration and root growth. The best time for improving soil condition is during the establishment of permanent vegetation. It is highly recommended that subsoilers, plows, or other implements are specified as part of final seedbed preparation. Use discretion in slip-prone areas.

Minimum Soil Conditions—Vegetation cannot be expected to stabilize soil that is unstable due to its texture, structure, water movement or excessively steep slope. The following minimum soil conditions are needed for the establishment and maintenance of a long-lived vegetative cover. If these conditions cannot be met, see the standards and specifications for Topsoiling.

- Soils must include enough fine-grained material to hold at least a moderate amount of available moisture.
- The soil must be free from material that is toxic or otherwise harmful to plant growth.

Design Criteria

See specifications for permanent seeding below.

Maintenance

1. Expect emergence within 4 to 28 days after seeding, with legumes typically following grasses. Check permanent seedlings within 4 to 6 weeks after planting. Look for:
 - Vigorous seedlings;
 - Uniform ground surface coverage with at least 30% growth density;
 - Uniformity with legumes and grasses well intermixed;
 - Green, not yellow, leaves. Perennials should remain green throughout the summer, at least at the plant bases.
2. Permanent seeding shall not be considered established for at least 1 full year from the time of planting. Inspect the seeding for soil erosion or plant loss during this first year. Repair bare and sparse areas. Fill gullies. Re-fertilize, re-seed, and re-mulch if required. Consider no-till planting. A minimum of 70% growth density, based on a visual inspection, must exist for an adequate permanent vegetative planting.
 - If stand is inadequate or plant cover is patchy, identify the cause of failure and take corrective action: choice of plant materials, lime and fertilizer quantities, poor seedbed preparation, or weather. If vegetation fails to grow, have the soil tested to determine whether pH is in the correct range or nutrient deficiency is a problem.
 - Depending on stand conditions, repair with complete seedbed preparation, then over-seed or re-seed.
 - If it is the wrong time of year to plant desired species, over-seed with small grain cover crop to thicken the stand until timing is right to plant perennials or use temporary seeding. See Temporary Seeding standard.

3. Satisfactory establishment may require re-fertilizing the stand in the second growing season.
 - Do not fertilize cool season grasses in late May through July (i.e. Kentucky Bluegrass, Orchardgrass, Perennial Ryegrass, Smooth Brome, Fescues, Timothy, Reed Canarygrass and Garrison Grass)
 - Grass that looks yellow may be nitrogen deficient. In lieu of a soil test, an application of 50 lbs. of N-P-K per acre in early spring will help cool season grasses compete against weeds or grow more successfully.
 - Do not use nitrogen fertilizer if the stand contains more than 20 percent legumes.
4. Long-term maintenance fertilization rates shall be established by following soil test recommendations or by using the rates shown in Table 2.

Table 7.10.1 Maintenance for Permanent Seedings Fertilization and Mowing

Mixture	Formula	Lbs./ Acre	Lbs./1,000 sq.ft.	Time	Mowing
Creeping Red Fescue Ryegrass Kentucky Bluegrass	10-10-10	500	12	Fall, yearly or as needed	Not closer than 3"
Tall Fescue	10-10-10	500	12		Not closer than 4"
Turf-type Fescue	10-10-10	500	12		
Crown Vetch Fescue	0-20-20	400	10	Spring, yearly following establishment and every 4-7 years thereafter	Do not mow
Flat Pea Fescue	0-20-20	400	10		Do not mow

Note: Following soil test recommendations is preferred to fertilizer rates shown above.

5. Consider mowing after plants reach a height of 6 to 8 inches. Mow grasses tall, at least 3 inches in height and minimize compaction during the mowing process. Vegetation on structural practices such as embankments and grass-lined channels need to be mowed only to prevent woody plants from invading the stand.

Common Problems / Concerns

- Insufficient topsoil or inadequately tilled, limed, and/or fertilized seedbed - results in poor establishment of vegetation.
- Unsuitable species or seeding mixture - results in competition with the perennials.
- Nurse crop rate too high in the mixture - results in competition with the perennials.
- Seeding done at the wrong time of year - results in poor establishment of vegetation, also plant hardiness is significantly decreased.
- Mulch rate inadequate - results in poor germination and failure.

Specifications for Permanent Seeding

Site Preparation

1. Subsoiler, plow, or other implement shall be used to reduce soil compaction and allow maximum infiltration. (Maximizing infiltration will help control both runoff rate and water quality.) Subsoiling should be done when the soil moisture is low enough to allow the soil to crack or fracture. Subsoiling shall not be done on slip-prone areas where soil preparation should be limited to what is necessary for establishing vegetation.
2. The site shall be graded as needed to permit the use of conventional equipment for seedbed preparation and seeding.
3. Topsoil shall be applied where needed to establish vegetation.

Seedbed Preparation

1. Lime—Agricultural ground limestone shall be applied to acid soil as recommended by a soil test. In lieu of a soil test, lime shall be applied at the rate of 100 pounds per 1,000-sq. ft. or 2 tons per acre.
2. Fertilizer—Fertilizer shall be applied as recommended by a soil test. In place of a soil test, fertilizer shall be applied at a rate of 25 pounds per 1,000-sq. ft. or 1000 pounds per acre of a 10-10-10 or 12-12-12 analyses.
3. The lime and fertilizer shall be worked into the soil with a disk harrow, spring-tooth harrow, or other suitable field implement to a depth of 3 inches. On sloping land, the soil shall be worked on the contour.

Seeding Dates and Soil Conditions

Seeding should be done March 1 to May 31 or August 1 to September 30. If seeding occurs outside of the above-specified dates, additional mulch and irrigation may be required to ensure a minimum of 80% germination. Tillage for seedbed preparation should be done when the soil is dry enough to crumble and not form ribbons when compressed by hand. For winter seeding, see the following section on dormant seeding.

Dormant Seedings

1. Seedings should not be made from October 1 through November 20. During this period, the seeds are likely to germinate but probably will not be able to survive the winter.
2. The following methods may be used for “Dormant Seeding”:

- From October 1 through November 20, prepare the seedbed, add the required amounts of lime and fertilizer, then mulch and anchor. After November 20, and before March 15, broadcast the selected seed mixture. Increase the seeding rates by 50% for this type of seeding.
- From November 20 through March 15, when soil conditions permit, prepare the seedbed, lime and fertilize, apply the selected seed mixture, mulch and anchor. Increase the seeding rates by 50% for this type of seeding.
- Apply seed uniformly with a cyclone seeder, drill, cultipacker seeder, or hydro-seeder (slurry may include seed and fertilizer) on a firm, moist seedbed.
- Where feasible, except when a cultipacker type seeder is used, the seedbed should be firmed following seeding operations with a cultipacker, roller, or light drag. On sloping land, seeding operations should be on the contour where feasible.

Mulching

1. Mulch material shall be applied immediately after seeding. Dormant seeding shall be mulched. 100% of the ground surface shall be covered with an approved material.
2. Materials
 - Straw—If straw is used it shall be unrotted small-grain straw applied at the rate of 2 tons per acre or 90 pounds (two to three bales) per 1,000-sq. ft. The mulch shall be spread uniformly by hand or mechanically applied so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000-sq.-ft. sections and spread two 45-lb. bales of straw in each section.
 - Hydroseeders—If wood cellulose fiber is used, it shall be applied at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
 - Other—Other acceptable mulches include rolled erosion control mattings or blankets applied according to manufacturer's recommendations or wood chips applied at 6 tons per acre.

3. Straw and Mulch Anchoring Methods

Straw mulch shall be anchored immediately to minimize loss by wind or water.

- **Mechanical**—A disk, crimper, or similar type tool shall be set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but, generally, be left longer than 6 inches.
- **Mulch Netting**—Netting shall be used according to the manufacturer's recommendations. Netting may be necessary to hold mulch in place in areas of concentrated runoff and on critical slopes.
- **Asphalt Emulsion**—Asphalt shall be applied as recommended by the manufacturer or at the rate of 160 gallons per acre.

- **Synthetic Binders**—Synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equivalent may be used at rates specified by the manufacturer.
- **Wood Cellulose Fiber**—Wood cellulose fiber shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water with the mixture containing a maximum of 50 pounds cellulose per 100 gallons of water.

Irrigation

Permanent seeding shall include irrigation to establish vegetation during dry weather or on adverse site conditions, which require adequate moisture for seed germination and plant growth.

Irrigation rates shall be monitored to prevent erosion and damage to seeded areas from excessive runoff.

Table 7.10.2 Permanent Seeding

Seed Mix	Seeding Rate		Notes:
	Lbs./acre	Lbs./1,000 Sq. Feet	
General Use			
Creeping Red Fescue	20-40	1/2-1	For close mowing & for waterways with <2.0 ft/sec velocity
Domestic Ryegrass	10-20	1/4-1/2	
Kentucky Bluegrass	20-40	1/2-1	
Tall Fescue	40-50	1-1 1/4	
Turf-type (dwarf) Fescue	90	2 1/4	
Steep Banks or Cut Slopes			
Tall Fescue	40-50	1-1 1/4	
Crown Vetch	10-20	1/4-1/2	Do not seed later than August
Tall Fescue	20-30	1/2-3/4	
Flat Pea	20-25	1/2-3/4	Do not seed later than August
Tall Fescue	20-30	1/2-3/4	
Road Ditches and Swales			
Tall Fescue	40-50	1-1 1/4	
Turf-type (Dwarf) Fescue	90	2 1/4	
Kentucky Bluegrass	5	0.1	
Lawns			
Kentucky Bluegrass	100-120	2	
Perennial Ryegrass		2	
Kentucky Bluegrass	100-120	2	For shaded areas
Creeping Red Fescue		1-1/2	

Note: Other approved seed species may be substituted.

7.9 Mulching



Description

A protective layer of mulch, usually of straw, applied to bare soil is used to abate erosion by shielding it from raindrop impact. Mulch also helps establish vegetation by conserving moisture and creating favorable conditions for seeds to germinate.

Conditions Where Practice Applies

Mulch should be used liberally throughout construction to limit the areas that are bare and susceptible to erosion. Mulch can be used in conjunction with seeding to establish vegetation or by itself to provide erosion control when the season does not allow grass to grow. Mulch and other vegetative practices must be applied on all disturbed portions of construction-sites that will not be re-disturbed for more than 21 days.

Design Criteria

See specifications for Mulching.

Maintenance

Additional mulching is necessary to cover exposed soil conditions when observed during routine maintenance inspections.

Common Problems / Concerns

The application of synthetic binders must be conducted in such a manner as to not be introduced into watercourses.

Weather considerations must be addressed to ensure the application of synthetic binders are not washed away and introduced into watercourses.

The use of a mulch cover is not recommended for areas, which will exhibit higher velocities than 3.5 feet/second. An erosion control matting is recommended for areas which will exhibit higher velocities.

Areas which have been mulched should be inspected and maintained if necessary every 7 days or within 24 hours of a rain event greater than or equal to 0.5 inches to ensure adequate protection.

Specifications
for
Mulching

1. Mulch and other appropriate vegetative practices shall be applied to disturbed areas within 7 days of grading if the area is to remain dormant (undisturbed) for more than 21 days or on areas and portions of the site which can be brought to final grade.
2. Mulch shall consist of one of the following:
 - Straw - Straw shall be unrotted small grain straw applied at the rate of 2 tons/ac. or 90 lb./1,000 sq. ft. (two to three bales). The straw mulch shall be spread uniformly by hand or mechanically so the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 sq.ft. sections and place two 45-lb. bales of straw in each section.
 - Hydroseeders - Wood cellulose fiber should be used at 2,000 lb./ac. or 46 lb./1,000 sq. ft.
 - Other - Acceptable mulches include mulch mattings and rolled erosion control products applied according to manufacturer's recommendations or wood mulch/chips applied at 10-20 tons/ac.
3. Mulch Anchoring - Mulch shall be anchored immediately to minimize loss by wind or runoff. The following are acceptable methods for anchoring mulch.
 - Mechanical - Use a disk, crimper, or similar type tool set straight to punch or anchor the mulch material into the soil. Straw mechanically anchored shall not be finely chopped but be left generally longer than 6 inches.
 - Mulch Nettings - Use according to the manufacturer's recommendations, following all placement and anchoring requirements. Use in areas of water concentration and steep slopes to hold mulch in place.
 - Synthetic Binders - For straw mulch, synthetic binders such as Acrylic DLR (Agri-Tac), DCA-70, Petroset, Terra Tack or equal may be used at rates recommended by the manufacturer. All applications of Sythetic Binders must be conducted in such a manner where there is no contact with waters of the state.
 - Wood Cellulose Fiber - Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 lb./acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 lb./100 gal. of wood cellulose fiber.

7.12 Temporary Rolled Erosion Control Products (Erosion Control Matting)



Description

A Temporary Rolled Erosion Control Product (TRECP) is a degradable manufactured material used to stabilize easily eroded areas while vegetation becomes established. Temporary Rolled Erosion Control Products are degradable products composed of biologically, photochemically or otherwise degradable materials. Temporary RECPs consist of erosion control netting, open weave textiles, and erosion control blankets and mattings. These products reduce soil erosion and assist vegetative growth by providing temporary cover from the erosive action of rainfall and runoff while providing soil-seed contact.

Condition where practice applies:

Temporary rolled erosion control products (matting or blankets) should be used on:

- Areas where erosion potential is high or a failure to establish vegetation is costly such as slopes greater than 3:1, constructed channels or stream banks
- Areas where establishing vegetation is difficult such as southern exposures or areas prone to drying
- Areas of concentrated flow, especially where flows exceeds 3.5 feet per second (e.g near culverts)
- Problem areas with highly erosive soils
- Areas where mulch is difficult to hold in place due to wind or water

Planning Considerations:

Temporary RECPs can be applied to critical or problem areas to enhance the erosion control as vegetation is being established. Although these materials add cost, they insure more immediate stability following construction reducing grading repairs and a faster greening of projects. Permanent non-degradable rolled erosion control products (turf reinforcement mats) are beyond the scope of this practice, but may be useful where design discharges or runoff exert velocities and shear stresses exceeding the ability of mature vegetation to withstand.

Temporary RECPs provide stable and rapid greening for areas conveying stormwater runoff. Care must be taken to choose the type of RECP, which is most appropriate for the specific needs of a project. Designers must take into account the vegetated and unvegetated velocities and sheer stresses in channel applications. With the abundance of soil stabilization products available, it is impossible to cover all the advantages, disadvantages and specifications of all manufactured RECPs. Therefore, as with many erosion control-type products, there is no substitute for a thorough understanding of the manufacturer's instructions and recommendations and a site visit by a product's designer or plan reviewer to verify appropriateness.

Temporary RECPs should be used to help establish vegetation on previously disturbed slopes - especially slopes of 3:1 or greater. The materials that compose the RECP will deteriorate over time. If used in permanent conveyance channels, designers should consider the system's resistance to erosion as it relates to the type of vegetation planted and the existing soil characteristics. As much as possible during establishment of vegetation, soil stabilization blankets should not be subjected to concentrated flows moving at greater than 3.5 feet/second.

Design Criteria

Choose a product that will provide the appropriate time period of protection. Allowable velocity range during vegetation establishment should be 3.5 feet per second or less.

Erosion Control Blankets - shall consist of photodegradable plastic netting or biodegradable natural fiber netting that covers and is entwined in a natural organic or man-made mulching material. The mulching material shall consist of wood fibers, wood excelsior, straw, coconut fiber, or man-made fibers, or a combination of the same. The blanket shall be of consistent thickness with the mulching material/fibers evenly distributed over its entire length. Mulching material/fibers must interlock or entwine to form a dense layer, which not only resists raindrop impact, but also will allow vegetation to penetrate the blanket. The mulching material degradation rate must be consistent with the designers desired slope protection time. Temporary Rolled Erosion Control Products (or erosion control blankets) shall meet the specifications that follow.

