

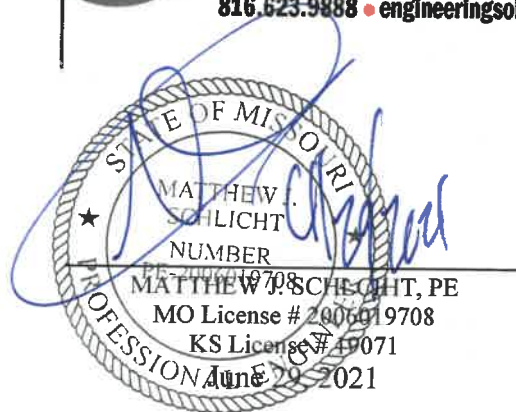
# Storm Water Pollution Prevention Plan

For

## WOODLAND OAKS

Lee's Summit, Jackson County, Missouri

Prepared By:



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# Project Description

## Project Location

The site is located at NE Colbern Road and NE Blackwell Road, Section 27, Township 48 North, Range 31 West in Lee's Summit, Jackson County, Missouri. The construction site consists of 19.18 acres. This proposed site is being developed by WOODLAND OAKS LLC, 656 BAYBERRY LN STE 101, LEES SUMMIT, MO 64063, Jackson County, Missouri. Below in Figure 1 is a vicinity map indicating the location of WOODLAND OAKS.



Figure 1: WOODLAND OAKS

### Construction Type

The project will consist of 42 residential lots and the associated roadways and site utilities.

### Existing Site Conditions

The existing site generally drains from West to East into an existing unnamed tributary that drains into Tributary to Lake Jacomo that serves as a regional detention facility for the watershed.

### Timing Schedule

Clearing and excavating operations are expected to start June, 2021. Completion of the project is expected by November, 2021.

### Areas

The disturbed area for the site is approximately 19.18 acres.

### Runoff Coefficient

Existing area is open space a run-off coefficient of  $C = 0.30$ . The run-off coefficient for the project is estimated to be 0.51. All disturbed areas will have a final stabilization of grass.

### Receiving Waters

Surface water that does not infiltrate into the ground will drain into an existing unnamed tributary that drains into Tributary to Lake Jacomo.

## **Construction Plans**

The construction plans, located in Appendix A, shows the existing and proposed grading of the site, the location of controls and the location of where stabilization is expected to occur. As the project's demands change, the site map shall be manually updated by the on-site contractor.

ESC Phase 1 - Pre-Clearing Plan: Phase 1 silt fence, inlet protection, and temporary construction entrance installed.

ESC Phase 2 - Inactive Area Stabilization Plan: Phase 2 secondary silt fence, inlet protection installed after major grading.

ESC Phase 3 - Final Restoration Plan: Areas disturbed by construction activities seeded and mulched.

### **MAINTENANCE:**

To maintain the erosion and sediment controls, the following procedures will be performed:

**Sediment capture devices:** Sediment will be removed from the upstream or upslope side of the filter fabric fences, when the depth of accumulated sediment reaches about one-third the height of the structure.

**Storm sewer inlets:** Any sediment in the storm sewer inlets will be removed and disposed of properly.

**Temporary controls:** All temporary controls will be removed after the disturbed areas have been stabilized.

## **Storm Water Management Controls**

### Erosion and Sediment Controls

Structural controls are designed to divert flows away from disturbed areas, to store flows, or to limit the discharge of pollutants from the site to the degree attainable. The site maps, located in Appendix A, show locations of each control, the size of the control, the required materials, and methods of installation and use.

#### Structural Practices

Silt fences will be installed along the contours within the grading area following site grading. The erosion control measures will be placed perpendicular to flow and parallel to the contours. Fabric for silt fences will be fastened to the upslope side of the fence posts in accordance with industry standards. The fabric will be trenched into the ground to a minimum of six inches and will be backfilled with tamped natural soil. Sediment trapped by silt fence will be removed when it accumulates to 1/3 the height of the silt fence. High velocity, high erosive flow is not expected on the project site due to the relatively gentle grades. In addition to the gentle grades, much of the site's southern portion will be surfaced with crushed stone, thereby reducing sediment loss.

Concrete trucks will be allowed to discharge excess concrete and drum wash water on the site, in such a manner as to allow the material to flow into the excavation stockpile or into a setting basin installed for this purpose.

#### Stabilization Practices

Where possible, vegetated strips will be left along both edges of the construction limits to trap suspended solids before storm water leaves the site. In addition, trees and other plant material, which are not in conflict with the proposed construction, will be left in place. All disrupted areas of the site will be finish-graded and stabilized with permanent seeding as soon as the weather permits.

Stabilization controls are designed to control erosion from disturbed areas. The disturbed areas of the construction site that will not be re-disturbed for 21 days or more must initiate stabilization measures by the 14<sup>th</sup> day after the last disturbance, except as precluded by snow cover. These disturbed areas shall be landscaped with seed or hydro seed and mulched with a minimum of 2 tons of straw per acre to achieve final stabilization of the site.

### Storm Water Management

As mentioned above, disturbed areas at the construction site that are not covered by crushed stone will be seeded and mulched. The intent is to return all surface areas to a condition which provides a run-off coefficient equal to or less than that which existed prior to construction. To the extent possible, final site grading will be conducted such that storm water runoff does not exceed erosive velocities of grassed surfaces (preconstruction levels).

### Other Controls

At the southwest corner of the project site, an area will be designated for equipment maintenance, repair, refueling, tool trailers and equipment lay down. The fuel tank will be kept on its own spill containment with extra storage. The fuel tank will be stored on the protected side of the tool trailer allowing access by equipment and trucks. Therefore, the fuel tank will never be placed directly on the ground surface. Spill kits will be maintained in each piece of equipment on site. Any chemicals, paints, solvents, or other potentially toxic materials will be properly stored. An office trailer will be located at west side of the project site. Portable toilets will be located near the office trailer. The portable toilets will be pumped out regularly and the waste hauled off site, by a licensed independent contractor, to an approved treatment facility. A dumpster for trash and rubbish will be located at the construction site. The dumpster will be emptied regularly by a waste disposal contractor that will haul the waste to an approved landfill. Steps will be taken to minimize off-site tracking of sediments. Any sediment tracked onto roads or streets will be removed before they become distributed along the pavement.

### **Non-Storm Water Discharges**

The following types of non-storm water discharges will occur on the site during construction:

- Groundwater pumped from excavations
- Flush water for pipe testing
- Wash water for concrete trucks

## **Maintenance and Inspection Procedures**

### Maintenance Plan

The maintenance practices that will be used to maintain erosion and sediment controls are, but not limited to the following:

- All measures and equipment will be maintained in good working order; if a repair is necessary, it will be repaired in an appropriate and timely manner.
- Identification of equipment, controls and site areas that should be inspected
- A maintenance inspection report will be made after each inspection and will stay on-site throughout the entire construction project.
- Clean silt control devices should begin when the features have lost 50% of their capacity.

### Inspection Plan

The inspection practices that will be used to maintain erosion and sediment controls are, but not limited to the following:

- Inspection is required every 7 days and within 24 hours of the end of any precipitation event. The contractor shall also inspect and assure that all sediment control devices are in working condition prior to any forecasted rainfall.
- Built up sediment will be removed from silt fencing when it has reached 1/3 the height of the fence
- Silt fences will be inspected for depth of sediment, torn fabric, proper attachment to fence post, and to see that the fence posts are firmly in the ground.
- Temporary and permanent seeding will be inspected for bare spots, washouts and healthy growth.

Inspection and maintenance logs will be maintained with the SWPPP in Appendix D.

\_\_\_\_\_ will be responsible for placement and maintenance of all control measures until final stabilization.

## **Employee Training**

An employee training program will be developed and implemented to educate employees about the requirements of the SWPPP. This education program will include background on the components and goals of the SWPPP and hands-on training in erosion controls, spill prevention and response, good housekeeping, proper material handling, disposal and control of waste equipment fueling, and proper storage, washing, and inspection procedure. All employees will be trained prior to their first day on the site.

## **Certifications**

The project owner will need to sign the Project Owner Certification prior to the start of clearing and excavating. The contractors will need to complete a Contractor Certificate Form. At the discretion of the owner, other contractors and subcontractors may be asked to complete Contractor Certificate Forms. Upon signing the certificate, the contractor or sub-contractor is a co-permittee with the owner and other co-permittee contractors. All certificates must be maintained with the SWPPP. All certificates can be found in Appendix D.

## **Conclusion**

Sediment control measures shall be removed once 70% of the permanent cover is established over 100% of the tributary area. Within 30 days after final stabilization of the project site the owner shall submit a Notice of Termination to the Missouri Department of Natural Resources.

The owner shall retain copies of the SWPPP, all reports required by this permit and records of all data used to complete the SWPPP and the inspection forms for at least three years from the date of final stabilization.



## Appendix A – Site Drawings




**PRE CLEARING PLAN**  
 Scale: 1" = 50'



North

NOTE: The Land Clearing Plan includes the placement of erosion control devices. The contractor shall be responsible for installing and maintaining these devices. The contractor shall be responsible for maintaining and repairing these devices. The contractor shall be responsible for maintaining and repairing these devices.

LEGEND

	PHASE 1 BELT FENCE
	PHASE 2 BELT FENCE
	INLET PROTECTION

DURING ALL PHASES OF CONSTRUCTION, EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED AS DESCRIBED IN APWA SECTION 8111.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.



Performance of Area  
 APWA Section 811.3  
 For Inlet Protection

Performance of Area  
 APWA Section 811.3  
 For Inlet Protection





FINAL RESTORATION PLAN  
SCALE: 1" = 40'



- LEGEND**
- PHASE 1 SILT FENCE
  - PHASE 2 SILT FENCE
  - INLET PROTECTION
  - OUTLET BLOODY OR EQUIVALENT
- SILT FENCE PROTECTION TO BE MAINTAINED BY CONTRACTOR

**DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 511.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.**

NOTES: 1. This plan shall be used in conjunction with the approved site plan and all other information related to the project. 2. All construction shall be in accordance with the approved site plan and all other information related to the project. 3. All construction shall be in accordance with the approved site plan and all other information related to the project.