Table 7.12.1

Material	Maximum Length Of Protection
Straw	10-12 Months
Straw/Coconut	24 Months
Coconut	36 Months
Excelsior	36 Months

Erosion Control Netting - shall consist of a woven natural fiber or extruded geosynthetic mesh used as a component in the manufacture of RECPs, or separately as a temporary RECP to anchor loose fiber mulches.

Open Weave Textile - shall consist of processed natural or polymer yarns woven into a matrix, used to provide erosion control and facilitate vegetation establishment.

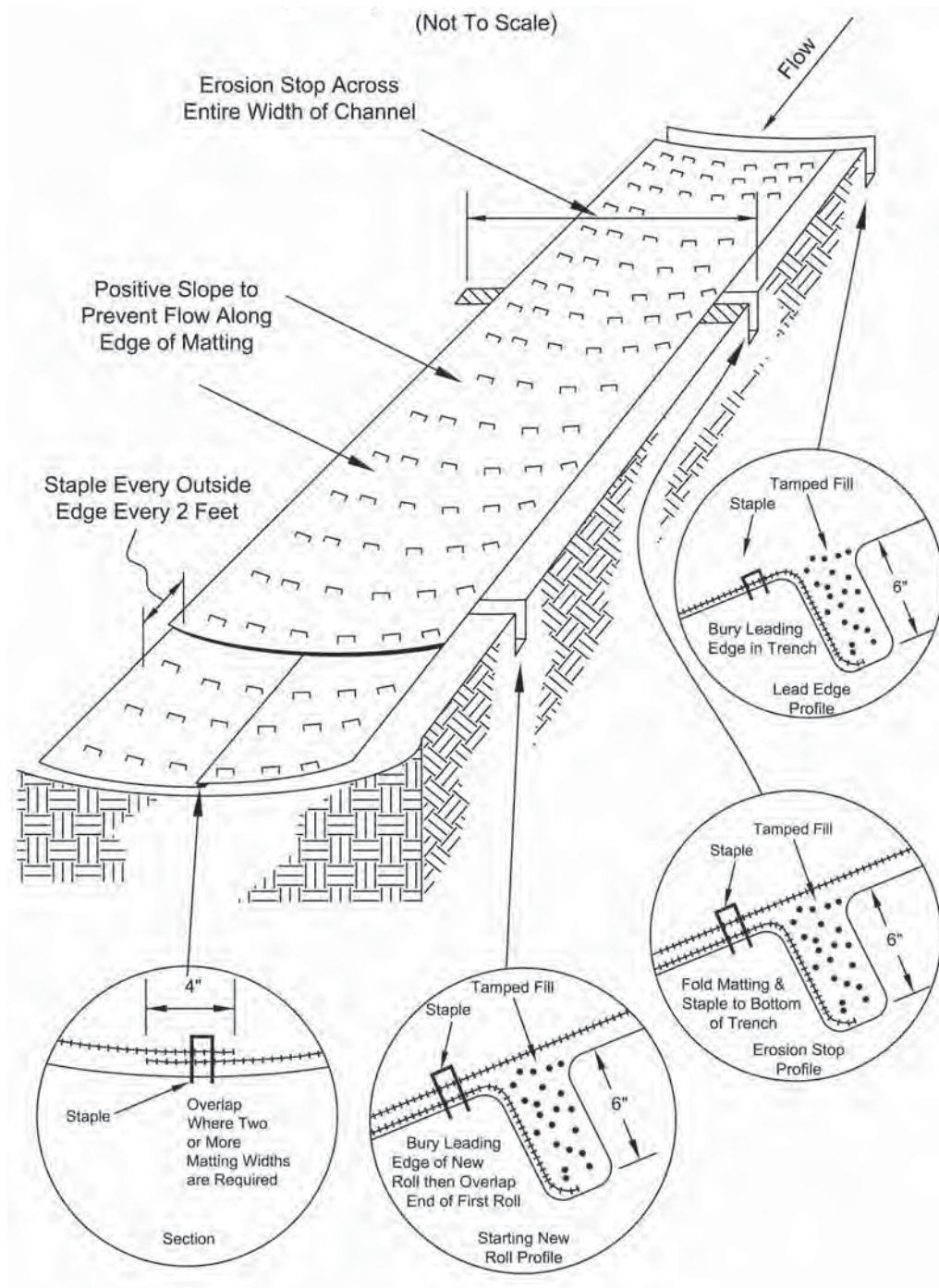
Maintenance:

All RECPs should be inspected regularly after installation, especially after storms to check for erosion or undermining of the product. Make needed repairs immediately, addressing rills or gullies that have developed prior to replacing the RECP. In the case erosion repairs, assure that subsequent runoff across the area is dispersed or adequately spread.

Common Problems/Concerns:

- Manufacturer's selection and installation recommendations not followed. Results in failure of the RECP.
- Poor contact between soil and the RECP. Results in erosion below the RECP and lower seed germination rates, causing failure.
- Proper stapling guidelines not followed. Results in movement or displacement of RECP.
- Erosion check slots are not used. Results in erosion under the RECP, causing failure.
- Unstable slopes that result in RECP or slope failure. Determine cause of slope failure, correct, and reinstall RECP
- In channels, the width of RECP used is not sufficient, this causes water to flow along the sides of RECP causing erosion. Install RECP up side slopes of ditch line as well as the bottom.

Specifications
for
Temporary Rolled Erosion Control Product



Specifications
for

Temporary Rolled Erosion Control Product

1. Channel/Slope Soil Preparation Grade and compact area of installation, preparing seedbed by loosening 2"-3" of topsoil above final grade. Incorporate amendments such as lime and fertilizer into soil. Remove all rocks, clods, vegetation or other debris so that installed RECP will have direct contact with the soil surface.
2. Channel/Slope Seeding Apply seed to soil surface prior to installation. All check slots, anchor trenches, and other disturbed areas must be reseeded. Refer to the Permanent Seeding specification for seeding recommendations.

Slope Installation

3. Excavate top and bottom trenches (12"x6"). Intermittent erosion check slots (6"x6") may be required based on slope length. Excavate top anchor trench 2' x 3' over crest of the slope.
4. If intermittent erosion check slots are required, install RECP in 6"x6" slot at a maximum of 30' centers or the mid point of the slope. RECP should be stapled into trench on 12" centers.
5. Install RECP in top anchor trench, anchor on 12" spacings, backfill and compact soil.
6. Unroll RECP down slope with adjacent rolls overlapped a minimum of 3". Anchor the seam every 18". Lay the RECP loose to maintain direct soil contact, do not pull taught.
7. Overlap roll ends a minimum of 12" with upslope RECP on top for a shingle effect. Begin all new rolls in an erosion check slot if required, double anchor across roll every 12".
8. Install RECP in bottom anchor trench (12"x6"), anchor every 12". Place all other staples throughout slope at 1 to 2.5 per square yard dependant on slope. Refer to manufacturer's anchor guide.

Channel Installation

9. Excavate initial anchor trench (12"x6") across the lower end of the project area.
10. Excavate intermittent check slots (6"x6") across the channel at 30' intervals along the channel.
11. Excavate longitudinal channel anchor slots (4"x4") along both sides of the channel to bury the edges. Whenever possible extend the RECP 2'-3' above the crest of channel side slopes.
12. Install RECP in initial anchor trench (downstream) anchor every 12", backfill and compact soil.
13. Roll out RECP beginning in the center of the channel toward the intermittent check slot. Do not pull taught. Unroll adjacent rolls upstream with a 3" minimum overlap (anchor every 18") and up each channel side slope.
14. At top of channel side slopes install RECP in the longitudinal anchor slots, anchor every 18".
15. Install RECP in intermittent check slots. Lay into trench and secure with anchors every 12", backfill with soil and compact.
16. Overlap roll ends a minimum of 12" with upstream RECP on top for a shingling effect. Begin all new rolls in an intermittent check slot, double anchored every 12".
17. Install upstream end in a terminal anchor trench (12"x6"); anchor every 12", backfill and compact.
18. Complete anchoring throughout channel at 2.5 per square yard using suitable ground anchoring devices (U shaped wire staples, metal geotextile pins, plastic stakes, and triangular wooden stakes). Anchors should be of sufficient length to resist pullout. Longer anchors may be required in loose sandy or gravelly soils.

6.3 Silt Fence



Description

Silt fence is a sediment-trapping practice utilizing a geotextile fence, topography and sometimes vegetation to cause sediment deposition. Silt fence reduces runoff's ability to transport sediment by ponding runoff and dissipating small rills of concentrated flow into uniform sheet flow. Silt fence is used to prevent sediment-laden sheet runoff from entering into downstream creeks and sewer systems.

Conditions Where Practice applies

Silt fence is used where runoff occurs as sheet flow or where flow through small rills can be converted to sheet flow. Major factors in its use are slope, slope length, and the amount of drainage area from which the fence will capture runoff. Silt fence cannot effectively treat flows in gullies, ditches or channels. For concentrated flow conditions see specifications for temporary diversions, sediment traps and sediment basins.

Planning Considerations

Alternatives: Silt Fence vs. Temporary Diversions and Settling Ponds. While silt fence requires less space and disturbs less area than other control measures there are significant disadvantages to its use. Silt fence is not as effective controlling sediment as routing runoff through a system of diversions and settling ponds. Settling ponds and earth diversions are more durable, easier to construct correctly and significantly more effective at removing sediments from runoff. Additionally earth diversions and settling ponds are less apt to fail during construction and typically require less repair and maintenance.

Proper installation is critical. Experience from ODNR and other field testing has shown that nearly 75 percent of silt fence does not function properly due to poor installation. Proper installation consists of it being installed: (1) on the contour; (2) with sufficient geotextile material buried; (3) with the fence pulled taut and supported on the downstream side by strong posts: (4) and with the fence backfilled and compacted.

Two general methods are used to install silt fence: (1) utilizing traditional method of digging the trench, installation of the fence materials, then backfilling and compaction; or (2) a method using an implement to static slice or narrow plow while installing the geotextile in the slot opening, followed by compaction and installation of posts. The latter methods generally installs silt fence more effectively and efficiently.

Silt fence is most applicable for relatively small areas with flat topography. Silt fence should be used below areas where erosion will occur in the form of sheet and rill erosion. For moderately steep areas, the area draining to the silt fence should be no larger that one quarter acre per 100 feet of fence length, the slope length no longer than 100 feet, and the maximum drainage gradient no steeper than 50 percent (2:1). This practice should be sited so that the entire fence ponds runoff and facilitates settling of suspended solids.

Design Criteria

Proper installation of silt fence requires utilizing the site topography. This is critical because the sediment removal process relies on ponding runoff behind the fence. As a ponding occurs behind the fence, coarser materials are allowed to settle out. Leaving a long, flat slope behind the silt fence maximizes areas for ponding (sediment deposition), and for water to disperse and flow over a much larger surface area of the silt fence. For silt fence to work effectively, runoff must be allowed to maintain sheet flow, to pond and to be released slowly. However, if silt fence is used without regard to a site's topography, it will typically concentrate runoff, increasing the likelihood of blocking and overtopping of the fence, thus reducing or eliminating its effectiveness.

Level Contour – For silt fence to promote deposition, it must be placed on the level contour of the land, so that flows are dissipated into uniform sheet flow that has less energy for transporting sediment. Silt fence should never concentrate runoff, which will result if it is placed up and down slopes rather than on the level contour.

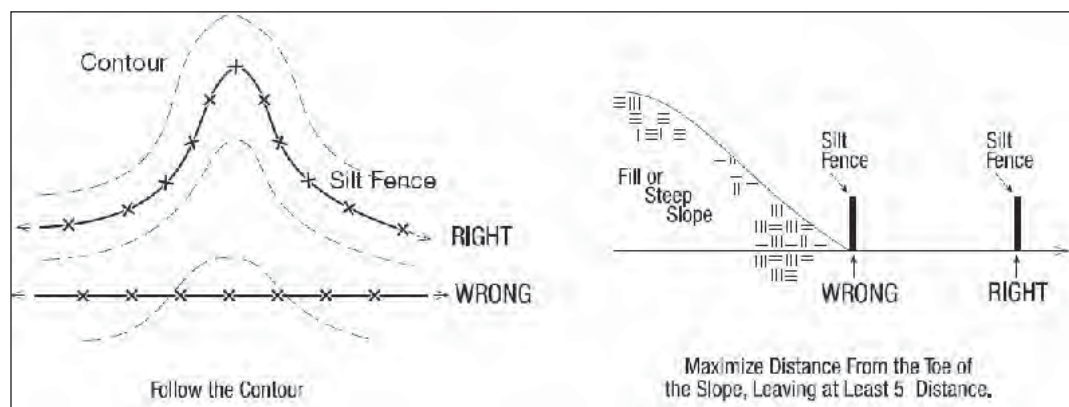


Figure 6.3.1 Silt fence layout

Flat Slopes – Slope has the greatest influence on runoff’s ability to transport sediment, therefore silt fence should be placed several feet away from the toe of a slope if at all possible, to encourage deposition. Silt fence generally should be placed on the flattest area available to increase the shallow ponding of runoff and maximize space available for deposited sediment.

Flow Around Ends – To prevent water ponded by the silt fence from flowing around the ends, each end must be constructed upslope so that the ends are at a higher elevation.

Vegetation – Dense vegetation also has the effect of dissipating flow energies and causing sediment deposition. Sediment-trapping efficiency will be enhanced where a dense stand of vegetation occurs for several feet both behind and in front of a silt fence.

Table 6.3.1 Maximum area contributing area using slope length

Maximum Slope Length Above Silt Fence		
Slope		Slope Length (ft.)
0% - 2%	Flatter than 50:1	250
2% - 10%	50:1 - 10:1	125
10% - 20%	10:1 - 5:1	100
20% - 33%	5:1 - 3:1	75
33% - 50%	3:1 - 2:1	50
> 50%	> 2:1	25

Note: For larger drainage areas, see standards for temporary diversions, sediment traps and sediment basins.

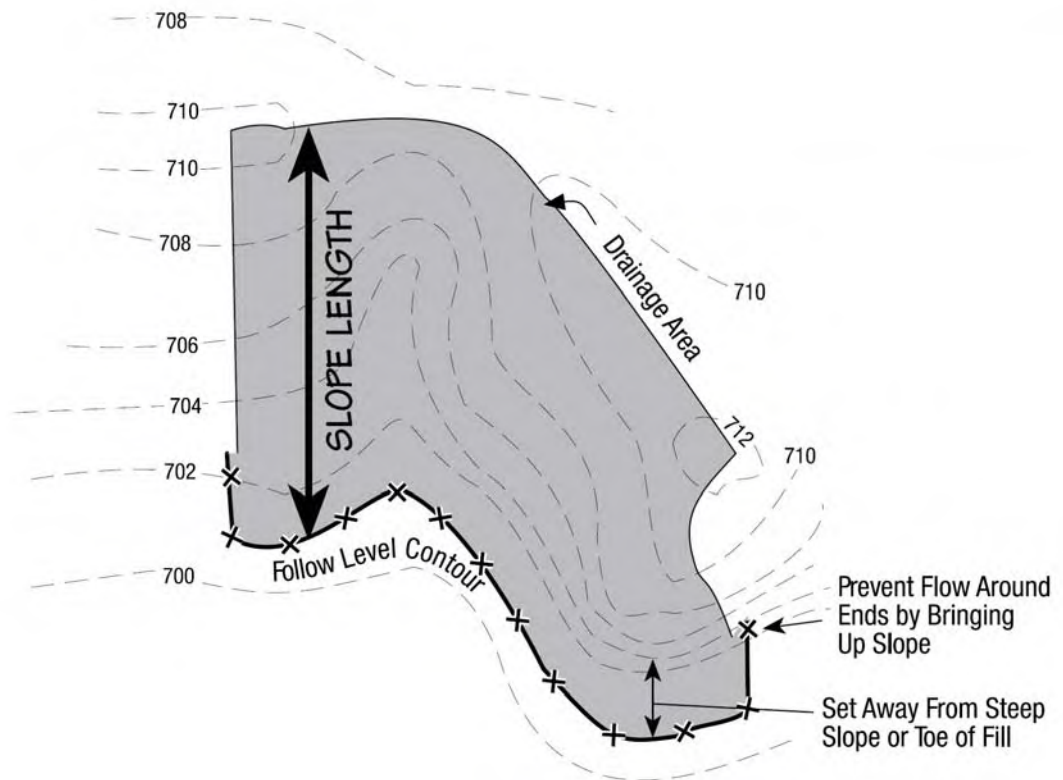


Figure 6.3.2 Silt fence and allowable drainage area

Dispersing Flow – Proper applications of silt fence allow all the intercepted runoff to pass as diffused flow through the geotextile. Runoff should never overtop silt fence, flow around the ends, or in any other way flow as concentrated flow from the practice. If any of these failures occurs, an alternative silt fence layout, or other practices are needed.