**SEED AND MULCH NOTES:**

All areas disturbed by construction activities shall be seeded and mulched in accordance with the approved site plan and all other information related to the project. 1. All areas disturbed by construction activities shall be seeded and mulched in accordance with the approved site plan and all other information related to the project. 2. All areas disturbed by construction activities shall be seeded and mulched in accordance with the approved site plan and all other information related to the project.

**ONCE SITE IS 90% VEGETATED ALL ESC DEVICES SHALL BE REMOVED AND ANY DISTURBED AREAS SHALL BE RESTORED**



**AMERICAN PUBLIC WORKS ASSOCIATION**  
**APWA**  
 KANSAS CITY METRO CHAPTER  
 10000 N. STATE AVENUE, SUITE 100  
 OMAHA, NE 68114

### SILT FENCE

(See Note 1 for details on materials and construction)

**NOTES:**

1. Construct silt fence using 1/2" diameter aggregate (minimum 100% passing No. 20 sieve) and 6" high x 12" wide sections.
2. Sections shall be spaced 6' apart.
3. Sections shall be installed in a trench 6" deep.
4. Sections shall be installed in a trench 6" deep.
5. Sections shall be installed in a trench 6" deep.
6. Sections shall be installed in a trench 6" deep.
7. After an interval of 24 hours, remove sections and replace with new sections.

**CONCRETE WALKOUT**

**NOTES:**

1. Construct concrete walkout using 4" concrete with 1/2" diameter aggregate (minimum 100% passing No. 20 sieve).
2. Sections shall be spaced 6' apart.
3. Sections shall be installed in a trench 6" deep.
4. Sections shall be installed in a trench 6" deep.
5. Sections shall be installed in a trench 6" deep.
6. Sections shall be installed in a trench 6" deep.
7. After an interval of 24 hours, remove sections and replace with new sections.

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### CONCRETE WALKOUT

(See Note 1 for details on materials and construction)

**NOTES:**

1. Construct concrete walkout using 4" concrete with 1/2" diameter aggregate (minimum 100% passing No. 20 sieve).
2. Sections shall be spaced 6' apart.
3. Sections shall be installed in a trench 6" deep.
4. Sections shall be installed in a trench 6" deep.
5. Sections shall be installed in a trench 6" deep.
6. Sections shall be installed in a trench 6" deep.
7. After an interval of 24 hours, remove sections and replace with new sections.

**CONCRETE ENTRANCE**

**NOTES:**

1. Construct concrete entrance using 4" concrete with 1/2" diameter aggregate (minimum 100% passing No. 20 sieve).
2. Sections shall be spaced 6' apart.
3. Sections shall be installed in a trench 6" deep.
4. Sections shall be installed in a trench 6" deep.
5. Sections shall be installed in a trench 6" deep.
6. Sections shall be installed in a trench 6" deep.
7. After an interval of 24 hours, remove sections and replace with new sections.

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### AREA INLET AND JUNCTION BOX PROTECTION

(See Note 1 for details on materials and construction)

**NOTES:**

1. Construct area inlet and junction box protection using 4" concrete with 1/2" diameter aggregate (minimum 100% passing No. 20 sieve).
2. Sections shall be spaced 6' apart.
3. Sections shall be installed in a trench 6" deep.
4. Sections shall be installed in a trench 6" deep.
5. Sections shall be installed in a trench 6" deep.
6. Sections shall be installed in a trench 6" deep.
7. After an interval of 24 hours, remove sections and replace with new sections.

**LEVEL SINK CURB INLET**

(From back of curb to inlet)

**NOTES:**

1. Construct level sink curb inlet using 4" concrete with 1/2" diameter aggregate (minimum 100% passing No. 20 sieve).
2. Sections shall be spaced 6' apart.
3. Sections shall be installed in a trench 6" deep.
4. Sections shall be installed in a trench 6" deep.
5. Sections shall be installed in a trench 6" deep.
6. Sections shall be installed in a trench 6" deep.
7. After an interval of 24 hours, remove sections and replace with new sections.

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 KANSAS CITY METRO CHAPTER  
 10000 N. STATE AVENUE, SUITE 100  
 OMAHA, NE 68114

### CURB INLET PROTECTION

(See Note 1 for details on materials and construction)

**NOTES:**

1. Construct curb inlet protection using 4" concrete with 1/2" diameter aggregate (minimum 100% passing No. 20 sieve).
2. Sections shall be spaced 6' apart.
3. Sections shall be installed in a trench 6" deep.
4. Sections shall be installed in a trench 6" deep.
5. Sections shall be installed in a trench 6" deep.
6. Sections shall be installed in a trench 6" deep.
7. After an interval of 24 hours, remove sections and replace with new sections.

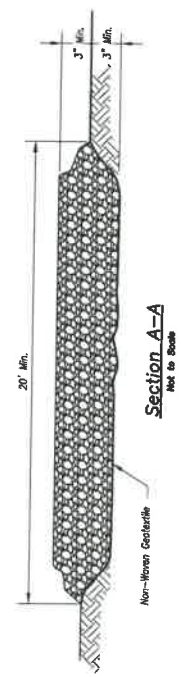
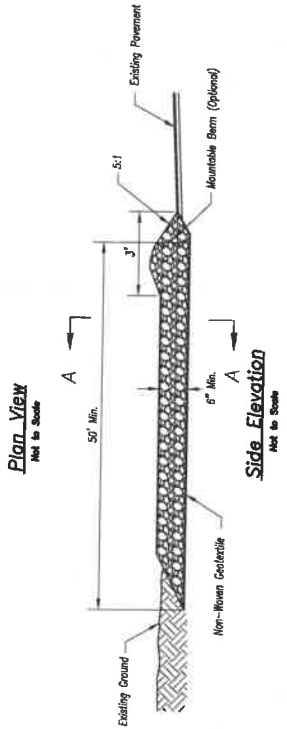
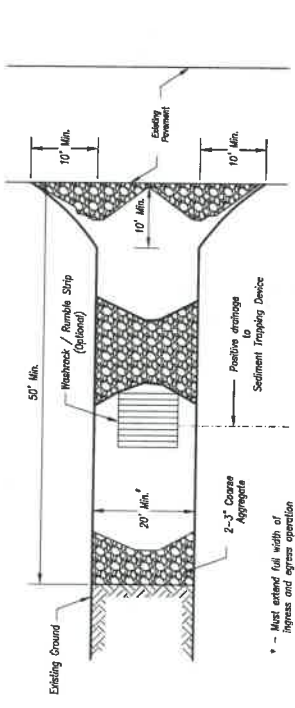
**LEVEL SINK CURB INLET**

(From curb and filter to existing curb and inlet throat)

**NOTES:**

1. Construct level sink curb inlet using 4" concrete with 1/2" diameter aggregate (minimum 100% passing No. 20 sieve).
2. Sections shall be spaced 6' apart.
3. Sections shall be installed in a trench 6" deep.
4. Sections shall be installed in a trench 6" deep.
5. Sections shall be installed in a trench 6" deep.
6. Sections shall be installed in a trench 6" deep.
7. After an interval of 24 hours, remove sections and replace with new sections.

## **Appendix B – Erosion Control Details**



**Notes for Construction Entrances:**

1. Avoid loading on steep slopes at curves on public roads, or removal of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope toward the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3:1 to 4:1 side slopes across the public road to direct runoff from it.
4. Install pipes under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimension and grade as shown on plans. Leave surface sloped for drainage.
6. Diver all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

**Maintenance for Construction Entrances:**

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

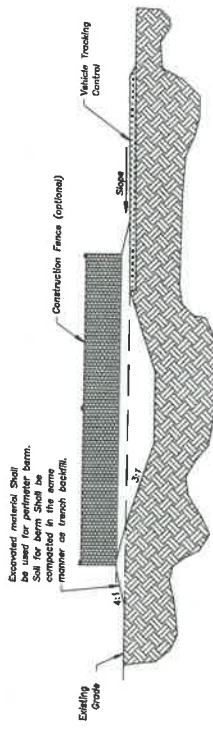
**CONSTRUCTION ENTRANCE**

**Notes for Concrete Washout:**

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a first subsurface pit sized to accommodate the anticipated volume of concrete washout. The slope leading out of this subsurface pit shall be 3:1. An aggregate bedding pit shall be sloped toward the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area, and at the exit of the washout area to clearly indicate the location(s) and pump type.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

**Maintenance for Concrete Washout:**

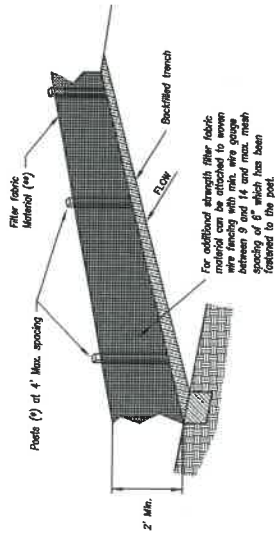
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for washed concrete.
3. Concrete washout water, washed pieces of concrete, and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable material and compacted to meet the same requirements as the foundation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



**CONCRETE WASHOUT**

**AMERICAN PUBLIC WORKS ASSOCIATION**  
KANSAS CITY METRO CHAPTER  
STANDARD DRAWING NUMBER ESC-01 ADOPTED 10/24/2016  
**CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT**

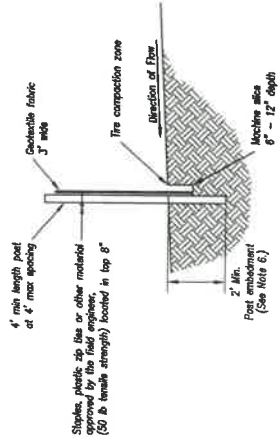
Construction Entrance modified from 2015 Overland Park Standard Details for Construction Entrances, Concrete Washout modified from 2009 City of Great Bend Standard Drawings.



For additional strength filter fabric material can be attached to woven mesh fabric with a max. overlap spacing of 6" and max. overlap spacing of 6" which has been followed to the post.

- (\*) FIBER  
 - MAX. LENGTH 4'  
 - HARDWOOD 1 3/4" x 1 3/4"  
 - NO.2 SOUTHERN PINE 2 3/4" x 2 3/4"  
 - STEEL 1.53 (LIFT)

(1\*) - Geotextile Fabric, shall be as per specifications of AASHTO M228



Staples, plastic zip ties or other material approved by the field engineer. (50 lb tensile strength) located at top 6"

Machine site 6" - 12" depth

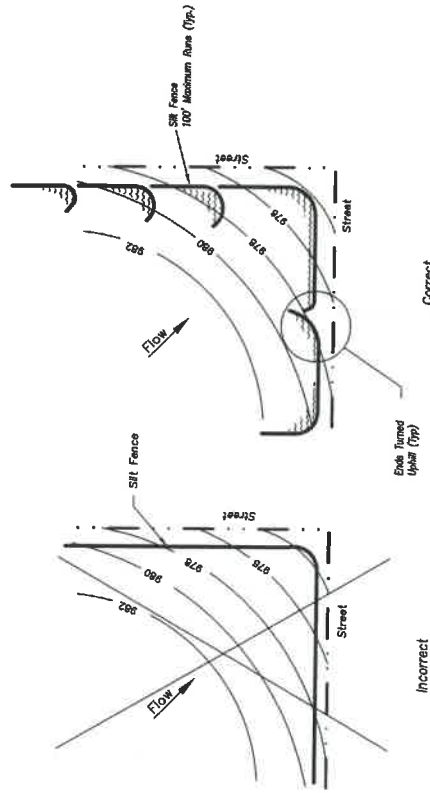
The compaction zone

Direction of flow

2' Min.

Post embedment (See Note 6.)

**SILT FENCE DETAILS**  
 Not to Scale



Correct

Incorrect

Figure\_A

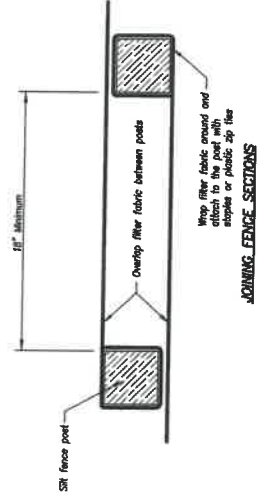
**SILT FENCE LAYOUT**  
 Not to Scale

**Notes:**

- In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
- Long perimeter runs of silt fence must be broken up into segments to minimize water concentrations (Figure A).
- Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
- Attach fabric to upstream side of post.
- Install posts a minimum of 2' into the ground.
- Touching will only be allowed for small or difficult installation, where silt fence cannot be reasonably used.

**Maintenance:**

- Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of silt fence.
- Repair as necessary to maintain function and structure.



**JOINING FENCE SECTIONS**  
 Not to Scale

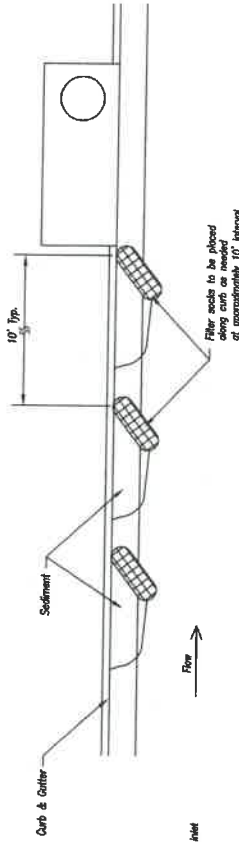
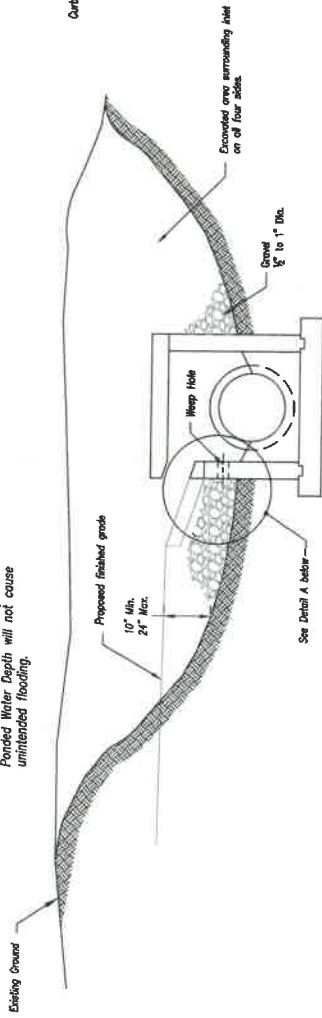
Wrap filter fabric around and attach to the post with staples or plastic zip ties

**AMERICAN PUBLIC WORKS ASSOCIATION**  
**APWA**  
 KANSAS CITY METRO CHAPTER  
 STANDARD DRAWING NUMBER ESC-03  
 ADOPTED 10/24/2016  
**SILT FENCE**

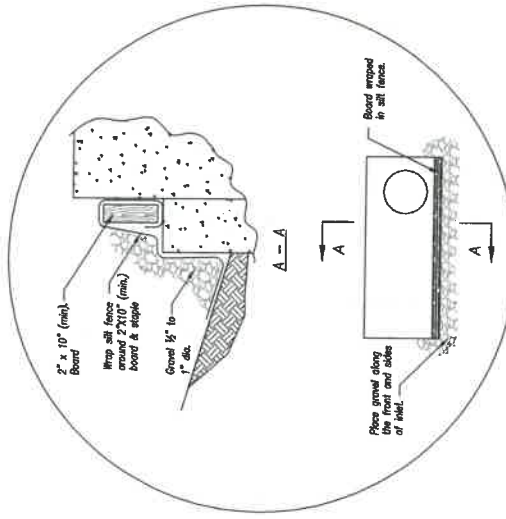
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



• Contractor shall field verify that Pounded Water Depth will not cause unmitigated flooding.



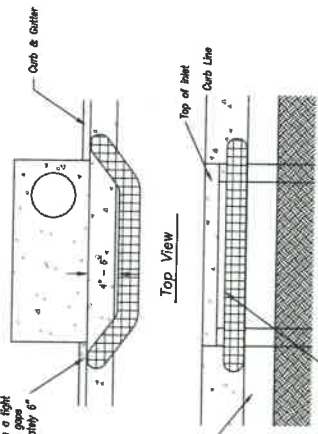
On Grade Curb Inlet Protection



Detail A

EARLY STAGE CURB INLET  
(Open Box and Prior to Pouring Curb and Inlet Throat)

Filter sock is to have a tight curb contact with no voids and extend approximately 5" beyond inlet opening.



Sump Inlet Sediment Filter

LATE STAGE CURB INLET  
(After Pouring Curb and Inlet Throat)

**Notes:**

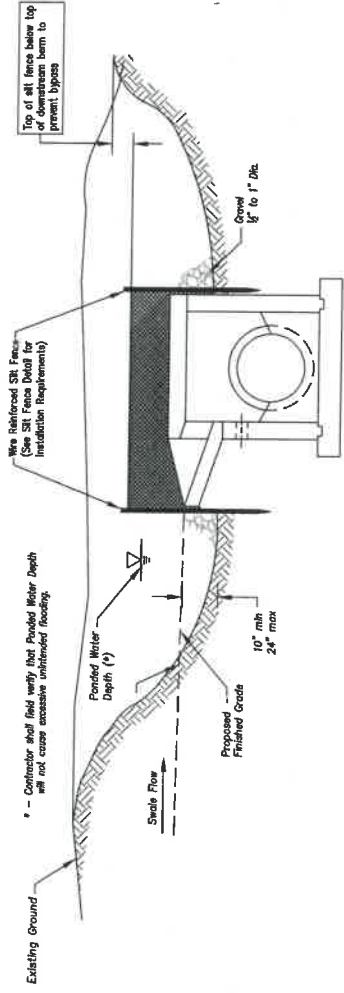
1. Immediately following inlet construction and prior to installation of filter sock, install a 2' x 10' (min.) board around the inlet opening by installing 2' x 10' (min.) board around the inlet opening. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Show details are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

**Maintenances:**

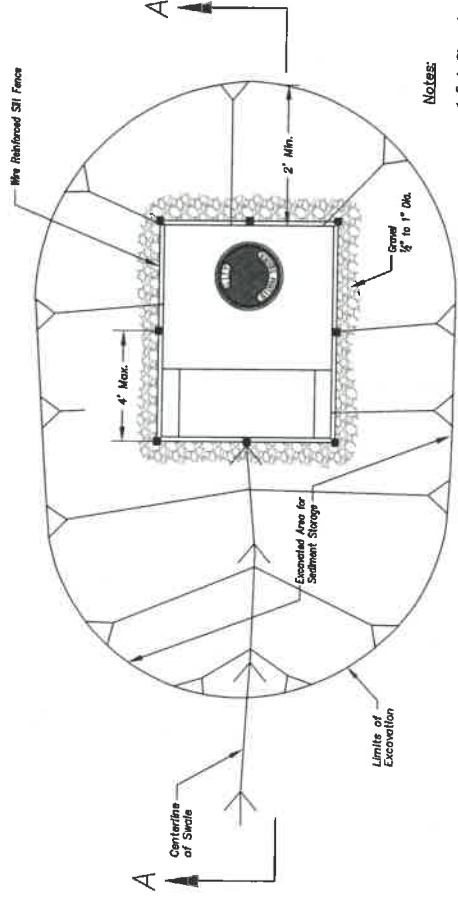
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

	<b>AMERICAN PUBLIC WORKS ASSOCIATION</b> KANSAS CITY METRO CHAPTER
	STANDARD DRAWING NUMBER ESC-06 ADOPTED 10/24/2016
<b>CURB INLET PROTECTION</b>	

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.