In cases where additional support of the fabric is needed, either wire or geogrid fencing may be used as a backing on the fabric. In these instances, the reinforcing material should be attached/erected first, then the fabric installed.

Materials

Fence posts shall be a minimum length of 32 inches long, composed of nominal dimensioned 2-by-2-inch hardwood of sound quality. They shall be free of knots, splits and other visible imperfections which would weaken the posts. Steel posts may be utilized in place of wood provide the geotextile can be adequately secured to the post.

Silt fence geotextile must meet the minimum criteria shown in the table below.

Table 6.3.2

Minimum criteria for Silt Fence Fabric (ODOT, 2002)		
Minimum Tensile Strength	120 lbs. (535 N)	ASTM D 4632
Maximum Elongation at 60 lbs	50%	ASTM D 4632
Minimum Puncture Strength	50 lbs (220 N)	ASTM D 4833
Minimum Tear Strength	40 lbs (180 N)	ASTM D 4533
Apparent Opening Size	≤ 0.84 mm	ASTM D 4751
Minimum Permittivity	1X10 ⁻² sec. ⁻¹	ASTM D 4491
UV Exposure Strength Retention	70%	ASTM G 4355

Maintenance

Silt Fence requires regular inspection and maintenance to insure its effectiveness. Silt fences must be inspected after each rainfall and at least daily during prolonged rainfall. Silt fence found damaged or improperly installed shall be replaced or repaired immediately.

Sediment deposits shall be routinely removed when they reach approximately one-half the height of the silt fence.

Common Problems/Concerns

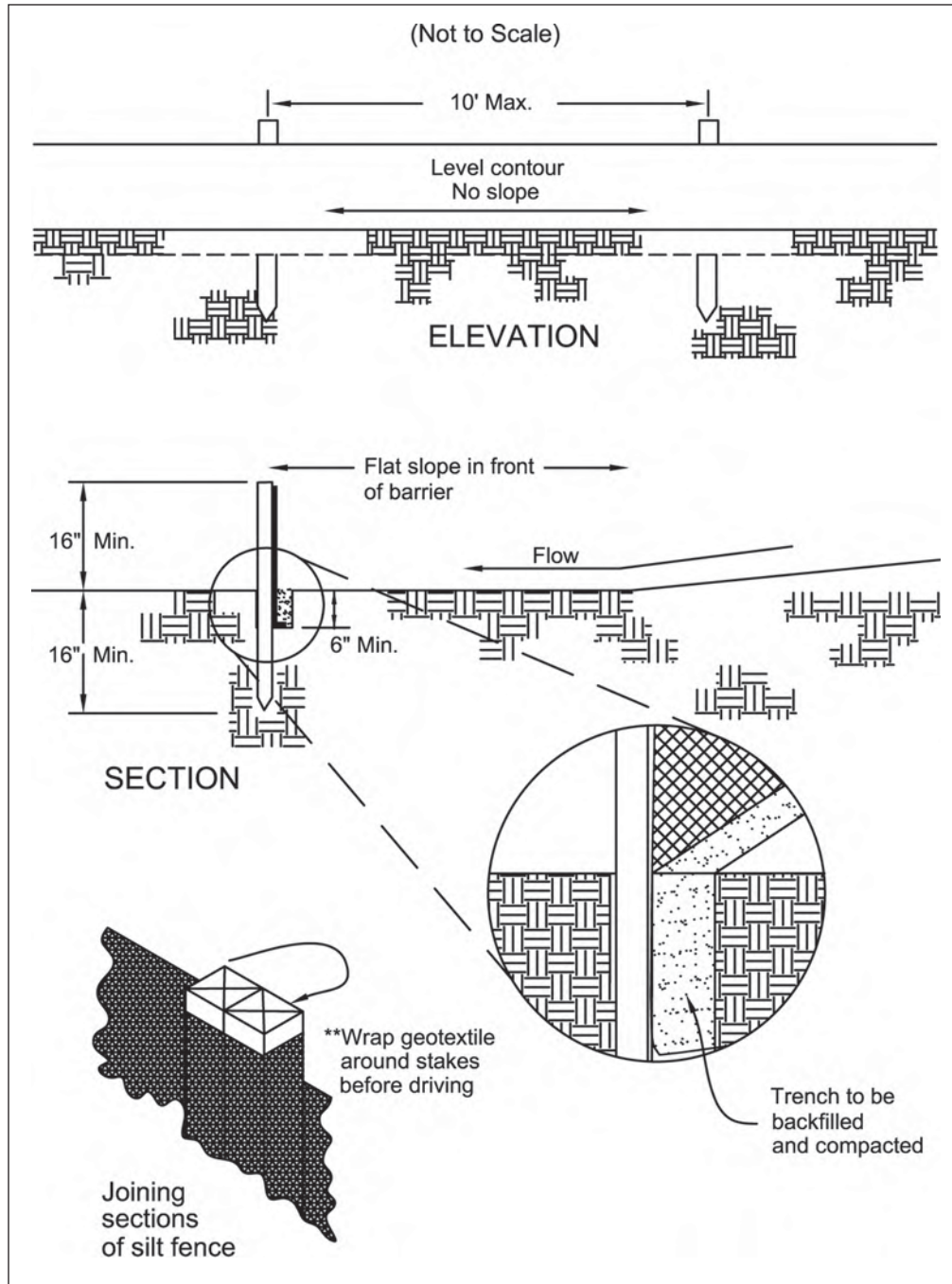
The predominant problems with silt fence regard inadequate installation or location that allows runoff to concentrate, overtop the fence, flow under the fabric or around the fence ends. If this occurs one of the following shall be performed, as appropriate:

- The location and layout of the silt fence shall be changed to conform to the level contour
- The silt fence shall be reinstalled with proper burial, backfill and compaction and support
- Accumulated sediment shall be removed
- Alternative practices shall be installed.

References

Construction and Material Specifications, January 1, 2002. State of Ohio Department of Transportation, P.O. Box 899, Columbus, Ohio 43216-0899, <http://www.dot.state.oh.us/construction/OCA/Specs/2002CMS/Specbook2002/Specbook2002.htm>

Specifications
for
Silt Fence



Specifications for **Silt Fence**

1. Silt fence shall be constructed before upslope land disturbance begins.
2. All silt fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions that may carry small concentrated flows to the silt fence are dissipated along its length.
3. Ends of the silt fences shall be brought upslope slightly so that water ponded by the silt fence will be prevented from flowing around the ends.
4. Silt fence shall be placed on the flattest area available.
5. Where possible, vegetation shall be preserved for 5 feet (or as much as possible) upslope from the silt fence. If vegetation is removed, it shall be reestablished within 7 days from the installation of the silt fence.
6. The height of the silt fence shall be a minimum of 16 inches above the original ground surface.
7. The silt fence shall be placed in an excavated or sliced trench cut a minimum of 6 inches deep. The trench shall be made with a trencher, cable laying machine, slicing machine, or other suitable device that will ensure an adequately uniform trench depth.
8. The silt fence shall be placed with the stakes on the downslope side of the geotextile. A minimum of 8 inches of geotextile must be below the ground surface. Excess material shall lay on the bottom of the 6-inch deep trench. The trench shall be backfilled and compacted on both sides of the fabric.
9. Seams between sections of silt fence shall be spliced together only at a support post with a minimum 6-in. overlap prior to driving into the ground, (see details).
10. Maintenance—Silt fence shall allow runoff to pass only as diffuse flow through the geotextile. If runoff overtops the silt fence, flows under the fabric or around the fence ends, or in any other way allows a concentrated flow discharge, one of the following shall be performed, as appropriate: 1) the layout of the silt fence shall be changed, 2) accumulated sediment shall be removed, or 3) other practices shall be installed.

Sediment deposits shall be routinely removed when the deposit reaches approximately one-half of the height of the silt fence.

Silt fences shall be inspected after each rainfall and at least daily during a prolonged rainfall. The location of existing silt fence shall be reviewed daily to ensure its proper location and effectiveness. If damaged, the silt fence shall be repaired immediately.

Criteria for silt fence materials

1. Fence post – The length shall be a minimum of 32 inches. Wood posts will be 2-by-2-in. nominal dimensioned hardwood of sound quality. They shall be free of knots, splits and other visible imperfections, that will weaken the posts. The maximum spacing between posts shall be 10 ft. Posts shall be driven a minimum 16 inches into the ground, where possible. If not possible, the posts shall be adequately secured to prevent overturning of the fence due to sediment/water loading.
2. Silt fence fabric – See chart below.

Table 6.3.2 Minimum criteria for Silt Fence Fabric (ODOT, 2002)

FABRIC PROPERTIES	VALUES	TEST METHOD
Minimum Tensile Strength	120 lbs. (535 N)	ASTM D 4632
Maximum Elongation at 60 lbs	50%	ASTM D 4632
Minimum Puncture Strength	50 lbs (220 N)	ASTM D 4833
Minimum Tear Strength	40 lbs (180 N)	ASTM D 4533
Apparent Opening Size	≤ 0.84 mm	ASTM D 4751
Minimum Permittivity	1X10 ⁻² sec.-1	ASTM D 4491
UV Exposure Strength Retention	70%	ASTM G 4355

6.5 Filter Berm



Description

Filter berms are sediment trapping practices that utilize a compost/mulch material. They are typically installed with pneumatic equipment. Filter berms reduce sediment from runoff by slowing and filtering runoff, and dissipating flow.

Conditions Where Practice Applies

Filter berms are appropriate on nearly level ground or slopes up to 5:1, where runoff occurs as sheet flow. Filter berms cannot effectively treat flows in gullies, ditches or channels. For more severe conditions see specifications for temporary diversions, sediment traps, and sediment basins.

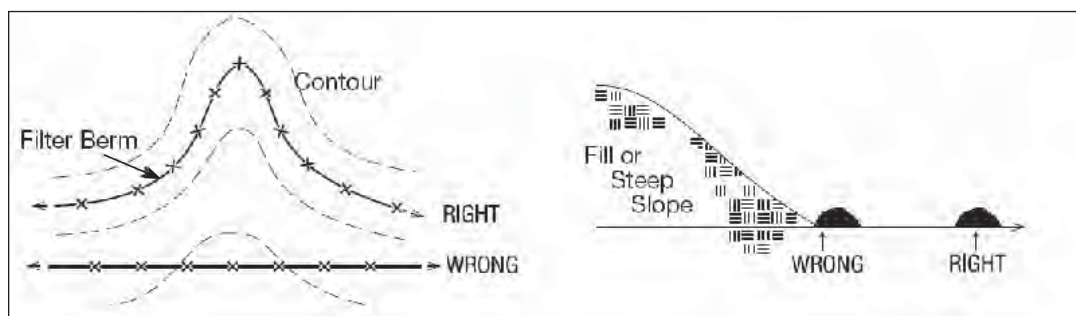
Design Criteria

Compost filter berms used as sediment control practice require an adequately constructed berm constructed on the contour, that is, on a level line across the site's topography. While silt fences rely primarily on settling, compost filter berms filter runoff as it passes through the practice. To accomplish this, runoff must be intercepted on the contour to insure that sheet flow is not concentrated into rills or channels.

Materials – Compost/mulch used for filter berms shall be weed free and derived from a well-decomposed source of organic matter. The compost shall be produced using an aerobic composting process meeting CFR 503 regulations, including time and temperature data indicating effective weed seed, pathogen and insect larvae kill. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth.

Materials should meet the following requirements: pH between 5.0-8.0; 100% passing a 3" sieve, 90% to 100% passing a 1" sieve, 70% to 100% passing a 3/4", no more than 50% shall pass a 1/4" sieve; moisture content is less than 60%; material shall be relatively free (<1% by dry weight) of inert or foreign man made materials.

Level Contour – Filter berms must be placed on the level contour of the land so that flows are dissipated into uniform sheet flow that has less energy for transporting sediment. Filter berms should never concentrate runoff, which will occur if it is placed up and down slopes rather than on the level contour.



Flat Slopes – If at all possible, filter berms should be placed away from the toe of a slope and on the flattest area available. This allows the sheet flow energy to dissipate and allows for a greater storage area for sediments.

Steeper Slopes – For placement on steeper slopes follow the spacing recommendations on the following table.

Drainage Area – Follow recommendations on following table

Table 6.5.1 Filter Berm Spacing for General Applications *Install Parallel Along Contours As Follows		
Ratio (H:V)	% Slope	Recommended Spacing
< 20:1	5% or less	300 foot with a maximum of 1 acre per 500 lineal feet
20:1 - 10:1	5 to 10%	75 foot intervals
9:1 - 5:1	10 to 20%	50 foot intervals

Flow Around Ends – To prevent water from flowing around the ends of the Filter berm each end must be constructed up-slope so that the ends are at a higher elevation.

Vegetation – Filter berm may be vegetated for a more permanent placement such as wetlands and natural areas.

References

Standard Specification for Compost for Erosion/Sediment Control (Filter Berms)

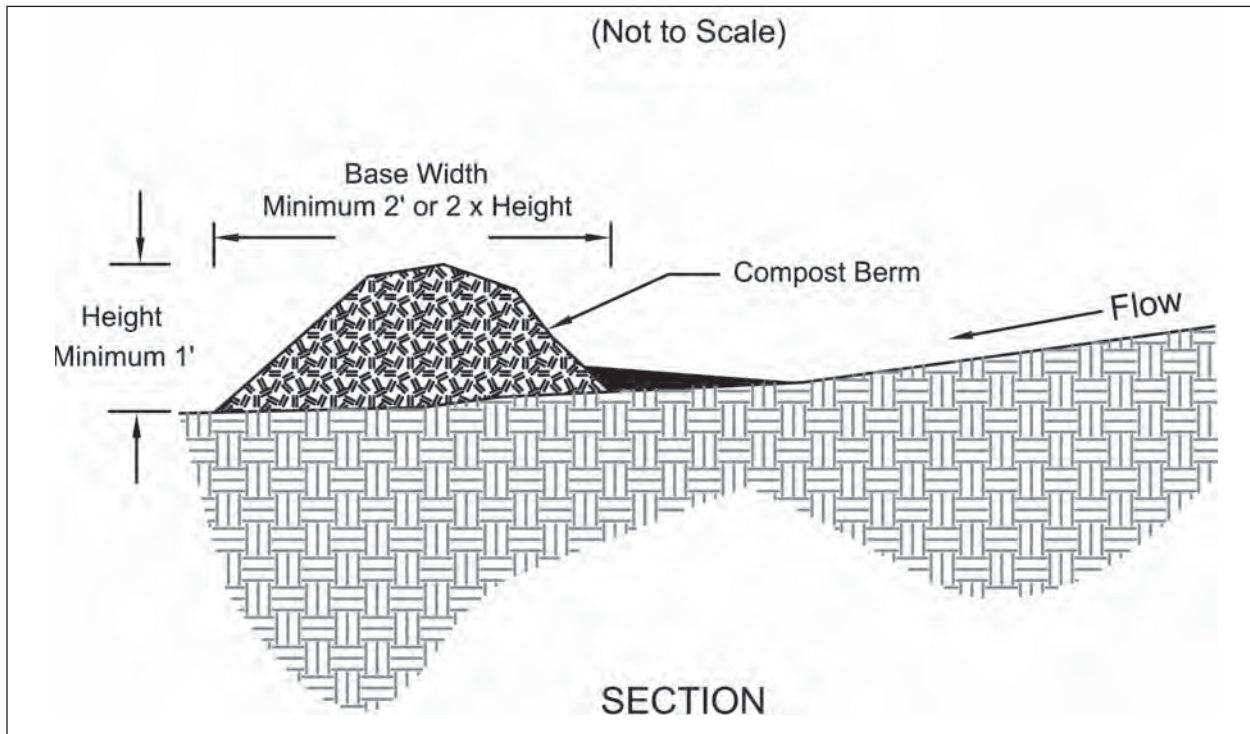
<http://www.iaasla.org/NEWS/FILES/AASHTO-Filterberm6.doc>

[www.dot.state.pa.us/Pennndot/Bureaus/ ChiefEng.nsf/spec%20filter%20berms?OpenPage-28k](http://www.dot.state.pa.us/Pennndot/Bureaus/ChiefEng.nsf/spec%20filter%20berms?OpenPage-28k)

http://tammi.tamu.edu/erosion_control_fact_sheet.pdf Using compost for eroision controls and revegetation, S. Mukhtar Texas Cooperative Extension, The Texas A & M Universtiy System.Prepared in cooperation with the Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency.