**Section A-A**  
Not to Scale

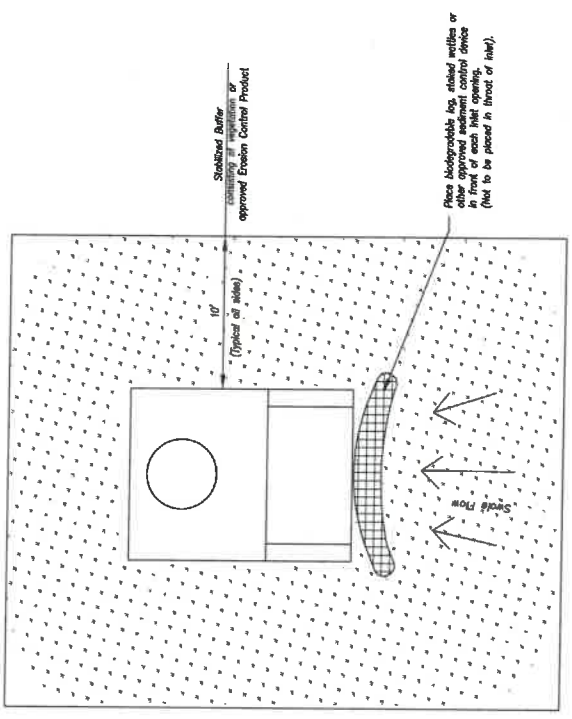


**Plan**  
Not to Scale

**Notes:**

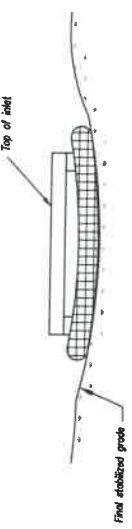
1. Early Stage Area Inlet Sediment Barrier to be installed prior to construction of other inlet or Junction Box.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.

**EARLY STAGE AREA INLET**  
(All open boxes and inlets not at final grade)



**Plan**  
Not to Scale


**Front View**



**LATE STAGE AREA INLET**  
(Area inlets at final grade and existing inlets)

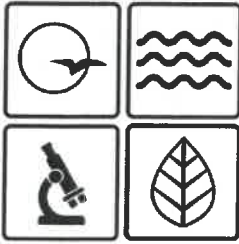
**Maintenance:**

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

**AMERICAN PUBLIC WORKS ASSOCIATION**  
  
**KANSAS CITY METRO CHAPTER**  
**AREA INLET AND JUNCTION BOX PROTECTION**  
 STANDARD DRAWING NUMBER: ESC-07  
 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

## Appendix C – Permits



Missouri Department of dnr.mo.gov

# NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

WOODLAND OAKS  
MORA18395, Jackson County  
WOODLAND OAKS LLC  
656 BAYBERRY LN STE 101  
LEES SUMMIT, MO 64063

Please find your Missouri State Operating Permit which authorizes land disturbance activities for WOODLAND OAKS. This permit has been issued as requested and is based upon application then department.

Please note that prior to the beginning of land disturbance activities other permits may also be required. Especially note the requirements for a Missouri Department of Natural Resources 401 Water Quality Certification and the U.S. Army Corps of Engineers 404 permit. A 401 Certification is needed when placing material, or fill, into the jurisdictional waters of the United States. Examples are culverts under road crossings, riprap along stream banks and storm water outfall pipes. The term jurisdictional waters refers to large lakes, rivers, streams and wetlands, including those that don't always contain water.

The permitting and certification process is shared between the department and the U.S. Army Corps of Engineers. More details can be found at the US Army Corps of Engineer's Website at <http://www.usace.army.mil/>. Some of these activities are also described on page 2, item 3 of the permit.

This permit contains several requirements and should be thoroughly read and understood by you. If your permit requires environmental monitoring, copies of the necessary forms have been . In all future correspondence regarding your permit please reference your permit number as shown on page 1 of the permit.

Please contact the Water Pollution Enforcement and Compliance Unit if you would like to schedule an Environmental Assistance Visit (EAV) at 573-751-1300. During the visit, staff will review the requirements of the permit and answer any questions that you may have. Staff will also be available to walk the site to advise on Best Management Practices required by the permit. The department's regional office staff may also contact you to schedule an EAV.

If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Sections 644.051.6 and 621.250, RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission. Contact information for the AHC is as follows: Administrative Hearing Commission, Third Floor, 131 West High Street, Jefferson City, MO 65101 (Mailing address: PO Box 1557, Jefferson City, MO 65102-1557), Phone: 573-751-2422, Fax: 573-751-5018, Website: [www.oh.mo.gov/ahc](http://www.oh.mo.gov/ahc).

Please be aware that this facility may also be subject to any applicable county or other local ordinances or restrictions.

Sincerely,

Water Protection Program

A handwritten signature in cursive script that reads "Chris Wieberg".

Chris Wieberg  
Director

CW

WOODLAND OAKS  
MORA18395

**ePermitting Certification and Signature Document**

Missouri State Operating General Permit number MORA18395 was issued on 06-29-2021 based on information entered into the Missouri Department of Natural Resources' electronic Permitting (ePermitting) system. Missouri Regulation 10 CSR 20-6.010(2)(B) requires that all applications for construction and operating permits be signed.

WOODLAND OAKS, Jackson County  
NE COLBERN RD AT NE BLACKWELL RD  
LEE'S SUMMIT, MO 64086  
Total Permitted Area: 19.15 Acres  
Total Number of Permitted Features: 1

Based upon the selection you made on the 'New Permit' screen; it was indicated that a single polygon was drawn indicating the entire disturbance area.

Is any part of the area that is being disturbed in a jurisdictional water of the United States? If yes, you must also receive a Clean Water Act, Section 404 Permit for this site from the United States Army Corp of Engineers.  
**No**

I understand there may be an established Local Authority Erosion Control Plan in the city or the unincorporated area of the county where land disturbance activities covered under this general permit will occur. (Note - you may want to contact your local authority to determine if there are any requirements).  
**Agreed**

A Stormwater Pollution Prevention Plan (SWPPP) must be developed for this site. This plan must be developed in accordance with requirements and guidelines specified within the general permit for storm water discharges from land disturbance activities. The application will be considered incomplete if the SWPPP has not been developed.  
**Agreed**

The above certifications were made electronically in the ePermitting system by:  
Name: MATTHEW SCHLICHT  
Date: 06/29/2021

I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and being granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, and terms of this permit, subject to any legitimate appeal available to an applicant under the Missouri Clean Water Commission.  
**Agreed**

MATTHEW SCHLICHT  
Signature

06-29-2021  
Date

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

General Operating Permit

In compliance with the Missouri Clean Water Law, (chapter 644 R.S. Mo as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.: MORA18395  
Owner: WOODLAND OAKS LLC  
Address: 656 BAYBERRY LN STE 101  
LEES SUMMIT, MO 64063  
Continuing Authority: WOODLAND OAKS LLC  
656 BAYBERRY LN STE 101  
LEES SUMMIT, MO 64063  
Facility Name: WOODLAND OAKS  
Facility Address: NE COLBERN RD AT NE BLACKWELL RD  
LEE'S SUMMIT, MO 64086  
Legal Description: Sec. 27, T 48N, R 31W, Jackson County  
UTM Coordinates: 385396.652 / 4311374.134  
Receiving Stream: Tributary to Lake Jacomo ( U )  
First Classified Stream - ID#: Lake Jacomo ( L3 ) 7101.00  
USGS# and Sub Watershed#: 10300101 - 0205

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein.

FACILITY DESCRIPTION

All Outfalls - Construction or land disturbance activity (e.g., clearing, grubbing, excavating, grading, filling and other activities that result in the destruction of the root zone and/or land disturbance activity that is reasonably certain to cause pollution to waters of the state).

This permit authorizes only wastewater, including storm water, discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System, it does not apply to other regulated areas. This permit may be appealed in accordance with RSMo Section 644.051.6 and 621.250, 10 CSR 20-6.020, and 10 CSR 20-1.020.

06-29-2021

Issue date

Handwritten signature of Edward B. Galbraith in blue ink.

Edward B. Galbraith, Director, Division of Environmental Quality

02/07/2022

Expiration date

Handwritten signature of Chris Wieberg in black ink.

Chris Wieberg, Director, Water Protection Program

## APPLICABILITY

1. This general permit authorizes the discharge of stormwater and certain non-stormwater discharges from land disturbance sites that disturb one or more acres or disturb less than one acre when part of a larger common plan of development or sale that will disturb a cumulative total of one or more acres over the life of the project. This general permit also authorizes the discharge of stormwater and certain non-stormwater discharges from smaller projects where the Missouri Department of Natural Resources (Department) has exercised its discretion to require a permit [10 CSR 20-6.200 (1)(B)].

A Missouri State Operating Permit that specifically identifies the project must be issued before any site vegetation is removed or the site disturbed.

Any site owner/operator subject to these requirements for stormwater discharges and who disturbs land prior to permit issuance from the Department is in violation of both State and Federal Laws.

The legal owner of the property or the holder of an easement on the property, and operator on which the site is located are responsible for compliance with this permit.