<http://www.ces.uga.edu/pubcd/B1200.htm>

Specifications
for
Filter Berm



1. **Materials** – Compost used for filter berms shall be weed, pathogen and insect free and free of any refuse, contaminants or other materials toxic to plant growth. They shall be derived from a well-decomposed source of organic matter and consist of a particles ranging from 1/4" to 3".
2. **Installation** – Filter berms will be placed on a level line across slopes, generally parallel to the base of the slope or other affected area. On slopes approaching 2:1, additional berms shall be provided at the top and as needed mid-slope.

Filter berms are not to be used in concentrated flow situations or in runoff channels.
3. **Maintenance** – Inspect filter berms after each significant rain, maintaining the berms in a functional condition at all times.

Remove sediments collected at the base of the filter berms when they reach 1/3 of the exposed height of the practice.

Where the filter berm deteriorates or fails it will be, it will be repaired or replaced with a more effective alternative.
4. **Removal** – Filter berms no longer needed will be dispersed on site in a manner that will facilitate seeding.

6.6 Filter Sock



Description

Filter socks are sediment-trapping devices using compost inserted into a flexible, permeable tube with a pneumatic blower device or equivalent. Filter socks trap sediment by filtering water passing through the berm and allowing water to pond, creating a settling of solids.

Conditions where practice applies

Filter socks are appropriate for limited drainage areas, requiring sediment control where runoff is in the form of sheet flow or in areas that silt fence is normally considered acceptable. The use of filter socks is applicable to slopes up to 2:1 (H:V), around inlets, and in other disturbed areas of construction sites requiring sediment control. Filter socks also may be useful in areas, where migration of aquatic life such as turtles, salamanders and other aquatic life would be impeded by the use of silt fence.

Planning Considerations

Filter socks are sediment barriers, capturing sediment by ponding and filtering water through the device during rain events. They may be a preferred alternative where equipment may drive near or over sediment barriers, as they are not as prone to complete failure as silt fence if this occurs during construction. Driving over filter socks is not recommended; but if it should occur, the filter sock should be inspected immediately, repaired and moved back into place as soon as possible.

Design Criteria

Typically, filter socks can handle the same water flow or slightly more than silt fence. For most applications, standard silt fence is replaced with 12" diameter filter socks. However, proper installation is especially important for them to work effectively.

Materials – Compost/mulch used for filter socks shall be weed free and derived from a well-decomposed source of organic matter. The compost shall be produced using an aerobic composting process meeting CFR 503 regulations, including time and temperature data indicating effective weed seed, pathogen and insect larvae kill. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products are not acceptable.

Materials should meet the following requirements: pH between 5.0-8.0; 100% passing a 2" sieve and a minimum of 70% greater than the 3/8" sieve; moisture content is less than 60%; material shall be relatively free (<1% by dry weight) of inert or foreign man made materials.

Level Contour – Place filter socks on the level contour of the land so that flows are dissipated into uniform sheet flow. Flow coming to filter socks must not be concentrated and the filter sock should lie perpendicular to flows.

Flat Slopes – When possible, place filter socks at a 5' or greater distance away from the toe of the slopes in order for the water coming from the slopes to maximize space available for sediment deposit (see the illustration). When this is not possible due to construction limitations, additional filter socks may be required upslope of the initial filter sock (see the chart below for appropriate slope lengths and spacing).

Flow Around Ends – In order to prevent water flowing around the ends of filter socks, the ends of the filter socks must be constructed pointing upslope so the ends are at a higher elevation.

Vegetation – For permanent areas, seeding filter socks is recommended to establish vegetation directly in the sock and immediately in front and back of the sock at a distance of 5 feet. Vegetating on and around the filter socks will assist in slowing down water for filtration creating a more effective longer-term sediment control.

Drainage Area: Generally filter socks are limited to ¼ to ½ acre drainage area per 100 foot of the sediment barrier. Specific guidance is given in the chart below.

Table 6.6.1 Maximum Slope Length Above Filter Sock and Recommended Diameter

Slope	Ratio (H:V)	8"	12"	18"	24"
0% - 2%	10% - 20%	125	250	300	350
10% - 20%	50:1 - 10:1	100	125	200	250
2% - 10%	10:1 - 5:1	75	100	150	200
20% - 33%	5:1 - 2:1		50	75	100
>50%	>2:1		25	50	75

Note: For larger drainage areas, see standards for temporary diversions, sediment traps and sediment basins.

Dispersing flow – Sheet flow and runoff should not exceed berm height or capacity in most storm events. If overflow of the berm is a possibility, a larger filter sock should be installed or an alternative sediment control should be used.

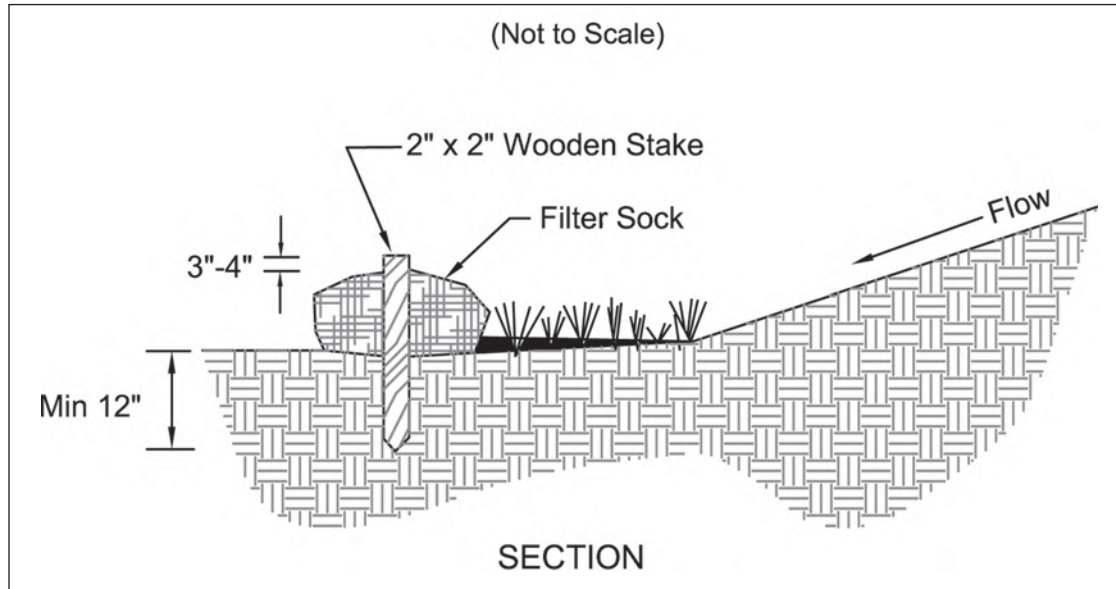
Maintenance – Filter socks should be regularly inspected to make sure they hold their shape, are ponding, and allowing adequate flow through. If ponding becomes excessive, filter socks should be replaced. Used filter socks may be cut and the compost dispersed and seeded to prevent captured sediment from being resuspended.

Removal – When construction is completed on site, the filter socks may be cut and dispersed with a loader, rake, bulldozer or other device to be incorporated into the soil or left on top of the soil for final seeding. The mesh netting material will be disposed of in normal trash container or removed by the contractor.

References

Standard Specification for Compost for Erosion/Sediment Control (Filter Berms) AASHTO Designation: MP-9 <http://www.iaasla.org/NEWS/FILES/AASHTO-Filterberm6.doc>

Specifications
for
Filter Sock



1. Materials – Compost used for filter socks shall be weed, pathogen and insect free and free of any refuse, contaminants or other materials toxic to plant growth. They shall be derived from a well-decomposed source of organic matter and consist of a particles ranging from 3/8" to 2".
2. Filter Socks shall be 3 or 5 mil continuous, tubular, HDPE 3/8" knitted mesh netting material, filled with compost passing the above specifications for compost products.

INSTALLATION:

3. Filter socks will be placed on a level line across slopes, generally parallel to the base of the slope or other affected area. On slopes approaching 2:1, additional socks shall be provided at the top and as needed mid-slope.
4. Filter socks intended to be left as a permanent filter or part of the natural landscape, shall be seeded at the time of installation for establishment of permanent vegetation.

5. Filter Socks are not to be used in concentrated flow situations or in runoff channels.

MAINTENANCE:

6. Routinely inspect filter socks after each significant rain, maintaining filter socks in a functional condition at all times.
7. Remove sediments collected at the base of the filter socks when they reach 1/3 of the exposed height of the practice.
8. Where the filter sock deteriorates or fails, it will be repaired or replaced with a more effective alternative.
9. Removal – Filter socks will be dispersed on site when no longer required in such as way as to facilitate and not obstruct seedings.

Appendix G

Certification

Hardin County Wind Project

Owner Certification (Operator)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name

Title

Signature

Date

Appendix H

Release Reporting of a Hazardous Substance

Release Reporting of a Hazardous Substance

The State Emergency Response Commission (SERC) finalized a set of eight (8) release reporting rules (3750-25-01; 3750-25-05; 3750-25-10; 3750-25-12; 3750-25-13; 3750-25-15; 3750-25-20; and 3750-25-25), effective June 30, 1993. The purpose of this section is to make you aware of your reporting obligations in case of a discharge or release.

All verbal notifications made under these rules are to be reported to the Ohio EPA's Emergency Response Section, Local Emergency Planning District which may be affected, and the jurisdictional fire department.

An owner or operator is required to report a release or discharge under 3750.06 of the Ohio Revised Code anytime there is a release or spill of a regulated chemical which exceeds its assigned Reportable Quantity (RQ) and leaves the facility property line. The regulated substances subject to the release reporting requirements are referenced below.

Materials Subject to Release Reporting

- Extremely Hazardous Substances 40 CFR; Part 355; Appendix A and B,
- CERCLA Hazardous Substances 40 CFR Part 302; Table 302.4, and
- Oil (definition includes without limitation to, gasoline, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil).
- The Reportable Quantity (RQ) for the discharge of oil including crude oil into or upon navigable waters is an amount which causes a visible film or sheen upon the surface of the water.
- The RQ for the release of oil into the environment, excluding navigable waters, is an amount of 25 gallons or more.
- The RQ for the release of crude oil from an oil and gas extraction storage facility into the environment, excluding navigable waters, is 210 gallons.

Verbal Notification Requirement

The verbal notification to the fire department, LEPC, and Ohio EPA shall be made within 30 minutes of knowledge of the release, unless notification within that timeframe is impractical due to uncertain circumstances. In addition, calls to The National Response Center (NRC) shall be made for those reportable quantity releases involving CERCLA hazardous substances or oil to navigable waters as soon as possible. The National Response Center (NRC) 24-hour number is 1-800-424-8802.

The release notification for 24-hour reporting of spills in the State of Ohio is:

In Ohio call: 1-800-282-9378

If the 1-800 number does not work, call:
(614) 224-0946

In addition, facility must call:

- LEPC emergency coordinator
- Jurisdictional fire department

Be prepared to relay as much of the information listed below as is known or can be estimated at the time of reporting. Please remember this is an initial report and estimates can be corrected in your follow-up emergency notice report.

- Name and phone number of the person to contact for further information.
- Location and source of the release or discharge.
- Chemical name or identity of any substance involved in the release or discharge.
- Is the substance an extremely hazardous substance.
- Estimate of the quantity (gallons or pounds) discharged into the environment.
- Time and duration of the release or discharge.
- The environmental medium or media into which the substance was released or discharged.
- Potential health effects associated with the release or discharge of the substance.
- Report precautions taken, including evacuation, remediation, or other proposed response actions.

This information is required under ORC Section 3750.06(C) and Rule 3750-25-25(A)(1) of the Ohio Administrative Code (OAC).

Written Follow-up Requirements

After the release or discharge, written follow-up emergency notice must be submitted within 30 days to the Ohio EPA Emergency Response Section and the local planning committee of the planning district in which the release or discharge occurred, unless the release was from a vessel, then the report is sent only to the SERC. This follow-up emergency notice is your company's opportunity to explain in its own words the circumstances and actions relating to the release of pollutants to the environment. Your written emergency notice should follow the question sequence as indicated below. If any of the questions are not applicable to your incident, indicate N/A (not applicable) for that item.

1. Who

- Complete facility name, address and telephone number of the facility from which the release occurred. Complete name of owner and/or operator.

2. When

- Actual time, date, and duration of the discharge or release.
- Actual time and date of discovery of the release or discharge.
- Actions taken to respond to and contain the release or discharge.
- Indicate the spill number assigned by Ohio EPA. (If you do not know this number, call a duty officer during business-hours and ask. The telephone number is (614) 644-3194). If the National Response Center was notified, please provide their assigned case number.

3. Location

- Location of facility from which the release or discharge occurred.
- Location of release: county, township, and city.
- Longitude and latitude of the release, if known.
- Distance and direction from nearest intersection or milepost if it was a transportation-related release or discharge.

4. Product Release

- Common and/or technical name of the material released or discharged and CAS Numbers.
- What was the quantity and duration of the discharge? Indicate volume in gallons or pounds.

5. Environmental Impact

- Name of the environmental medium or media affected (i.e. navigable waters, land, and/or air). If navigable waters, please identify.
- What was the length of area of the navigable waterway affected?
- What was the ground surface area (square feet or yards) and depth of soil contamination?
- To the extent information is available; identify damage to wildlife and/or vegetation.
- To the extent information is available; identify impact to human health and safety (i.e. evacuations, exposure, etc.)
- Where appropriate, identify medical advice provided for exposed individuals and or local medical personnel.

6. Monitoring and Detection

- If the release or discharge was monitored, indicate the method of detection and concentrations detected.
- If the release was air-borne, how was the wind direction and speed determined?
- Was the public warned, and if so, how?

7. Mitigation, Containment Action

- How much product or waste was recovered or neutralized?
- How was the material recovered or neutralized?
- Were any other actions taken to reduce the impact of the discharge (containment, adsorbents, on-site treatment, etc.)?

8. Prevention Measures

- Please provide plans to prevent recurrence of the discharge or release which may occur at this specific source. This may include: employee training, replacement of equipment, construction, or security measures such as lighting, fencing or locks.