2. This permit authorizes non-stormwater discharges from the following activities provided that these discharges are addressed in the permittee's specific Stormwater Pollution Prevention Plan (SWPPP) required by this general permit:
  - a. De-watering activities if there are no contaminants other than sediment present in the discharge, and the discharge is treated as specified in Requirements, Section C.8.m. of this permit;
  - b. Flushing water hydrants and potable water lines;
  - c. Water only (i.e., without detergents or additives) rinsing of streets and buildings; and
  - d. Site watering to establish vegetation.
3. This general permit does not authorize the placement of fill materials in flood plains, the obstruction of stream flow, directing stormwater across private property not owned or operated by the permittee, or changing the channel of a defined drainage course. This general permit addresses only the quality of the stormwater runoff and the minimization of off-site migration of sediments and other water contaminants.
4. This permit does not authorize land disturbance activity in jurisdictional waters of the United States as defined by the U.S. Army Corps of Engineers, unless the permittee has obtained the required Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers and its associated Section 401 Water Quality Certification from the department. Land disturbance activities may not begin in the affected waters of the United States until the required 404 permit and 401 certification have been obtained.
5. This general permit prohibits any discharge of wastewater generated from air pollution control equipment or the containment of scrubber water in lined ponds to waters of the state.
6. This general permit prohibits any discharge of sewage or pollutants to waters of the state including but not limited to:
  - a. Any hazardous material, oil, lubricant, solid waste or other non-naturally occurring substance from the site, including fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
  - b. Soaps or solvents used in vehicle and equipment washing;
  - c. Hazardous substances or petroleum products from an on-site spill or handling and disposal practices;



APPLICABILITY (continued)

- d. Wash and/or rinse waters from concrete mixing equipment including ready mix concrete trucks, unless managed by an appropriate control. Any such pollutants must be adequately treated and addressed in the SWPPP, and cannot be discharged to waters of the state;
  - e. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
  - f. Domestic wastewaters, including gray waters; or
  - g. Industrial stormwater runoff.
6. The Department reserves the right to revoke or deny coverage under this general permit to applicants for stormwater discharges from land disturbance activities at sites that have contaminated soils that will be disturbed by the land disturbance activity or where such materials are brought to the site to use as fill or borrow. A site-specific permit may be required to cover such activities.
  7. Discharges to waters of the state shall not cause violations of the Water Quality Standards 10 CSR 20-7.031, including both specific and general criteria. If at any time the Department determines that the quality of waters of the state may be better protected by requiring the owner/operator of the permitted site to apply for a site-specific permit, the Department may require any person to obtain a site-specific operating permit [10 CSR 20-6.010(13)(C)].

The Department may require the permittee to apply for and obtain a site-specific or different general permit if:

- a. The permittee is not in compliance with the conditions of this general permit;
- b. The discharge no longer qualifies for this general permit due to changed site conditions and/or regulations; or
- c. Information becomes available that indicates water quality standards have been or may be violated.

The permittee will be notified in writing of the requirement to apply for a site-specific permit or a different general permit. When a site-specific permit or different general permit is issued to the authorized permittee, the applicability of this general permit to the permittee is automatically terminated upon the effective date of the site specific or different general permit.

8. Any owner/operator authorized by a general permit may request to be excluded from the coverage of the general permit and apply for a site-specific permit [10 CSR 20-6.010(13) (D)].
9. This operating permit does not affect, remove, or replace any requirement of the National Environmental Policy Act, the Endangered Species Act; the National Historic Preservation Act; the Comprehensive Environmental Response, Compensation and Liability Act; or the Resource Conservation and Recovery Act. Determination of applicability to the above mentioned acts is the responsibility of the permittee.
10. This permit does not supersede any requirement for obtaining project approval under an established local authority.
11. This permit is not transferable to other owners or operators.

### EXEMPTIONS FROM PERMIT REQUIREMENTS

1. Facilities that discharge all stormwater runoff directly to a combined sewer system are exempt from stormwater permit requirements.
2. Land disturbance activity as described in 10 CSR 20-6.200(1) (B) and 10 CSR 20-6.010(1) (B) where water quality standards are not exceeded.
3. Oil and gas related activities as listed in 40 C.F.R § 122.26(a) (2) (ii) where water quality standards are not exceeded.

### REQUIREMENTS

1. This permit is to ensure the design, installation and maintenance of effective erosion and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:
  - a. Control stormwater volume and velocity within the site to minimize soil erosion;
  - b. Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and stream bank erosion;
  - c. Minimize the amount of soil exposed during construction activity;
  - d. Minimize the disturbance of steep slopes;
  - e. Minimize sediment discharges from the site. Design, install and maintain erosion and sediment controls that address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle size expected to be present on the site;
  - f. Provide and maintain natural buffers around surface waters as detailed in 8.f, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration and filtering, unless infeasible; and
  - g. Minimize soil compaction and, unless infeasible, preserve topsoil.
  - h. Capture or treat a 2-year, 24-hour storm event. A 2-year, 24-hour storm event shall be determined for the project location using the National Oceanic and Atmospheric Administration's National Weather Service Atlas 14 which can be located at <http://hdsc.nws.noaa.gov/hdsc/pfds/>.
2. Installation of Best Management Practices (BMP) necessary to prevent soil erosion at the project boundary must be complete prior to the start of all phases of construction.
3. Install sediment controls along any perimeter areas of the site that will receive pollutant discharges.
  - a. Remove any sediment per the manufacturer's instructions or before it has accumulated to one-half of the above-ground height of any perimeter control.
  - b. For sites where perimeter controls are infeasible, other practices shall be implemented to minimize discharges to perimeter areas of the site.
4. BMPs shall be maintained and remain in effective operating condition during the entire duration of the project, with repairs made within the timeframe specified elsewhere in this permit, until final stabilization has been achieved.
5. Minimize sediment trackout from the site.
  - a. Restrict vehicle traffic to properly designed exit points.
  - b. Use appropriate stabilization techniques at all points that exit onto paved roads.
  - c. Remove any sediment that has been tracked out within the same business day or by the end of the next business day if trackout occurs on a non-business day.

REQUIREMENTS (continued)

6. The primary requirement of this permit is the development and implementation of a SWPPP which incorporates site specific practices to best minimize the soil exposure, soil erosion, and the discharge of pollutants. The permittee shall fully implement the provisions of the SWPPP required under this part as a condition of this general permit throughout the term of the land disturbance project. **The SWPPP must be developed prior to issuance of the permit and must be specific to the land disturbance activities at the site.** A permit must be issued before any disturbance of root zone of the existing vegetation or other land disturbance activities may begin. Either an electronic copy or a paper copy of the SWPPP must be accessible to anyone on-site at all times when land disturbance operations are in progress, or other operational activities that may affect the maintenance or integrity of the BMP structures and made available as specified under the Records Section of this permit.
7. The SWPPP must:
  - a. List and describe all outfalls;
  - b. Incorporate required practices identified below;
  - c. Incorporate erosion control practices specific to site conditions;
  - d. Provide for maintenance and adherence to the plan;
  - e. Discuss whether or not a 404/401 Permit is required for the project; and
  - f. Name the person responsible for inspection, operation and maintenance of BMPs.

The purpose of the SWPPP is to ensure the design, implementation, management and maintenance of BMPs in order to prevent sediment and other pollutants in stormwater discharges associated with the land disturbance activities; compliance with the Missouri Water Quality Standards; and compliance with the terms and conditions of this general permit.

The permittee shall select, install, use, operate and maintain appropriate BMPs for the permitted site. The following manuals are acceptable resources for the selection of appropriate BMPs. *Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*, (Document number EPA 833-R-06-004) published by the United States Environmental Protection Agency (USEPA) in May 2007. This manual as well as other information, including examples of construction SWPPPs, is available at the USEPA internet site at [https://www3.epa.gov/npdes/pubs/industrial\\_swppp\\_guide.pdf](https://www3.epa.gov/npdes/pubs/industrial_swppp_guide.pdf); and

The latest version of *Protecting Water Quality: A field guide to erosion, sediment and stormwater best management practices for development sites in Missouri*, published by the Missouri Department of Natural Resources. This manual is available on the Department's internet site at: <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>.

The permittee is not limited to the use of these guidance manuals. Other guidance publications may be used to select appropriate BMPs. However, all BMPs should be described and justified in the SWPPP.

8. SWPPP Requirements: The following information and practices shall be provided for in the SWPPP:
  - a. Nature of the Construction Activity: The SWPPP briefly must describe the nature of the construction activity, including:
    - 1) The function of the project (e.g., low density residential, shopping mall, highway, etc.);
    - 2) The intended sequence and timing of activities that disturb the soils at the site;
    - 3) Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities including off-site borrow and fill areas; and
    - 4) A general map (e.g., United States Geological Survey quadrangle map, a portion of a city or county map, or other map) with enough detail to identify the location of the construction site and waters of the State within one mile of the site.

REQUIREMENTS (continued)

- b. Site Map: The SWPPP must contain a legible site map showing the site boundaries and outfalls and identifying:
- 1) Direction(s) of stormwater flow and approximate slopes anticipated after grading activities;
  - 2) Areas of soil disturbance and areas that will not be disturbed (or a statement that all areas of the site will be disturbed unless otherwise noted);
  - 3) Location of major structural and non-structural BMPs identified in the SWPPP;
  - 4) Locations where stabilization practices are expected to occur;
  - 5) Locations of off-site material, waste, borrow or equipment storage areas;
  - 6) Locations of all waters of the state (including wetlands);
  - 7) Locations where stormwater discharges to a surface water; and
  - 8) Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
- c. Site Description: In order to identify the site, the SWPPP shall include facility and outfall information. The SWPPP shall have sufficient information to be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs.
- d. Selection of Temporary and Permanent BMPs: The permittee shall select appropriate BMPs for use at the site and list them in the SWPPP.
- e. The SWPPP shall require existing vegetation and trees to be preserved where practical.
- f. For surface waters of the state, defined as "all waters within the jurisdiction of this state, including all rivers, streams, lakes and other bodies of surface and subsurface water lying within or forming a part of the boundaries of the state which are not entirely confined and located completely upon lands owned, leased or otherwise controlled by a single person or by two or more persons jointly or as tenants in common, located on or adjacent to the site, the permittee must:
- 1) Provide and maintain a 50-foot undisturbed natural buffer;
  - 2) Provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer; or
  - 3) If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
  - 4) Where you are retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water:
    - i. The ordinary high water mark of the water body, defined as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, and/or the presence of litter and debris; or
    - ii. The edge of the stream or river bank, bluff, or cliff, whichever is applicable.
- g. Description of BMPs: The SWPPP shall include a description of both structural and non-structural BMPs that will be used at the site.

The SWPPP shall provide the following general information for each BMP which will be used one or more times at the site:

- 1) Physical description of the BMP;
- 2) Site conditions that must be met for effective use of the BMP;
- 3) BMP installation/construction procedures, including typical drawings; and
- 4) Operation and maintenance procedures for the BMP.

REQUIREMENTS (continued)

The SWPPP shall provide the following information for each specific instance where a BMP is to be installed:

- 1) Whether the BMP is temporary or permanent;
  - 2) Where, in relation to other site features, the BMP is to be located;
  - 3) When the BMP will be installed in relation to each phase of the land disturbance procedures to complete the project; and
  - 4) Site conditions that must be met before removal of the BMP if the BMP is not a permanent BMP.
- h. Disturbed Areas: Slopes for disturbed areas must be defined in the SWPPP. A site map or maps defining the sloped areas for all phases of the project must be included in the SWPPP.

For soil disturbing activities that have been temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days:

- 1) The permittee shall construct BMPs to establish interim stabilization; and
- 2) Stabilization must be initiated immediately and completed within 14 calendar days.

For soil disturbing activities that have been permanently ceased on any portion of the site, final stabilization of disturbed areas must be initiated immediately and completed within 14 calendar days.

Allowances to the 14 day completion period for temporary and final stabilization may be made due to weather and equipment malfunctions. The use of allowances shall be documented in the SWPPP.

Interim stabilization shall consist of well-established and maintained BMPs that are reasonably certain to protect waters of the state from sediment pollution over an extended period of time. This may require adding more BMPs to an area than is normally used during daily operations. These BMPs may include a combination of sediment basins, check dams, sediment fences and mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 3:1 (three feet horizontal to one foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee shall establish interim stabilization within seven days of ceasing operations on that part of the site.

If vegetative stabilization measures are being implemented, stabilization is considered "installed" when all activities necessary to seed or plant the area are completed.

- i. Installation: The permittee shall ensure the BMPs are properly installed at the locations and relative times specified in the SWPPP. Peripheral or border BMPs to control runoff from disturbed areas shall be installed or marked for preservation before general site clearing is started. Note that this requirement does not apply to earth disturbances related to initial site clearing and establishing entry, exit and access of the site, which may require that stormwater controls be installed immediately after the earth disturbance. For phased projects, BMPs shall be properly installed as necessary prior to construction activities. Stormwater discharges from disturbed areas which leave the site shall pass through an appropriate impediment to sediment movement such as a sedimentation basin, sediment traps and silt fences prior to leaving the land disturbance site. A drainage course change shall be clearly marked on a site map and described in the SWPPP.
- j. Sedimentation Basins: The SWPPP shall include a sedimentation basin for each drainage area with ten or more acres disturbed at one time. The sedimentation basin shall be sized to treat a local 2-year, 24-hour storm. Accumulated sediment shall be removed from the basin when basin is 50% full. Utilize outlet structures that withdraw water from the surface when

REQUIREMENTS (continued)

discharging from basins and impoundments unless infeasible. Discharges from the basin shall not cause scouring of the banks or bottom of the receiving stream. The SWPPP shall require the basin be maintained until final stabilization of the disturbed area served by the basin.

Where use of a sediment basin is infeasible, the SWPPP shall evaluate and specify other similarly effective BMPs to be employed to control erosion and sediment delivery. These similarly effective BMPs shall be selected from appropriate BMP guidance documents authorized by this permit. The BMPs must provide equivalent water quality protection to achieve compliance with this permit. The SWPPP shall require both temporary and permanent sedimentation basins to have a stabilized spillway to minimize the potential for erosion of the spillway or basin embankment.

- k. Pollution Prevention Measures: The SWPPP shall include BMPs for pollution prevention measures. At 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 must 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 stormwater;
    - 3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. Included but not limited to the installation of containment berms and use of drip pans at petroleum product and liquid storage tanks and containers; and
    - 4) Prevent discharges from causing or contributing to an exceedance of water quality standards including general criteria.
  - l. Roadways: Where applicable, upon installation of or connection to roadways, all efforts should be made to prevent the deposition of earth and sediment onto roadways through the use of proper BMPs. Stormwater inlets susceptible to receiving sediment from the permitted land disturbance site shall have curb inlet protection. Where stormwater will flow off the end of where a roadway terminates, a sediment catching BMP such as gravel berm or silt fence shall be provided. Curb inlets shall be cleaned weekly or following a rainfall that generates a run-off.
  - m. Dewatering: Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. The SWPPP shall include a description of any anticipated dewatering methods. An estimation of the volume of water discharged from these dewatering activities shall be kept with the SWPPP after each discharge has ended along with the type and maximum capacity (e.g., flow rate) of equipment used. The SWPPP shall call for specific BMPs designed to treat water pumped from trenches and excavations and in no case shall this water be pumped off-site without being treated by the specified BMPs.
9. Good housekeeping practices shall be maintained at all times to keep waste from entering waters of the state. Solid and hazardous waste management include providing trash containers and regular site cleanup for proper disposal of solid waste such as scrap building material, product/material shipping waste, food containers and cups, and providing containers and proper disposal of waste paints, solvents and cleaning compounds. The provision of portable toilets for proper disposal of sanitary sewage and the storage of construction materials should be kept away from drainage courses and low areas.

REQUIREMENTS (continued)

10. All fueling facilities present shall at all times adhere to applicable federal and state regulations concerning underground storage, above ground storage and dispensers.
11. Hazardous wastes that are transported, stored, or used for maintenance, cleaning, or repair shall be managed according to the provisions of the Missouri Hazardous Waste Laws and Regulations.
12. All paint, solvents, petroleum products, petroleum waste products and storage containers such as drums, cans, or cartons shall be stored according to BMPs. The materials exposed to precipitation shall be stored in watertight, structurally sound, closed containers. All containers shall be inspected for leaks or spillage during the inspection of BMPs.
13. Amending/Updating the SWPPP: The permittee shall amend and update the SWPPP as appropriate during the term of the land disturbance activity. The permittee shall amend the SWPPP at a minimum whenever the:
  - a. Design, operation, or maintenance of BMPs is changed;
  - b. Design of the construction project is changed that could significantly affect the quality of the stormwater discharges;
  - c. Permittee's inspections indicate deficiencies in the SWPPP or any BMP;
  - d. Department notifies the permittee in writing of deficiencies in the SWPPP;
  - e. SWPPP is determined to be ineffective in minimizing or controlling erosion and sedimentation (e.g., there is visual evidence of excessive site erosion or excessive sediment deposits in streams or lakes); and/or
  - f. Department determines violations of water quality standards may occur or have occurred.
14. An individual shall be designated by the permittee as the lead for environmental matters. The lead individual for environmental matters shall have a thorough and demonstrable knowledge of the site's SWPPP and sediment and erosion control practices in general. The lead individual for environmental matters or a designated inspector knowledgeable in erosion, sediment and stormwater control principles shall inspect all structures that function to prevent pollution of waters of the state.
15. Site Inspections Reports: The permittee (or a representative of the permittee) shall conduct regularly scheduled inspections. These inspections shall be conducted by a qualified person, one who is responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site. For disturbed areas that have not been finally stabilized, all installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. All stormwater outfalls shall be inspected for evidence of erosion or sediment deposition. When practicable the receiving stream shall also be inspected for 50 feet downstream of the outfall. Any structural or maintenance problems shall be noted in an inspection report and corrected as soon as possible but no more than seven calendar days after the inspection. All BMPs must be inspected in accordance to one of the two schedules listed below, and any changes to the frequency of inspections, including switching between the options listed below, must be documented in the SWPPP:
  - a. At least once every seven calendar days and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour storm has ceased during a normal work day and within 72 hours if the rain event ceases during a non-work day such as a weekend or holiday; or
  - b. Once every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches of precipitation or greater, or the occurrence of runoff from snowmelt. To determine if a storm event of 0.25 inches or greater has occurred on your site, you must either keep a properly maintained rain gauge on site, or obtain the storm event information from a weather station for your location.
    - 1) Inspections are only required during the project's normal working hours.

REQUIREMENTS (continued)

- 2) You must conduct an inspection within 24 hours once a storm event has produced 0.25 inches within a 24 hour period, even if the storm event is still continuing.
- 3) If you have elected to inspect every 14 calendar days and there is a storm event at your site that continues for multiple days, and each day of the storm produces 0.25 inches or more of rain, you are required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

The SWPPP must explain how the person responsible for erosion control will be notified when stormwater runoff occurs. If weather conditions prevent correction of BMPs within seven calendar days, the reasons for the delay must be documented (including pictures) and there must be a narrative explaining why the work cannot be accomplished within the seven day time period. The documentation must be filed with the regular inspection reports. The permittee shall correct the problem as soon as weather conditions allow. Areas on-site that have been finally stabilized must be inspected at least once per month.

A log of each inspection and copy of the inspection report shall be kept readily accessible and must be available upon request by the Department. Electronic logs are acceptable as long as reports can be provided in a timely manner. If inspection reports are kept off-site, your SWPPP must indicate where they are stored. The inspection report shall be signed by the permittee or by the person performing the inspection if duly authorized to do so. The inspection report is to include the following minimum information:

- a. Inspector's name;
  - b. Date of inspection;
  - c. Observations relative to the effectiveness of the BMPs;
  - d. Actions taken or necessary to correct the observed problem; and
  - e. Listing of areas where land disturbance operations have permanently or temporarily stopped.
16. Notification to All Contractors: The permittee shall be responsible for notifying each contractor or entity (including utility crews and city employees or their agents) who will perform work at the site of the existence of the SWPPP and what action or precautions shall be taken while on-site to minimize the potential for erosion and the potential for damaging any BMP. The permittee is responsible for any damage a subcontractor may do to established BMPs and any subsequent water quality violation resulting from the damage.
17. Public Notification: The permittee shall post a copy of the public notification sign described by the Department at the main entrance to the site. The public notification sign must be visible from the public road that provides access to the site's main entrance. An alternate location is acceptable provided the public can see it and it is noted in the SWPPP. The public notification sign must remain posted at the site until the permit has been terminated.