9. Health Risks

- List known or anticipated acute and chronic health risks of exposure associated with the substances which were released.

10. Permit Numbers

- Indicate any air, water, or other permit numbers which may be pertinent to this incident (voluntary information).
- If this is a NPDES/air permit, please enclose a copy of your current effluent/emission limitations.

11. Chronology

- Provide a chronological review of the incident. Include a chronology of communications with state and local government.

12. Documentation

- Provide any reports or other documents which pertain to the incident (e.g. accident reports, manifest, bills of lading, and laboratory analyses).

13. Causes

- Describe any extenuating circumstances which caused the discharge.

14. Economic Impact

(This information is voluntary)

- Estimate the dollar value, if any, of the spilled product.
- What was the equipment damage cost (estimate)?
- What was the cost of spill cleanup (estimate)?
- What are the estimated costs of spill prevention to eliminate possible reoccurrence of this event?

This information is required pursuant to ORC Section 3750.06(D) and OAC Rule 3750-25-25(A) (2).

The written emergency notice must be submitted within 30 days of the release or discharge to:

Ohio EPA, DERR—ER
Lazarus Government Center
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049
ATTN: ER Records Mgmt.

Note: the 30-day written spill release notice to the Ohio EPA/SERC can be submitted by attaching the report and emailing to: cindy.stanwick@epa.ohio.gov. Please reference the Ohio EPA, Emergency Response spill number on the email subject line.

County LEPC Emergency Coordinator (see pages 23-30)

The statute provides that if significant additional information regarding the mandatory or voluntary information submitted becomes known during the period between submission of the written report and one (1) year after the release or discharge, the owner or operator shall submit to the LEPC and the Ohio EPA an updated written notice within three (3) days after learning of the additional information.

If this is the second oil spill release at this location within a 12 month period, or a release of over 1,000 gallons which has reached water, then you must submit a copy of your Spill Prevention Control and Counter-measure Plan (SPCC) to the U.S. EPA Regional Administrator and to Ohio EPA within 60 days from the time of the discharge as required by 40 CFR 112.4. Your SPCC plan may be submitted with your response to the 30-day written follow-up report. You may obtain SPCC information from U.S. EPA, by contacting their Hotline Center at 800-424-9346.

Appendix I

Notice of Termination (NOT) Form and Instructions



Notice of Termination (NOT) Form Instructions For Ohio EPA General Permits

Where to file NOT form

NOTs must be sent to the following address:

Ohio Environmental Protection Agency
General Permit Program
P.O. Box 1049
Columbus, OH 43216-1049

Completing the Form

Please complete the fill-in form on-line at www.epa.ohio.gov/dsw/storm/stormform.aspx or print legibly in the appropriate areas only. Forms transmitted by FAX will not be accepted. Complete all sections of the NOT form. Incomplete forms will be returned to the applicant for resubmittal.

Please place each character slightly above the appropriate line. Abbreviate if necessary to stay within the space allowed for each item.

Section I - Permit Information

Enter the existing Ohio NPDES general permit number assigned to the facility or site for which you are submitting this NOT. If you do not know the permit number, contact the Ohio EPA Storm Water Section at (614) 644-2001.

Section II - Owner/Applicant Information/Mailing Address

This information should appear on the NOT form as it appears on the original Notice of Intent (NOI) form.

Give the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in the application. The name of the operator may or may not be the same as the facility. The operator of the facility is the legal entity which controls the facility's operation rather than the plant or site manager. For construction activities, the responsible party is the owner or the developer of the property. Do not use a colloquial name. Give the name and phone number of a contact person who is responsible for addressing NPDES permit requirements. Enter the complete address and telephone number of the operator (provide phone number as: area code exchange number).

Section III - Facility/Site Location Information

This information should appear on the NOT form as it appears on the original Notice of Intent (NOI) form.

Enter the facility's or site's official or legal name and complete address, including city, state, zip code, county, township, and section. If the facility lacks a street address, indicate the street name and approximate address number.

Section IV - Reason for Termination

Indicate your reason for submitting this NOT by placing an "x" on the appropriate space. You may indicate more than one reason.

Standard Certification

The standard certification should be completed except where a specific certification (listed below) is required.

Industrial Storm Water and Coal Mining Activity Certification Only

This certification should be completed only if you are submitting this NOT to terminate permit coverage under the storm water general permit associated with industrial activity or the general permit associated with coal mining activity.

Construction Certification Only

This certification should be completed only if you are submitting this NOT to terminate permit coverage under the storm water general permit associated with construction activity.

Note for all certifications: provide date as month day year using 2 digits for each space.

Signatory Requirements

Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows.

For a corporation; by a responsible corporate officer, which means: (1) a president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision-making functions for the corporation; or (2) the manager of one or more manufacturing, production or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship; by a general partner or the proprietor; or

For a municipality, state, federal, or other public facility; by either a principal executive officer or ranking elected official



Notice of Termination (NOT) of Coverage Under Ohio Environmental Protection Agency General NPDES Permit

Division of Surface Water

(Read accompanying instructions carefully before completing this form.)

Submission of this NOT constitutes notice that the party identified in Section II of this form is no longer authorized to discharge into state waters under the NPDES general permit program. NOTE: All necessary information must be provided on this form. Do not use correction fluid on this form. Forms transmitted by fax will not be accepted. There is no fee associated with submitting this form.

I. Permit Information:

NPDES General Permit Number: OH

Facility General Permit Number:

II. Owner/Applicant Information/Mailing Address

Company (Applicant) Name:

Mailing (Applicant) Address:

City: State: Ohio Zip Code: -

Contact Person: Phone: () - Fax: () -

Contact Email:

III. Facility/Site Location Information

Facility Name:

Facility Address/Location:

City: State: Ohio Zip Code: -

County: Township(s): Section:

Facility Contact Person: Phone: () - Fax: () -

Facility Contact Email:

IV. Reason for Termination

Transfer of Ownership ☐ Cease to Discharge ☐ Facility Closed ☐

Project Completed ☐ Obtained Individual Permit ☐

V. Certifications

Standard Certification:

I certify under penalty of law that all discharges authorized by the NPDES general permit have been eliminated or that I am no longer the operator of the facility. I understand that by submitting this NOT, I am no longer authorized to discharge under this general permit and that discharging pollutants to waters of the state without an NPDES permit is unlawful under ORC 6111.

Name (typed): Title:

Signature: Date:

Industrial Storm Water and Coal Mining Activity Certification Only:

I certify under penalty of law that all discharges associated with the identified facility that are authorized by the above referenced NPDES general permit have been eliminated, that I am no longer the operator of the facility, or in the case of a coal mine that the SMCRA bond has been released by ODNR-Division of Reclamation. I understand that by submitting this NOT, I am no longer authorized to discharge storm water associated with industrial activity under this general permit, and that discharging pollutants in storm water associated with industrial activity to waters of the state is unlawful under ORC 6111 where the discharge is not authorized by an NPDES permit.

Name (typed): Title:

Signature: Date:

Storm Water Construction Activity Certification Only:

For non-residential developments, I certify under penalty of law that, prior to the submittal of this NOT, all elements of the storm water pollution prevention plan have been completed, the disturbed soil at the identified facility have been stabilized and temporary erosion and sediment control measures have been removed at the appropriate time, or all storm water discharges associated with construction activity from the identified facility that are authorized by the above referenced NPDES general permit have otherwise been eliminated.

For residential developments only, I certify under penalty of law that, prior to the submittal of this NOT, either (i) temporary stabilization has been completed and the lot, which includes a home, has been transferred to the homeowner; (ii) final stabilization has been completed and the lot, which does not include a home, has been transferred to the property owner; or (iii) no stabilization has been implemented on a lot, which includes a home, and the lot has been transferred to the homeowner.

I understand that, by submitting this NOT, I am no longer authorized to discharge storm water associated with construction activity by the general permit, and that discharging pollutants in storm water associated with construction activity to waters of the state is unlawful under ORC 6111 where the discharge is not authorized by an NPDES permit.

Name (typed): Title:

Signature: Date:

Appendix J

Construction Site Inspection Checklist



Construction Site Inspection Checklist for OHC000004

By making use of some simple Best Management Practices (BMPs) a construction site operator can do his or her share to protect Ohio's water resources from the harmful effects of sediment. The topography of the site and the extent of the construction activities will determine which of these practices are applicable to any given site, but the BMPs listed here are applicable to most construction sites. For details on the installation and maintenance of these BMPs, please refer to the current ***Rainwater and Land Development, Ohio's Standards for Storm Water Management Land Development and Urban Stream Protection*** by the Ohio Department of Natural Resources (ODNR) Division of Soil and Water Conservation. The manual is available at <http://ohiodnr.com/soilandwater/water/rainwater/default/tabid/9186/Default.aspx> or by contacting your county Soil and Water Conservation District.

Temporary Stabilization

This is the most effective BMP. All disturbed areas that will lie dormant for over 14 days must be stabilized within 7 days of the date the area becomes inactive. The goal of temporary stabilization is to provide cover, quickly. Areas within 50 feet of a stream must be stabilized within 2 days of inactivity. This is accomplished by seeding with fast-growing grasses then covering with straw mulch. Apply only mulch between November 1 and March 31. To minimize your costs of temporary stabilization, leave natural cover in place for as long as possible. Only disturb areas you intend to work within the next 14 days.

Construction Entrances

Construction entrances are installed to minimize off-site tracking of sediments. A stone access drive should be installed at every point where vehicles enter or exit the site. Every individual lot should also have its own drive once construction on the lot begins.

Sediment Ponds

Sediment ponds are required for construction areas with concentrated runoff, when the design capacity of silt fence or inlet protection is exceeded, or for drainage areas with 10 or more disturbed areas. There are two types of sediment ponds: sediment basins and sediment traps. A sediment trap is appropriate where the contributing drainage area is 10 acres or less. The outlet is an earthen embankment with a simple stone spillway. A sediment basin is appropriate for drainage areas larger than 10 acres. The outlet is an engineered riser pipe with a skimmer or similar device used to dewater the pond at the surface. Often a permanent storm water management pond, such as a retention or detention basin, can be modified to act as a sediment basin during construction. All sediment ponds must be installed within 7 days of first grubbing the area they control, provide a minimum dewatering zone of 67 cubic yards per acre of total contributing drainage area and a sediment settling zone of 34 cubic yards per disturbed acre below the level of the outlet. Sediment basins must be designed to drain the dewatering zone over a 48-hour period.

Silt Fence

This is typically used at the perimeter of a disturbed area. It's only for small drainage areas on relatively flat slopes or around small soil storage piles. Not suitable where runoff is concentrated in a ditch, pipe or through streams. For large drainage areas where flow is concentrated, collect runoff in diversion berms or channels and pass it through a sediment pond prior to discharging it from the site. Combination barriers constructed of silt fence supported by straw bales or silt fence embedded within rock check dams may be effective within small channels. As with all sediment controls, silt fence must be capable of pooling runoff so that sediment can settle out of suspension. Silt fence must be installed within 7 days of first grubbing the area it controls.

Inlet Protection

This must be installed on all yard drains and curb drains when these inlets do not drain to a sediment trap or basin. Even if there is a sediment trap or basin, inlet protection is still recommended, as it will increase the overall sediment removal efficiency. These are best used on roads with little or no traffic. If working properly, inlet protection will cause water to pond. If used on curb inlets, streets will flood temporarily during heavy storms. Check with your municipality before installing curb inlet protection. They may prefer an alternate means of sediment control such as silt fence or ponds.

Permanent Stabilization

All areas at final grade must be permanently stabilized within 7 days of reaching final grade. This is usually accomplished by using seed and mulch, but special measures are sometimes required. This is particularly true in drainage ditches or on steep slopes. These measures include the addition of topsoil, erosion control matting, rock rip-rap or retaining walls. Permanent seeding should be done March 1 to May 31 and August 1 to September 30. Dormant seeding can be done from November 20 to March 15. At all other times of the year, the area should be temporarily stabilized until a permanent seeding can be applied.

Non-Sediment Pollution Control

Although sediment is the pollutant of greatest concern on most construction sites, there are other sources of pollution. Most of these BMPs are easy to implement with a little bit of planning and go a long way toward keeping your site clean and organized. Please be sure to inform all contractors how these BMPs affect their operations on the site, particularly those that will be working near a stream.

Inspection Sheet

INSPECTIONS MUST BE CONDUCTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF A 0.5" OR GREATER RAINFALL. ALL SEDIMENT CONTROLS MUST BE INSTALLED PRIOR TO GRADING AND WITHIN 7 DAYS OF FIRST GRUBBING

GENERAL INSPECTION INFORMATION

Construction Site Inspection Date: _____ Inspector Name: _____

Inspector Title: _____ Qualifications/Certifications: _____

Storm Events of the Last 7 Days

Storm Event Date	Storm Event Time	Storm Event Duration	Total Rainfall Amount (inches)	Discharge Occur? (Y/N)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Weather Information at the Time of Inspection

Temperature _____ Climate (Sunny, Cloudy, Rain)? _____ Is Storm Water Being Discharged? _____

Sketch or Small Site Map

Along with a narrative inspection log, Ohio EPA recommends the inspector use a sketch or a reduced photocopy of the site plan showing the location of storm water outfalls and storm drain inlets as well as the location and types of control measures. Problems observed at these locations, or at other locations on the construction site, should be highlighted and any corrective measures undertaken should be drawn in and noted in detail on the front side of the sketch. This method will also be helpful as the permittee is required to update the SWP3 to reflect current site conditions.

CONSTRUCTION ENTRANCES

Key things to look for ...

	Yes	No
1. Has the drive been constructed by placing geotextile fabric under the stone?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the stone 2-inch diameter?	<input type="checkbox"/>	<input type="checkbox"/>
3. Has the stone been placed to a depth of 6 inches, with a width of 10 feet and a length of at least 50 feet (30 feet for entrances onto individual sublots)?	<input type="checkbox"/>	<input type="checkbox"/>
4. If the drive is placed on a slope, has a diversion berm been constructed across the drive to divert runoff away from the street or water resource?	<input type="checkbox"/>	<input type="checkbox"/>
5. If drive is placed across a ditch, was a culvert pipe used to allow runoff to flow across the drive?	<input type="checkbox"/>	<input type="checkbox"/>

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

SEDIMENT PONDS

Key things to look for ...

	Yes	No
1. Are concentrated flows of runoff directed to a sediment pond?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is sheet-flow runoff from drainage areas that exceed the design capacity of silt fence (generally 0.25 acre or larger) directed to a sediment pond?	<input type="checkbox"/>	<input type="checkbox"/>
3. Is runoff being collected and directed to the sediment pond via the storm sewer system or via a network of diversion berms and channels?	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the sediment pond dewatering zone appropriately sized (67 cubic yards per acre of total drainage area)?	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the sediment pond sediment settling zone appropriately sized (34 cubic yards per acre of disturbed area)?	<input type="checkbox"/>	<input type="checkbox"/>
6. Is the sediment basin designed to be dewatered at the surface through the use of a skimmer or another similar surface water dewatering device?	<input type="checkbox"/>	<input type="checkbox"/>
7. Is the sediment basin designed so that the dewatering zone will drain in no less time than 48 hours?	<input type="checkbox"/>	<input type="checkbox"/>
8. Have the embankments of the sediment pond and the areas that lie downstream of the pond been stabilized?	<input type="checkbox"/>	<input type="checkbox"/>
9. For sediment basins that dewater 100% between storms, is the riser pipe wrapped with chicken wire and double wrapped with geotextile fabric?	<input type="checkbox"/>	<input type="checkbox"/>
10. Does the riser have 1-inch diameter holes spaced 4 inches apart, both horizontally and vertically?	<input type="checkbox"/>	<input type="checkbox"/>
11. For sediment basins, which dewater 60% between storms, is the diameter of the dewatering hole per plan (see Chapter 6 of <i>Rainwater</i> manual)?	<input type="checkbox"/>	<input type="checkbox"/>
12. For sediment traps, is there geotextile under the stone spillway and is the spillway saddle-shaped?	<input type="checkbox"/>	<input type="checkbox"/>
13. For sediment traps, which dewater 100% between storms, is the dewatering pipe end-capped, no larger than 6 inches in diameter, perforated and double-wrapped in geotextile?	<input type="checkbox"/>	<input type="checkbox"/>
14. Is the length-to-width ratio between inlet(s) and outlet at least 2:1? NOTE: If not, a baffle should be added to lengthen the distance.	<input type="checkbox"/>	<input type="checkbox"/>
15. Is the depth from the bottom of the basin to the top of the primary spillway no more than 3 to 5 feet?	<input type="checkbox"/>	<input type="checkbox"/>
16. For a modified storm water pond being used as a sediment pond, is the connection between the riser pipe and the permanent outlet water-tight?	<input type="checkbox"/>	<input type="checkbox"/>
17. Was the basin installed prior to grading the site?	<input type="checkbox"/>	<input type="checkbox"/>
18. Is it time to clean-out the sediment pond to restore its original capacity? Generally, sediment should be removed from the sediment settling zone once it's half-full. Stabilize the dredged sediments with seed and mulch.	<input type="checkbox"/>	<input type="checkbox"/>

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

SILT FENCE

Key things to look for ...