OTHER DISCHARGES

1. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the Stormwater Pollution Prevention Plan (SWPPP) and made available to the department upon request. The department may also require the submittal of a written or electronic report detailing measures taken to clean up the spill within five (5) days of the spill. Such a report must include the type of material spilled, volume, date of spill, date clean-up was completed, clean-up method, and final disposal method. If the spill occurs outside of normal business hours, or if the permit holder cannot reach regional office staff for any reason, the permit holder is instructed to report the spill to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. Leaving a message on a department staff member voice-mail does not satisfy this reporting requirement.



REQUIREMENTS (continued)

2. Removed substances: Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

SAMPLING REQUIREMENTS AND EFFLUENT LIMITATIONS

The Department may require sampling and reporting as a result of illegal discharges, compliance issues, complaint investigations, or other such evidence of contamination from activities at the site. If such an action is needed, the Department will specify in writing any sampling requirements, including such information as location, extent and parameters.

RECORDS

1. The permittee shall retain copies of this general permit, the SWPPP and all amendments for the site named in the State Operating Permit, results of any monitoring and analysis and all site inspection records required by this general permit. The records shall be accessible during normal business hours. The records shall be retained for a period of at least three years from the date of the Letter of Termination.
2. The permittee shall provide a copy of the SWPPP to the Department, USEPA, or any local agency or government representative if they request a copy in the performance of their official duties.
3. The permittee shall provide a copy of the SWPPP to those who are responsible for installation, operation, or maintenance of any BMP. The permittee, their representative, and/or the contractor(s) responsible for installation, operation and maintenance of the BMPs shall have a current copy of the SWPPP with them when on the project site.

LAND PURCHASE AND CHANGE OF OWNERSHIP

1. Federal and Missouri stormwater regulations [10 CSR 20-6.200(1) (B)] require a stormwater permit and erosion control measures for all land disturbances of one or more acres. These regulations also require a permit for less than one acre lots if the lot is part of a larger common plan of development or sale where that plan is at least one acre in size.
2. If the permittee sells any portion of the permitted site to a developer for commercial, industrial, or residential use, this land remains a part of the common sale and the new owner must obtain a permit prior to conducting any land disturbance activity. Therefore, the original permittee must amend the SWPPP to show that the property has been sold and therefore no longer under the original permit coverage.
3. Property of any size which is part of a larger common plan of development where the property has been stabilized and the original permit terminated will require application of a new land disturbance permit for any future land disturbance activity.
4. If the entire tract is sold to a single entity, then this permit shall be terminated when the new owner obtains a new land disturbance permit for the site.
5. If a portion of a larger common plan of development is sold to an individual for the purpose of building his or her own private residence, a permit is required if the portion of land sold is equal to or greater than one acre while no permit is required for less than one acre of land sold.

### TERMINATION

1. This permit may be terminated when the project is stabilized. The project is considered to be stabilized when perennial vegetation, pavement, buildings, or structures using permanent materials cover all areas that have been disturbed. With respect to areas that have been vegetated, vegetation cover shall be at least 70% over 100% of the site. In order to terminate the permit, the permittee shall notify the Department by submitting Form H Request for Termination of a General Permit.
2. The Cover Page (Certificate Page) of the Master General Permit for Land Disturbance specifies the “effective date” and the “expiration date” of the Master General Permit. The “issued date” along with the “expiration date” will appear on the State Operating Permit issued to the applicant. This permit does not continue administratively beyond the expiration date.
3. Due to the nature of the electronic permitting system, a period of 60 days will be granted at the discretion of the department in order to apply for a new permit after the new version is effective. Applicants must maintain appropriate best management practices during the discretionary period.

### DUTY TO REAPPLY

If the project or development completion date will be after the expiration date of this general permit, then the permittee must reapply to the Department for a new permit. This permit may be applied for and issued electronically once made available by the director in accordance with Section 644.051.10, RSMo.

### MODIFICATION, REVOCATION, AND REOPENING

1. If at any time the Department determines that the quality of waters of the state may be better protected by reopening this permit, or revoking this permit and requiring the owner/operator of the permitted site to apply for a site-specific permit, the Department may revoke a general permit and require any person to obtain such an operating permit as authorized by 10 CSR 20-6.010(13) and 10 CSR 20-6.200(1) (B).
2. If this permit is reopened, modified or revoked pursuant to this Section, the permittee retains all rights under Chapter 536 and 644 Revised Statutes of Missouri upon the Department’s reissuance of the permit as well as all other forms of administrative, judicial, and equitable relief available under law.

### STANDARD CONDITIONS

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

1. Other Information
  - a. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
2. Duty to Comply
  - a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

STANDARD CONDITIONS (continued)

3. Duty to Provide Information
  - a. The permittee shall furnish to the Department, within a reasonable time, any information which the Department 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 Department upon request, copies of records required to be kept by this permit.
  
4. Inspection and Entry
  - a. The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
    - i. 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 the permit;
    - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    - iii. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
    - iv. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
  
5. Signatory Requirement
  - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
  - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
  - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

**Missouri Department of Natural Resources**  
**Fact Sheet**  
**MO-RA00000**

The Federal Water Pollution Control Act [Clean Water Act (CWA)] Section 402 of Public Law 92-500 (as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the CWA). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (permit) are issued by the Missouri Department of Natural Resources (department) under an approved program, operated in accordance with federal and state laws (Federal CWA and Missouri Clean Water Law Section 644 as amended). Permits are issued for a period of five (5) years unless otherwise specified.

Per 40 CFR 124.56, 40 CFR124.8, and 10 CSR 20-6.020(1)(A)2., a Fact Sheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the permit. A Fact Sheet is not an enforceable part of an MSOP.

This Fact Sheet is for a:

- Major
- Minor
- Industrial Facility
- Variance
- Master General Permit
- Permit with widespread public interest

**Definitions**

**Common Promotional Plan:** A plan undertaken by one (1) or more persons, to offer lots for sale or lease; where land is offered for sale by a person or group of persons acting in concert, and the land is contiguous or is known, designated or advertised as a common unit or by a common name or similar names, the land is presumed, without regard to the number of lots covered by each individual offering, as being offered for sale or lease as part of a common promotional plan.

**Immediately:** For the purposes of this permit, immediately should be defined as within 24 hours.

**Infeasible:** Infeasible means not technologically possible, or not economically practicable and achievable in light of best industry practices.

**Larger Common Plan of Development or sale:** A contiguous area where multiple separate and distinct construction activities are occurring under one plan.

**Ordinary High Water Mark:** The line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation and/or the presence of litter and debris.

**Peripheral:** For the purposes of this permit, peripheral should be defined as the outermost boundary of the area that will be disturbed.

**Permanently:** For the purposes of this permit, permanently should be defined as any activity that has been ceased without any intentions of future disturbance.

Waters of the state: Section 644.016.1(27) RSMo. defines waters of the state as, "All waters within the jurisdiction of this state, including all rivers, streams, lakes and other bodies of surface and subsurface water lying within or forming a part of the boundaries of the state which are not entirely confined and located completely upon lands owned, leased or otherwise controlled by a single person or by two or more persons jointly or as tenants in common."

### **Part I – Facility Information**

Facility Type: Industrial Stormwater  
Facility Description: Construction or land disturbance activity (e.g., clearing, grubbing, excavating, grading, filling, and other activities that result in the destruction of the root zone and/or land disturbance activity that is reasonably certain to cause pollution to waters of the state).

This permit establishes a SWPPP requirement to minimize pollutants of concern from this type of facility or for all facilities covered under this permit. 10 CSR 20-6.200(6)(A)7. specifies that "general permits shall contain BMP requirements and/or monitoring and reporting requirements to keep the stormwater from becoming contaminated." Local conditions are not considered when developing conditions for a general permit. A facility may apply for a site-specific permit if they desire a review of site-specific conditions.

While drafting this permit for renewal, the department hosted four public meetings held on January 27, February 24, April 18, and May 19, 2016, which allowed stakeholders to voice concerns about conditions within the permit and submit comments during the period of initial stakeholder involvement. These concerns were taken into consideration when drafting the permit. In addition to these meetings, the department also held an informal review period for stakeholders to review the draft prior to the 30 day public comment period.

### **Part II – Receiving Stream Information**

#### **APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

Per Missouri Effluent Regulations (10 CSR 20-7.015), the waters of the state are divided into seven (7) categories. This permit applies to facilities discharging to the following water body categories:

Please mark all appropriate designated waters of the state categories of the receiving stream.

- Missouri or Mississippi River [10 CSR 20-7.015(2)]
- Lakes or Reservoirs [10 CSR 20-7.015(3)]
- Losing Streams [10 CSR 20-7.015(4)]
- Metropolitan No-Discharge Streams [10 CSR 20-7.015(5)]
- Special Streams [10 CSR 20-7.015(6)]
- Subsurface Waters [10 CSR 20-7.015(7)]
- All Other Waters [10 CSR 20-7.015(8)]

Missouri Water Quality Standards (10 CSR 20-7.031) defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1<sup>st</sup> classified receiving stream's beneficial water uses shall be maintained in accordance with 10 CSR 20-7.031(4). The BMP requirement established by this permit are intended to be protective of all streams that fall within the categories of receiving water bodies indicated above. A general permit does not take into consideration site-specific conditions.

### **Part III – Applicability**

Condition number 8 was expanded to include a more comprehensive list of state and federal requirements that must be taken into consideration.

If the proposed project encounters and will potentially affect a species of concern, please report it to the Missouri Department of Conservation and the United States Fish and Wildlife Service. For more information about requirements of the Endangered Species Act, please visit the following links:

1. To determine the potential for species of concern within or near a project, please visit the United States Fish and Wildlife Services' "Information, Planning and Conservation" website at <http://ecos.fws.gov/ipac/>.
2. If there are listed species in the county or township, check to see if critical habitat has been designated and if that area overlaps or is near the project area. Critical habitat designations and associated requirements may also be found at 50 CFR Parts 17 and 226. For additional information, use the map view tool at <http://criticalhabitat.fws.gov/crithab/> to find data specific to your state and county.