	Yes	No
1. Is the fence at least 4" to 6" into the ground?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the trench backfilled to prevent runoff from cutting underneath the fence?	<input type="checkbox"/>	<input type="checkbox"/>
3. Is the fence pulled tight so it won't sag when water builds up behind it?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are the ends brought upslope of the rest of the fence so as to prevent runoff from going around the ends?	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the fence placed on a level contour? If not, the fence will only act as a diversion.	<input type="checkbox"/>	<input type="checkbox"/>
6. Have all the gaps and tears in the fence been eliminated.	<input type="checkbox"/>	<input type="checkbox"/>
7. Is the fence controlling an appropriate drainage area? Refer to Chapter 6 of <i>Rainwater</i> manual. RULE OF THUMB: Design capacity for 100 linear feet of silt fence is 0.5 acres for slopes < 2%, 0.25 acres for slopes 2% to 20%, & 0.125 acres for slopes 20% or more. Generally, no more than 0.25 acres should lie behind 100 feet of fence at 2% to 10% slope, i.e., the distance between the fence and the top of the slope behind it should be no more than 125 feet. The allowable distance increases on flatter slopes and decreases for steeper slopes.	<input type="checkbox"/>	<input type="checkbox"/>

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

INLET PROTECTION

Key things to look for ...

	Yes	No
1. Does water pond around the inlet when it rains?	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the fabric been replaced when it develops tears or sags?	<input type="checkbox"/>	<input type="checkbox"/>
3. For curb inlet protection, does the fabric cover the entire grate, including the curb window?	<input type="checkbox"/>	<input type="checkbox"/>
4. For yard inlet protection, does the structure encircle the entire grate?	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the fabric properly entrenched or anchored so that water passes through it and not under it?	<input type="checkbox"/>	<input type="checkbox"/>
6. For yard inlet protection, is the fabric properly supported to withstand the weight of water and prevent sagging? The fabric should be supported by a wood frame with cross braces, or straw bales.	<input type="checkbox"/>	<input type="checkbox"/>
7. Is sediment that has accumulated around the inlet removed on a regular basis?	<input type="checkbox"/>	<input type="checkbox"/>

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

TEMPORARY STABILIZATION

Key things to look for ...

	Yes	No
1. Are there any areas of the site that are disturbed, but will likely lie dormant for over 14 days?	<input type="checkbox"/>	<input type="checkbox"/>
2. Have all dormant, disturbed areas been temporarily stabilized in their entireties?	<input type="checkbox"/>	<input type="checkbox"/>
3. Have disturbed areas outside the silt fence been seeded or mulched?	<input type="checkbox"/>	<input type="checkbox"/>
4. Have soil stockpiles that will sit for over 14 days been stabilized?	<input type="checkbox"/>	<input type="checkbox"/>
5. Has seed and mulch been applied at the proper rate? In general, seed is applied at 3 to 5 lbs per 1000 sq ft and straw mulch is applied at 2-3 bales per 1000 sq ft.	<input type="checkbox"/>	<input type="checkbox"/>
6. Has seed or mulch blown away? If so, repair.	<input type="checkbox"/>	<input type="checkbox"/>

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

PERMANENT STABILIZATION

Key things to look for ...

	Yes	No
1. Are any areas at final grade?	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the soil been properly prepared to accept permanent seeding?	<input type="checkbox"/>	<input type="checkbox"/>
3. Has seed and mulch been applied at the appropriate rate (see Chapter 7 of the <i>Rainwater</i> manual)?	<input type="checkbox"/>	<input type="checkbox"/>
4. If rainfall has been inadequate, are seeded areas being watered?	<input type="checkbox"/>	<input type="checkbox"/>
5. For drainage ditches where flow velocity exceeds 3.5 ft/s from a 10-year, 24-hour storm has matting been applied to the ditch bottom?	<input type="checkbox"/>	<input type="checkbox"/>
6. If the flow velocity exceeds 5.0 ft/s, has the ditch bottom been stabilized with rock rip-rap? NOTE: Rock check dams may be needed to slow the flow of runoff.	<input type="checkbox"/>	<input type="checkbox"/>
7. Has rock rip-rap been placed under all storm water outfall pipes to prevent scouring in the receiving stream or erosion of the receiving channel?	<input type="checkbox"/>	<input type="checkbox"/>
8. For sites with steep slopes or fill areas, is runoff from the top of the site conveyed to the bottom of the slope or fill area in a controlled manner so as not to cause erosion?	<input type="checkbox"/>	<input type="checkbox"/>

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

NON-SEDIMENT POLLUTION CONTROL

Key things to look for ...

	Yes	No
1. Has an area been designated for washing out concrete trucks? Washings must be contained on site within a bermed area until they harden. The washings should never be directed toward a watercourse, ditch or storm drain.	<input type="checkbox"/>	<input type="checkbox"/>
2. Is waste and packaging disposed of in a dumpster? Do not burn them on site.	<input type="checkbox"/>	<input type="checkbox"/>
3. Are fuel tanks and drums of toxic and hazardous materials stored within a diked area or trailer and away from any watercourse, ditch or storm drain?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are streets swept as often as necessary to keep them clean and free from sediment? NOTE: Sediment should be swept back onto the lot - not down the storm sewers.	<input type="checkbox"/>	<input type="checkbox"/>
5. Are stockpiles of soil or other materials stored away from any watercourse, ditch or storm drain?	<input type="checkbox"/>	<input type="checkbox"/>
6. Have stream crossings been constructed entirely of non-erodible material?	<input type="checkbox"/>	<input type="checkbox"/>
7. If an area of the site is being dewatered, is it being pumped from a sump pit or is the discharge directed to a sediment pond? NOTE: if you must lower ground water, the water may be discharged to the receiving stream as long as the water remains clean. Be sure not to co-mingle the clean ground water with sediment-laden water or to discharge it off-site by passing it over disturbed ground.	<input type="checkbox"/>	<input type="checkbox"/>

Note areas where repairs or maintenance is needed or where this practice needs to be applied:

Appendix K

SWP3 Checklist for Construction Activities



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

Storm Water Pollution Prevention Plan (SWP3) Checklist for Construction Activities (OHC000004)

Part III.G.1 - Site Description				
Does the SWP3.....	Y	N	N/A	Comments
(a) describe the nature and type of construction activity (e.g., low density residential, shopping mall, highway, etc.)?	X			Section 2.1 of the SWP3
(b) describe the total area of the site that is expected to be disturbed (i.e., the area of grubbing, clearing, excavating, filling, or grading including off-site borrow areas)?	X			Section 2.2 of the SWP3
(c) include a calculation of the runoff coefficients for both the pre-construction and post-construction site conditions?	X			Section 2.4 of the SWP3
(d) include an estimation of the impervious area and percent imperviousness as a result of the construction activity?	X			Section 2.3 of the SWP3
(e) include any existing data describing the soil? <i>NOTE: If this data is not available, it does not need to be included.</i>	X			Section 2.5 of the SWP3
provide any information on the quality of the storm water discharge from the construction site? <i>NOTE: If this data is not available, it does not need to be included.</i>	X			Section 2.5 of the SWP3
(f) include any information about prior land uses at the site (e.g., was the property used to manage solid or hazardous waste)?	X			Section 2.6 in the SWP3
(g) include an implementation schedule which describes the sequence of major construction operations (i.e., grubbing, excavating, grading, utilities and infrastructure installation) and the implementation of erosion, sediment and storm water management practices or facilities to be employed during each operation of the sequence?	X			Section 2.7 of the SWP3
(h) include the name(s) or location(s) of the initial and subsequent surface water bodies receiving the storm water discharge?	X			Section 2.8 of the SWP3
include the areal extent and description of the wetland or other special aquatic sites which will be disturbed and/or will receive the storm water discharges?	X			Section 2.5 of the SWP3
(i) include a detail drawing of a typical individual lot with shown sediment and erosion controls for construction sites with no centralized sediment controls (e.g., a sediment settling pond or inlet protection), which receives drainage from multiple lots?			X	
(j) include the location and description of storm water discharges associated with dedicated asphalt and/or concrete batch plants covered by the NPDES construction storm water general permit?			X	
(k) include a copy of the NPDES construction storm water general permit?	X			Appendix A
(l) include a cover page identifying the name and location of the site, the name and contact information for site operators and SWP3 authorization agents as well as preparation date, start date, and completion date?	X			Cover page
(m) include a modification log to be updated in the field?	X			Appendix D

Part III.G.1.n - Site Map Requirements				
Does the SWP3 site map.....	Y	N	N/A	Comments
(i) describe the limits of earth-disturbing activity of the site including associated off-site borrow or spoil areas that are not addressed by a separate NOI and associated SWP3?	X			Figures 4-1 through 4-20
(ii) describe the soils types depicted for all areas of the site, including locations of unstable or highly erodible soils?	X			Section 2.5 of the SWP3 AND Figure 2
(iii) show existing and proposed contours to delineate drainage watersheds expected during and after major grading activities as well as the size of each drainage watershed, in acres?	X			Figures 4-1 through 4-20
(iv) show surface water locations including springs, wetlands, streams, lakes, water wells, etc., on or within 200 feet of the site, including the boundaries of wetlands or stream channels and first subsequent named receiving water(s) the permittee intends to fill or relocate for which the permittee is seeking approval from the Army Corps of Engineers and/or Ohio EPA?	X			Figure 3 and Figures 4-1 through 4-20
(v) include the location of existing and planned buildings, roads, parking facilities, and utilities?	X			Figure 3 and Figures 4-1 through 4-20
(vi) include the location of all erosion and sediment control practices, including the location of areas likely to require temporary stabilization during the course of site development?	X			Figure 3 and Figures 4-1 through 4-20
(vii) include the location of sediment and storm water management basins noting their sediment settling volume and contributing drainage area?			X	
(viii) include the location of permanent storm water management practices to be used to control pollutants in storm water after construction operations have been completed?	X			na (SWP3 will be amended if permanent access roads will be constructed)
(ix) include areas designated for the storage or disposal of solid, sanitary, and toxic wastes (including dumpster areas), areas designated for cement truck washout, and areas for vehicle fueling?	X			Section 2.5 of the SWP3 (SWP3 to be updated with areas designated for the storage or disposal of solid, sanitary, and toxic wastes (including dumpster areas), areas designated for cement truck washout, and areas for vehicle fueling once these areas are designated)
(x) include the location of designated construction entrances where the vehicles will access the construction site?	X			Figure 3
(xi) include the location of any in-stream activities including stream crossings?			X	

Part III.G.2 - Sediment & Erosion Controls				
(a) Non-Structural Preservation Methods	Y	N	N/A	Comments
(1) Has every effort been made to preserve the natural riparian setback adjacent to streams or other surface water bodies?			X	
(2) Have efforts been made to phase in construction activities in order to minimize the amount of land disturbance at one time?			X	Small project that does not allow for phasing
(3) Will any portions of the site be left undisturbed (e.g., tree preservation areas)?		X		Site in farmed field
(b) Erosion Controls	Y	N	N/A	Comments
(1) Does the SWP3 describe the control practices used to restabilize areas after grubbing or construction?	X			Section 3.2.1

(2) Does the SWP3 specify the types of stabilization measures to be employed for any time of the year?				Section 3.2.1
(b)(2)(i) Temporary Stabilization	Y	N	N/A	Comments
For disturbed areas within 50 feet of a stream remaining dormant for over 14 days, will temporary erosion controls be applied within 2 days?			X	
For disturbed areas over 50 feet away from a stream remaining dormant for over 14 days, will temporary erosion controls be applied within 7 days?	X			Section 3.2.1
For disturbed areas that will be left idle over winter, will temporary erosion controls be applied prior to onset of winter weather?	X			Section 3.2.1
(b)(2)(i) Permanent Stabilization	Y	N	N/A	Comments
For disturbed areas within 50 feet of a stream at final grade, will permanent erosion controls be applied within 2 days of reaching final grade?			X	No work will be done within 50 feet of a stream
For disturbed areas remaining dormant for over 1 year or at final grade, will permanent erosion controls be applied within 7 days?	X			Section 3.2.1
(c) Runoff Control Practices	Y	N	N/A	Comments
(1) Does the SWP3 incorporate measures to reduce flow rates (e.g., riprap, ditch check dams)?			X	No concentrated flow
(2) Does the SWP3 incorporate measures to divert concentrated flow (e.g., pipe slope drains)?			X	No concentrated flow
(d) Sediment Control Practices	Y	N	N/A	Comments
(1) Will sediment control devices be implemented for all areas remaining disturbed for over 14 days?	X			Section 3.4 in the SWP3
(2) Are detail drawings of the sediment controls to be used included in the SWP3?	X			Appendix F
(d)(i) Timing of Installing Sediment Controls	Y	N	N/A	Comments
Does the SWP3 specify that sediment controls will be installed/implemented within 7 days of grubbing activities?	X			Sections 3.4, 3.4.1 and 3.4.3 of the SWP3
Does the SWP3 propose alternate sediment controls for the changing slopes and topography?			X	The entire construction area is flat
(d)(ii) Sediment Settling Ponds	Y	N	N/A	Comments
Does the SWP3 include the installation and use of a sediment settling pond? <i>NOTE: Sediment settling ponds are required for all drainage areas of 10 or more acres of land disturbed at one time, when there is concentrated runoff (storm sewer or ditch), or when the design capacity of silt fence or inlet protection has been exceeded.</i>			X	
For construction activities that require sediment settling pond(s), does the SWP3 propose to implement alternative controls to sediment settling ponds? <i>NOTE: Alternative controls must be equivalent in effectiveness to a sediment settling pond.</i>			X	
Is the dewatering volume of the sediment settling pond sized to receive at least 67 cubic yards (1800 cubic feet) of storm water per acre of total drainage area?			X	

Is the depth of the dewatering volume for each sediment settling pond less than or equal to 5 feet? <i>NOTE: The base of the dewatering volume is where the skimmer is connected to the outlet.</i>			X	
Will the dewatering volume drain down time in between 48 hours and 72 hours?			X	
Does the dewatering device (e.g., a skimmer) meet the design standards of Ohio's Rainwater and Land Development Manual?			X	
Is the sediment storage zone volume of the pond at least 1000 cubic feet per disturbed acre (Method 1)?			X	
If not, was RUSLE method (Method 2) used to calculate the sediment storage zone volume?			X	
Is the length to width ratio of the sediment settling pond at least two units of length for every one unit of width (> 2:1 length to width)? <i>NOTE: The greater the distance from the storm water inlet into the pond to the storm water outlet, the greater likelihood of sediment settlement. This prevents short-circuiting of the pond.</i>			X	
Will the sediment storage zone of the pond be cleaned out when the silt occupies 40 percent of the sediment storage zone (approximately one-half of the sediment storage zone depth)?			X	
Is the sediment settling pond designed to consider public (i.e., child) safety where site limitations preclude a safe design?			X	
(d)(iii) Silt Fence & Other Diversions	Y	N	N/A	Comments
Will silt fence or other diversions be used to control sheet flow?		X		Section 3.4.3 of the SWP3
Will silt fence be used in areas of steep slopes or concentrated flow? <i>NOTE: Silt fence is not permitted to be used for controlling high velocity storm water flow (only sheet flow).</i>			X	There is no steep slopes or concentrated flow within the consecution area

Design Capacity of Silt Fence

Maximum drainage area (in acres) to 100 linear feet of silt fence	Range of slope for a particular drainage area (in percent)
0.5	< 2%
0.25	≥ 2% but < 20%
0.125	≥ 20% but < 50%

(d)(iv) Inlet Protection	Y	N	N/A	Comments
Will the field drain inlets and/or the street curb inlets drain into a sediment settling pond or directly to surface waters of the state? <i>NOTE: Inlet protection is mandatory where sediment settling ponds will not be implemented.</i>			X	No drain inlets
Do any inlets not connected to a sediment settling pond receive runoff from one or more acres?			X	
Does the inlet protection meet the standards of Ohio's Rainwater and Land Development Manual?			X	



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(d)(v) Stream Protection	Y	N	N/A	Comments
Does the SWP3 propose to use any structural sediment controls in a stream? <i>NOTE: Use of structural sediment controls in-stream is prohibited in accordance with Part III.G.2.d.v.</i>		X		
For construction activities that are on the stream bank or will involve stream crossing, does the SWP3 include measures to minimize the number of stream crossings and/or the width of disturbance? <i>NOTE: If work along a stream bank is necessary, a non-erodible pad or non-erodible stream diversion dams (sand bags) must be installed. If stream crossings are necessary, a non-erodible stream crossing must be installed.</i>			X	No work will be done on the stream bank or will involve stream crossing

Part III.G.2.e – Post-Construction Storm Water Management (SWP3 will be amended if permanent access roads will be constructed)				
	Y	N	N/A	Comments
Does the SWP3 include the installation of a structural post-construction best management practice (BMP) to manage storm water runoff once construction activities have been completed?			X	
Will the construction activity result in the installation of any impervious surface? <i>NOTE: Projects that do not result in the installation of impervious surface do not require the installation of post-construction BMPs.</i>			X	
Has a long-term maintenance plan been developed or included in the SWP3 for maintenance of the structural post-construction BMP? <i>NOTE: The long-term maintenance plan must be developed and provided to the post-construction site operator, but does not need to be implemented as required by this permit. Local municipalities may require maintenance plan implementation.</i>			X	
Is the construction activity a linear project (e.g., pipeline or utility line installation) that does not result in the installation of impervious surface? <i>NOTE: Linear projects that don't result in the installation of impervious surface do not need the installation of structural post-construction BMPs.</i>			X	
Large Construction Activities (≥ 5 Acres)	Y	N	N/A	Comments
Does the SWP3 include a structural post-construction BMP with a specified volume and drain time?			X	
If so, was one of the two methods proposed in the NPDES construction storm water general permit (CGP) used to determine the water quality volume (WQv) and drain time?			X	
If the formula described in the CGP was used to calculate the WQv, were the correct values used for:			X	
(a) runoff coefficient (C)?			X	
(b) precipitation depth (P = 0.75-inches)?			X	
(c) and the drainage area (A) to the BMP?			X	

If the structural post-construction BMP will be used for sediment storage and/or has a reduced infiltration capacity, was the WQv increased by an additional 20 percent (“fudge factor”)?			X	
Does the drain time in the SWP3 for the proposed structural post-construction BMP match the drain time for the selected BMP in the table below?			X	
Does the outlet structure of the post-construction BMP allow the discharge of half or more of the WQv or EDv in less than 1/3 rd of the drain time?			X	

Target Drain Times for Structural Post-Construction BMPs

Best Management Practice	Drain Time of WQv
Infiltration Basin or Trench ¹	48 hours
Permeable Pavement - Infiltration ¹	48 hours
Permeable Pavement – Extended Detention	24 hours
Dry Extended Detention Basin ²	48 hours
Wet Extended Detention Basin ³	24 hours
Constructed Wetland (above permanent pool) ⁴	24 hours
Sand & Other Media Filtration ⁵	24 hours
Bioretention Cell ^{5,6}	24 hours
Pocket Wetland ⁷	24 hours

- 1** Practices that are designed to fully infiltrate the WQv (basin, trench, permeable pavement) shall empty within 48 hours to provide storage for the subsequent storm events.
- 2** Dry basins must include forebay and micropool each sized at 10% of the WQv.
- 3** Provide both a permanent pool and an EDv above the permanent pool, each sized at 0.75 WQv.
- 4** Extended detention shall be provided for the WQv above the permanent water pool.
- 5** The surface ponding area (WQv) shall completely empty within 24 hours so that there is no standing water. Shorter drawdown times are acceptable as long as design criteria in Ohio’s Rainwater and Land Development manual have been met.
- 6** This would include Grassed Linear Bioretention which was previously called Enhanced Water Quality Swale.
- 7** Pocket wetlands must have a wet pool equal to the WQv, with 25% of the WQv in a pool and 75% in marshes. The EDv above the permanent pool must be equal to the WQv.

Large Construction Activities (Continued)	Y	N	N/A	Comments
If the SWP3 proposes to use an alternative BMP instead of one of the BMPs listed in the table above, is the alternative BMP equivalent in effectiveness to the BMPs listed above?			X	
Is there a pre-existing drainage basin or other BMP that will receive the storm water drainage from the construction site, is it sized appropriately to treat the WQv?			X	
For public road construction activities, are the post-construction BMPs designed consistent with the Ohio Department of Transportation’s “Location and Design Manual, Volume Two?”			X	
For construction activities where a post-construction BMP cannot be placed onsite and will require an offsite post-construction BMP, has the offsite mitigation proposal been authorized by Ohio EPA? <i>NOTE: Offsite BMPs must have a long-term maintenance agreement, be within the same HUC,</i>			X	

<i>and be at least 1.5 times the size of an onsite BMP.</i>				
For redevelopment projects which disturb 5 or more acres of land, was one of the following options used to as a post-construction practice:			X	
(a) 20% reduction in impervious area?			X	
(b) a BMP sized to treat 20% of the WQv?			X	
(c) or a combination of (a) and (b) above?			X	
For construction activities where non-structural post-construction BMPs are proposed, has the substitution of structural BMPs with non-structural BMPs been authorized?			X	
For construction activities where alternative post-construction BMPs are proposed, has the alternative BMP been authorized by Ohio EPA? <i>NOTE: Alternative BMPs must have TARP Tier II acceptance, be able to remove 80% of total suspended solids (TSS) in the runoff, and be able to treat the WQv unless hydrologic impacts are not necessary.</i>			X	
Has the local municipality authorized the use of an alternative post-construction BMP?			X	
Small Construction Activities (≥ 1 Acre, but < 5 Acres)	Y	N	N/A	Comments
Does the SWP3 include a structural post-construction BMP? <i>NOTE: A structural post-construction BMP is required for small construction activities, but the design standards have not been specified in the CGP.</i>			X	
(i) If so, does the SWP3 explain the technical basis used to select the BMPs chosen where flows exceed pre-development levels?			X	
(ii) Does the SWP3 include the installation of velocity dissipation devices at discharge locations and outfall channels?			X	

Part III.G.2.f - Surface Water Protection				
	Y	N	N/A	Comments
Does the construction site contain any streams, rivers, lakes, or wetlands?		X		
If so, has the U.S. Army Corps of Engineers been contacted for a determination of impacts requiring Clean Water Act 401 or 404 permitting?			X	
For storm water discharges from BMPs into wetlands, have BMPs (e.g., level spreaders, buffers, or infiltration basins) been proposed to diffuse the concentrated flow into non-erosive flow?			X	

Part III.G.2.g - Non-Sediment Pollutant Controls				
Handling of Toxic or Hazardous Materials	Y	N	N/A	Comments
(1) Does the SWP3 provide directions on how to dispose toxic or hazardous wastes properly?			X	
(2) Does the SWP3 provide areas for recycling of used or unused hazardous materials? <i>NOTE: No toxic or hazardous</i>			X	

wastes shall be disposed into storm drains, septic tanks, or by burying, burning, or mixing the wastes.				
Waste Disposal	Y	N	N/A	Comments
Will containers (e.g., dumpsters, drums) be available for disposal of debris, trash, hazardous or petroleum wastes? <i>NOTE: All containers must be covered and leak-proof.</i>	X			Section 3.7.1
Clean Hard Fill	Y	N	N/A	Comments
(1) Are bricks, hardened concrete, and soil waste free from contamination which may leach constituents to waters of the state?			X	
(2) If clean construction wastes will be disposed into the property, are there any local prohibitions from this type of disposal?			X	
Construction & Demolition Debris	Y	N	N/A	Comments
Does the SWP3 state that all construction & demolition debris (C&DD) waste will be disposed of in an Ohio EPA approved C&DD landfill as required by Ohio Revised Code (ORC) 3714? <i>NOTE: Construction debris may be disposed of on-site, but demolition debris must be disposed in an Ohio EPA approved landfill. Materials which contain asbestos must comply with air pollution regulations (see Ohio Administrative Code 3745-20).</i>			X	
Construction Chemical Compounds	Y	N	N/A	Comments
(1) Does the SWP3 designate areas used for mixing or storage of compounds such as fertilizers, lime, asphalt, or concrete?	X			Section 3.7.1
(2) If so, are these areas located away from watercourses, drainage ditches, field drains, or other storm water drainage areas?	X			Section 3.7.1
Equipment Fueling & Maintenance	Y	N	N/A	Comments
(1) Does the SWP3 designate areas used for fueling or performing vehicle maintenance?	X			Section 3.7.1 (SPW3 will be amended if fueling or performing vehicle maintenance is going to occur at the site)
(2) If so, are these areas located away from watercourses, drainage ditches, field drains, or other storm water drainage areas?	X			Section 3.7.1 (SPW3 will be amended if fueling or performing vehicle maintenance is going to occur at the site)
(3) Has a spill prevention control and countermeasures (SPCC) plan been developed? <i>NOTE: A SPCC plan must be developed for sites with one above ground storage tank (AST) of 660 gallons or more, total above ground tank storage of 1330 gallons, or below ground storage of 42,000 gallons of fuel.</i>			X	
Concrete Wash Waters	Y	N	N/A	Comments
(1) Does the SWP3 designate areas used for receiving concrete chute or other concrete wash waters?	X			Section 2.10 of the SWP3
(2) If so, are these areas located away from watercourses, drainage ditches, field drains, or other drainage areas?	X			
Trench & Ground Water Control	Y	N	N/A	Comments
Does the construction site have an onsite trench or pond that must be dewatered?	X			Section 3.7.4 of the SWP3
If so, does the SWP3 call for the discharge of potentially turbid water through a filter bag, sump pit, or other sediment removal	X			Section 3.7.4 of the SWP3

device?				
Contaminated Soils	Y	N	N/A	Comments
Does the SWP3 address proper handling and disposal of soils contaminated by petroleum or other chemical spills? <i>NOTE: All contaminated soils must be treated and/or disposed in Ohio EPA approved solid waste management facilities or hazardous waste treatment, storage or disposal facilities (TSDFs).</i>	X			Section 3.7.5 of the SWP3
If the facility contains contaminated soil, which of the following practices will be used to prevent contamination from being released?			X	
(1) The use of berms, trenches, and pits to collect contaminated runoff and prevent discharges			X	
(2) Pumping runoff into a sanitary sewer (with prior approval of the sanitary sewer operator) or into a container for transport to an appropriate treatment/disposal facility			X	
(3) Covering areas of contamination with tarps or other methods that prevent storm water from coming into contact with the material			X	
Spill Reporting Requirements	Y	N	N/A	Comments
(1) Does the SWP3 describe what to do in the event of a small release (less than 25 gallons) of petroleum waste? <i>NOTE: Petroleum based and concrete curing compounds must have special handling procedures.</i>	X			Section 3.7.1 (SWP3 to be updated with a detailed plan on how to prevent and respond to spills and leaks once contractor is selected)
(2) Does the SWP3 describe what to do in the event of a larger release (25 or more gallons) of petroleum waste? <i>NOTE: You must contact, Ohio EPA (at 1-800-282-9378), the local fire department, and the local emergency planning committee (LEPC) within 30 minutes of a spill of 25 or more gallons.</i>	X			Section 3.7.1 (SWP3 to be updated with a detailed plan on how to prevent and respond to spills and leaks once contractor is selected)
Open Burning	Y	N	N/A	Comments
(1) Is open burning performed in a restricted area (as defined in OAC 3745-19)? <i>NOTE: Open burning is permitted in restricted areas for barbecues, heating, and certain occupational purposes.</i>			X	No open burning is anticipated
(2) Is open burning performed in a non-restricted area, but within 1,000 feet of an inhabited building away from the property? <i>NOTE: Open burning in an unrestricted area is limited to scrap lumber, wooden fence posts, agricultural, land-clearing, or landscape wastes.</i>			X	No open burning is anticipated
Dust Controls/Suppressants	Y	N	N/A	Comments
(1) Are dust suppressants proposed to be used in the SWP3?	X			Section 3.7.2
(2) If so, are the areas which the dust suppressant will be applied located near catch basins for storm sewers or other drainage ways? <i>NOTE: Used oil may not be used as a dust suppressant.</i>			X	
Air Permitting Requirements	Y	N	N/A	Comments
(1) Have appropriate measures been taken to ensure that all air pollution permits have been obtained? <i>NOTE: Air pollution permits may be required for activities including, but not limited to, mobile concrete batch plants, mobile asphalt plants, concrete crushers, and large generators.</i>			X	

(2) For restoration or demolition projects, will a notification be submitted to Ohio EPA, Division of Air Pollution Control to determine if asbestos corrective actions are required?			X	
Process Wastewater/Leachate Management	Y	N	N/A	Comments
Will all process wastewaters (e.g., equipment washing, leachate associated with on-site waste disposal, and concrete wash-outs) be collected and disposed of properly (e.g., to a publicly-owned treatment works)? <i>NOTE: The NPDES construction storm water general permit only authorizes the discharge of storm water and certain uncontaminated non-storm waters. The discharge of non-storm waters to waters of the state may be in violation of local, state, and federal laws or regulations.</i>	X			Section 3.7.1
Additional Concerns	Y	N	N/A	Comments
For construction activities involving the installation and/or replacement of a centralized sanitary system, (including sewer extensions) or a sewerage system (except those serving one, two, and three family dwellings) and potable water lines, was a PTI application submitted to Ohio EPA? <i>NOTE: Coverage under the NPDES construction storm water general permit does not alone authorize the installation of such sanitary sewerage systems or potable water lines.</i>			X	
Does the SWP3 include measures for implementing good housekeeping practices?			X	Section 3.1 of the SWP3
Does the SWP3 promote the use of protected storage areas for industrial or construction materials to minimize exposure of such materials to storm water?			X	Section 3.7.1 of the SWP3

Part III.G.2.i - Inspections				
	Y	N	N/A	Comments
Does the SWP3 require weekly inspections of BMPs and an inspection within 24 hours after every rain event of 0.5 inches within a 24 hour period?	X			Section 3.9.2 of the SWP3
If the site will be dormant for a long period, it's stabilized, and less frequent inspections are desired, does the SWP3 call for a waiver request to be submitted to OEPA for a reduction to monthly inspections?	X			Section 3.9.2 of the SWP3
Does the SWP3 state that only "qualified inspection personnel" will perform the inspections?	X			Section 3.9 of the SWP3
Does the SWP3 state that an inspection checklist will be completed and signed by the inspector after every inspection?	X			Section 3.9.1 of the SWP3
Does the SWP3 state that inspection records will be kept for 3 years after termination of construction activities?	X			Section 3.9.3 of the SWP3
For BMPS that require repair or maintenance, does the SWP3 specify non-sediment pond BMPs to be repaired within 3 days of inspection and sediment ponds to be repaired or cleaned out within 10 days of inspection?			X	No sediment ponds
For BMPs not meeting the intended function, does the SWP3 state that a new BMP will be installed within 10 days of the inspection?	X			Section 3.4.6 of the SWP3
For missing BMPs required for installation by the SWP3, does	X			Section 3.4.6 of the SWP3



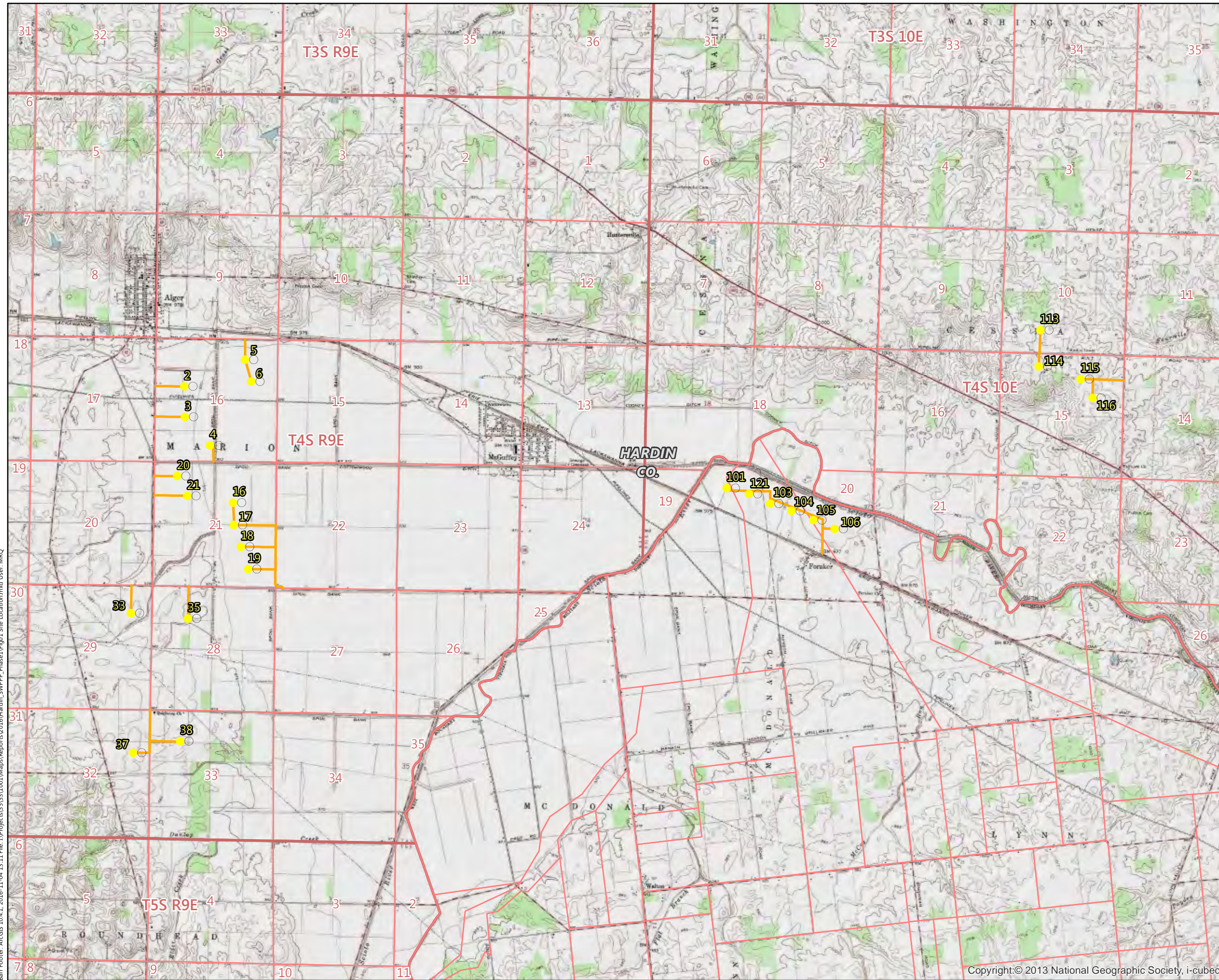
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the SWP3 state that the missing BMPs will be installed within 10 days of the inspection?				
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Figures

Note:

- If equipment and vehicle fueling is to occur at this site, identify designated areas on Figure 3-1 and 3-2.
- If equipment and vehicle washing is to occur at this site, identify designated areas on Figure 3-1 and 3-2.
- Show location of soil piles on Figures 4-1 through 4-37 once they are placed in the field.
- Show location of all BMPs (sediment and erosion controls) to Figures 4-1 through 4-37 once they are located in the field.



-  Turbine Location (8/5/2016)
-  Access Road
-  PLSS Section
-  PLSS Township

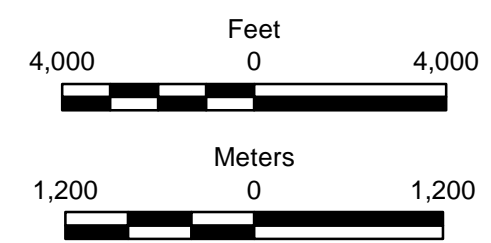
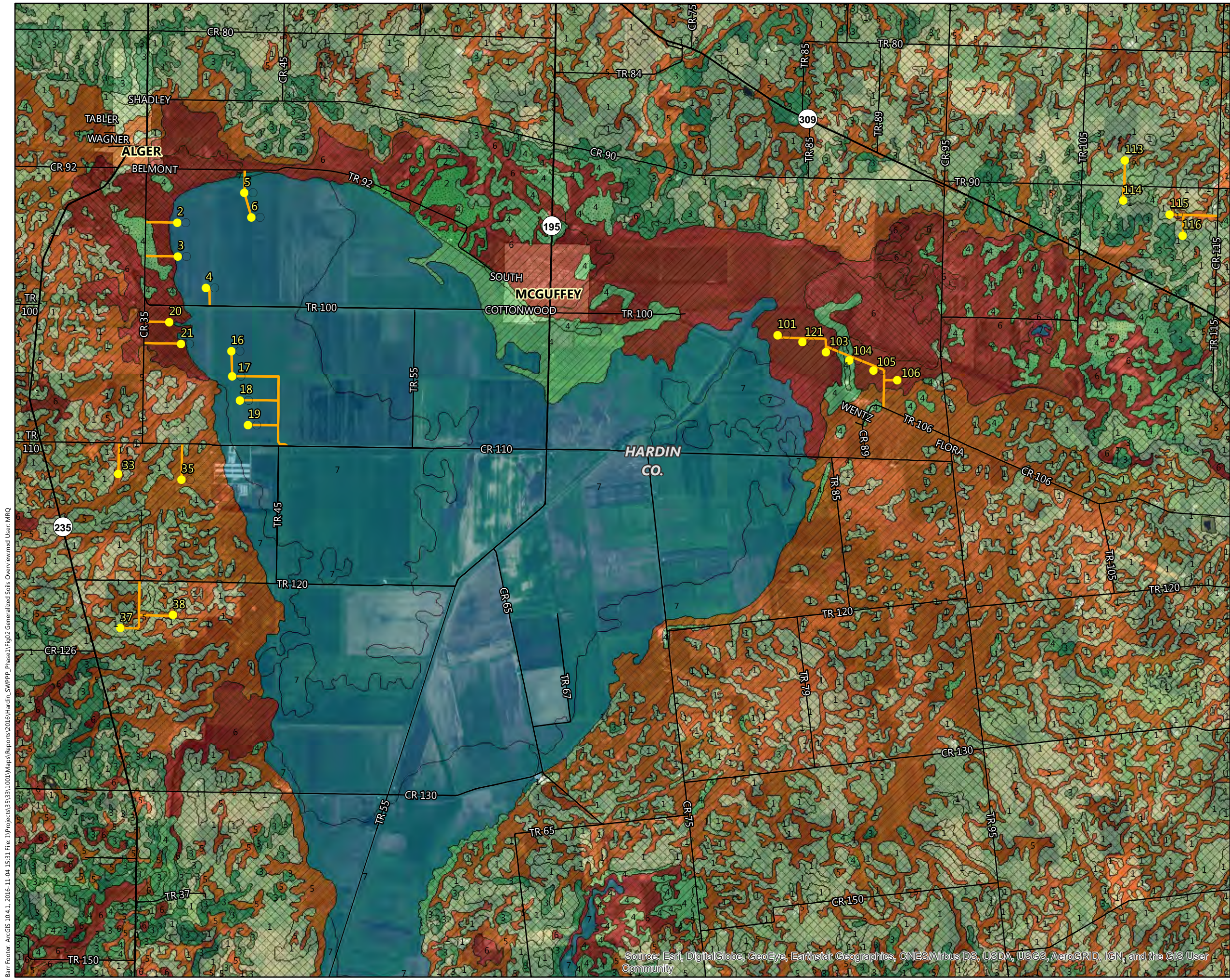
















Figure 1
Ammendment 1

SITE LOCATION
Hardin Wind Project
Invenergy LLC
Hardin County, Ohio



-  Turbine Location (8/5/2016)
-  Access Road
-  Property Boundary
- Soil K Factor (whole soil)
 -  0.2 - 0.29
 -  0.3 - 0.39
 -  0.4 - 0.49
 -  Not Rated (organics)
- Generalized Soil Map Unit Names
 -  1, Bount silt loam
 -  2, Sleeth silt loam
 -  3, Glynwood loams
 -  4, Generalized loams
 -  5, Pewamo silty clay loam
 -  6, Generalized clay loams
 -  7, Muck

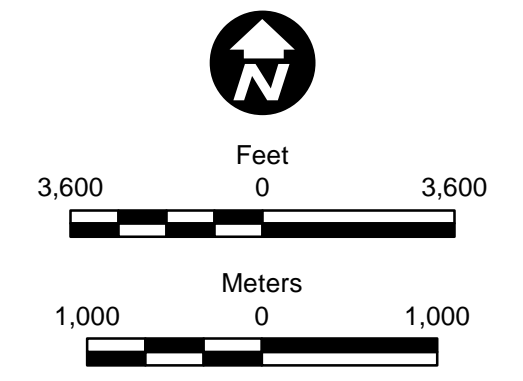
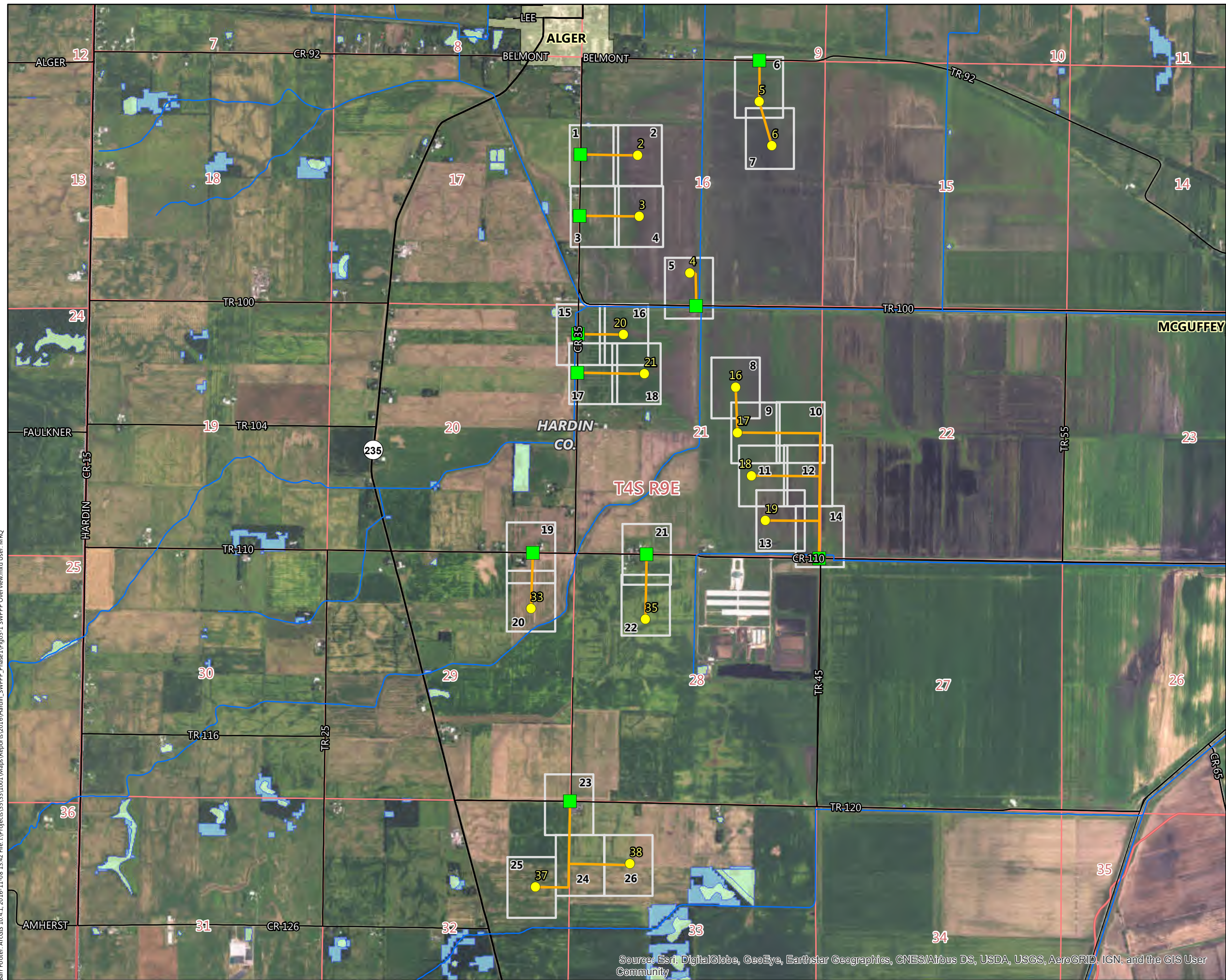


Figure 2
Ammendment 1

GENERALIZED SOILS OVERVIEW
Hardin Wind Project
Invenergy LLC
Hardin County, Ohio

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- Turbine Location (8/5/2016)
- Designated Construction Entrance
- Access Road
- USGS NHD Flowline
- Wetland Extent (National Wetland Inventory)
- Wetland Extent (Ohio Wetland Inventory)
- PLSS Township
- PLSS Section
- Figure 4 Mapbook Page Numbering and Extent

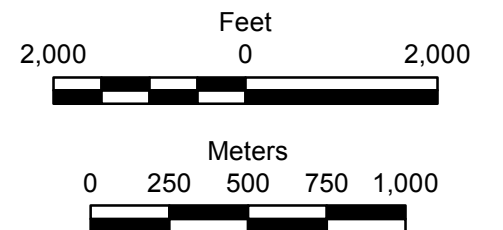


Figure 3-1
Amendment 1

SWPPP OVERVIEW
Hardin Wind Project
Invenergy LLC
Hardin County, Ohio

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Summary: Correspondence of Hardin Wind Energy LLC in Compliance with Condition No. 54 - SWPPP, Part 1 electronically filed by Teresa Orahod on behalf of Sally W. Bloomfield