The Missouri Department of Conservation's internet site for the Natural Heritage Review may be very helpful and can be found at the following link, <http://mdcgis.mdc.mo.gov/heritage/newheritage/heritage.htm>.

### **Part IV – Exemptions**

Condition Number 2 was added to cite all state exemptions from permitting requirements, combining several previous cited exemptions into one condition and reference. This includes an exemption for linear construction where the entire disturbance, including clearing of land to access the linear disturbance, is less than two feet in width.

Condition Number 3 was added to cite federal regulations that exclude land disturbance projects as related to the installation or maintenance work for oil and gas related activities.

### **Part V – Rationale of Technology Based Limitations & Permit Conditions**

#### **303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):**

Section 303(d) of the Federal CWA requires that each state identify waters that are not meeting Water Quality Standards and for which adequate water pollution controls have not been required. Water Quality Standards protect such beneficial uses of water as whole body contact, maintaining fish and other aquatic life, and providing drinking water for people, livestock, and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

#### **ANTI-BACKSLIDING:**

A provision in the Federal Regulations [CWA Section 303(d) (4); CWA Section 402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- Applicable: Backsliding proposed in this permit conforms to the anti-backsliding provisions of Section 402(o) of the CWA and 40 CFR 122.44. The department has determined that technical mistakes were made in the previous permit [CWA 402(o)(2)(B)(ii)]. The Settleable Solids limitation was removed since has been determined to not be adequate in protecting water quality in all areas of the state. Increased technology based best management practices will protect water quality at a similar if not more protective level.

**ANTIDegradation:**

Antidegradation policies ensure protection of water quality for a particular water body on a pollutant by pollutant basis to ensure Water Quality Standards are maintained to support beneficial uses such as fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as an Outstanding National Resource Water or Outstanding State Resource Water [10 CSR 20-7.031(3) (C)]. Antidegradation policies are adopted to minimize adverse effects on water. The department has determined that the best avenue forward for implementing the Antidegradation requirements into general permits is by requiring the appropriate development and maintenance of a SWPPP. The SWPPP must identify all Best Management Practices (BMPs) that are reasonable and effective, taking into account environmental impacts and costs. This analysis must document why no discharge or no exposure options are not feasible at the facility. This selection and documentation of appropriate control measures will then serve as the analysis of alternatives and fulfill the requirements of the Antidegradation Rule and Implementation Procedure 10 CSR 20-7.031(3) and 10 CSR 20-7.015(9)(A)5.

Any facility seeking coverage under this permit, which undergoes expansion or discharges a new pollutant of concern, must update their SWPPP and select new BMPs that are reasonable and cost effective. New facilities seeking coverage under this permit are required to develop a SWPPP that includes this analysis and documentation of appropriate BMPs. Renewal of coverage for a facility requires a review of the SWPPP to assure that the selected BMPs continue to be appropriate.

- Applicable: The main pollutant of concern in this permit is sediment. Compliance with the technology based limitations established in this permit for the protection of General Criteria, along with the evaluation and implementation of BMPs as documented in the SWPPP, meets the requirements of Missouri's Antidegradation Review [10 CSR 20-7.031(3), 10 CSR 20-7.031 Table A, and 10 CSR 20-7.015(9)(A)5].

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(3)(k) Best Management Practices (BMPs), BMPs are implemented to control or abate the discharge of pollutants when: (1) Authorized under Section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under Section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with Developing Your Stormwater Pollution Prevention Plan, a Guide for Construction Sites (EPA 833-R-06-004; [https://www3.epa.gov/npdes/pubs/sw\\_swppp\\_guide.pdf](https://www3.epa.gov/npdes/pubs/sw_swppp_guide.pdf)) published by the United States Environmental Protection Agency (EPA) in May 2007, BMPs are measures or practices used to reduce the amount of pollution entering waters of the state. BMPs may take the form of a process, activity, or physical structure. EPA developed resources and tools related to construction stormwater along with the BMPs to control and minimize stormwater (<https://www.epa.gov/npdes/stormwater-discharges-construction-activities#resources>). Along with EPA's resources and tools, the International Stormwater BMP database ([www.bmpdatabase.org/index.htm](http://www.bmpdatabase.org/index.htm)) may provide guidance on BMPs appropriate for specific industries.

Additionally in accordance with Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges.

- Applicable: A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

The new permit has been revised to allow permittees to store SWPPP documents electronically as long as they can be provided in an expedient manner.

**WATER QUALITY STANDARDS:**

Per 10 CSR 20-7.031(4), General Criteria shall be applicable to all waters of the state at all times, including mixing zones. Additionally, 40 CFR 122.44(d)(1) directs the department to include in each NPDES permit conditions to achieve water quality established under Section 303 of the CWA, including state narrative criteria for water quality.

General Criteria. The following water quality criteria shall be applicable to all waters of the state at all times. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

- (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits, or prevent full maintenance of beneficial uses;
- (2) Waters shall be free from oil, scum, and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
- (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor, or prevent full maintenance of beneficial uses;
- (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal, or aquatic life;
- (5) There shall be no significant human health hazard from incidental contact with the water;
- (6) There shall be no acute toxicity to livestock or wildlife watering;
- (7) Waters shall be free from physical, chemical, or hydrologic changes that would impair the natural biological community;
- (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment, and solid waste as defined in Missouri Solid Waste Law, Section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to Section 260.200-260.247, RSMo.

The settleable solids requirement was removed from this permit and was replaced with additional, more specific, BMP requirements. The settleable solids limit was determined not to be protective of all waters across the state, therefore, it was removed.

Additional BMPs added to the permit will provide for more consistency across the state. Examples of these BMPs include requirements to:

- Install and maintain perimeter controls along areas of the site that will receive pollutant discharges;
- Minimize sediment trackout from the site;
- Capture or treat runoff up to and including a 2-year, 24-hour storm event; and
- Direct stormwater to vegetated areas.

The minimum buffer width was increased from 25 feet to 50 feet. Studies have shown that a 50 foot vegetative buffer more adequately treats sediment from stormwater discharges. This appears to be standard in EPA's permit as well as in many other states.

In order to design controls that match the sediment removal efficiency of a 50-foot buffer, first you must know what this efficiency is for your site. The sediment removal efficiencies of natural buffers vary according to a number of site-specific factors, including precipitation, soil type, land cover, slope length, width, steepness, and the types of sediment controls used to reduce the discharge of sediment prior to the buffer.

Sediment removal efficiencies are based on the U.S. Department of Agriculture's RUSLE2 (Revised Universal Soil Loss Equation 2) model for slope profiles using a 100-foot long exposed slopes.

Sediment removal is defined as the annual sediment delivered at the downstream end of the 50-foot natural buffer (tons/yr/acre) divided by the annual yield from cleared area (tons/yr/acre).



Sediment removal is in part a function of (1) a perimeter control (i.e., silt fence) located between the disturbed portion of the site and the upland edge of the natural buffer and (2) stormwater flows traveling through a 50-foot buffer of undisturbed natural vegetation.

Additional guidance may be found at [https://www.epa.gov/sites/production/files/2015-10/documents/cgp2012\\_appendixg.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/cgp2012_appendixg.pdf).

Inspection frequencies: Site inspection frequencies have been changed from the previous permit based upon guidance from the US EPA and from stakeholder discussions. These frequencies will allow flexibility but will still allow for frequent enough inspections to ensure that all BMPs are adequately functioning.

### **Part VI – Effluent Limitations Determination**

In this general permit, Technology-Based Effluent Limitations are established through the SWPPP and BMP requirements. Effective BMPs may have to be designed on a site-specific basis. The concurrent implementation of monitoring and benchmarks provides a tool for each facility to evaluate the effectiveness of BMPs to ensure protection of water quality.

### **Part VII – Land Purchase and Change of Ownership**

A “**larger common plan of development or sale**” is a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan. This term is used in conjunction with common promotional plan, as defined in §644, RSMo.

Any portion of a project that is sold to a developer is still considered part of a larger common plan of development or sale and will require a permit.

If a portion of a site is sold to an individual for the purpose of building his or her private residence:

- A permit is required if the portion of land sold is equal to or greater than one acre.
- A permit is not required if the portion of land sold is less than one acre.

### **Part VIII – Termination**

The word ‘plant density’ was removed from the first paragraph since the department determined that percent of vegetative cover more accurately describes the vegetative requirements of this permit. This decision was made after discussion within the department and with stakeholders.

It is preferable that temporary BMPs such as sediment fence be removed prior to permit termination to eliminate potential solid waste issues that may occur as a result of unnecessary and unmaintained BMPs.

### **Part IX – Duty to Reapply**

This section has been revised to reflect the current applicable statutes which require applicants to submit an application for coverage electronically as soon as they are made available by the director. The determination was made that facilities do not need to submit an application 30 days prior to expiration because this permit does not administratively continue. Additionally, due to limitations within the electronic system currently used to issue permits, the department will use its discretion to allow existing permit holders a period of 60 days to reapply after the new version of the permit is effective. The department will announce the availability status of the new permit and the process to reapply at least 30 days prior to the expiration of the existing permit.

**Part X – Standard Conditions**

This section was revised to only include the specific standard conditions that apply to this permit. All other conditions have been removed.

**Part XI – Administrative Requirements**

On the basis of preliminary staff review and applicable standards and regulations, the department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the permit. The proposed determinations are tentative pending public comment.

**PUBLIC NOTICE:**

The department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest or because of water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and facility must be notified of the denial in writing.

The department must give public notice of a pending permit or of a new or reissued Missouri State Operating Permit. The public comment period is a length of time not less than thirty (30) days following the date of the public notice, during which interested persons may submit written comments about the proposed permit.

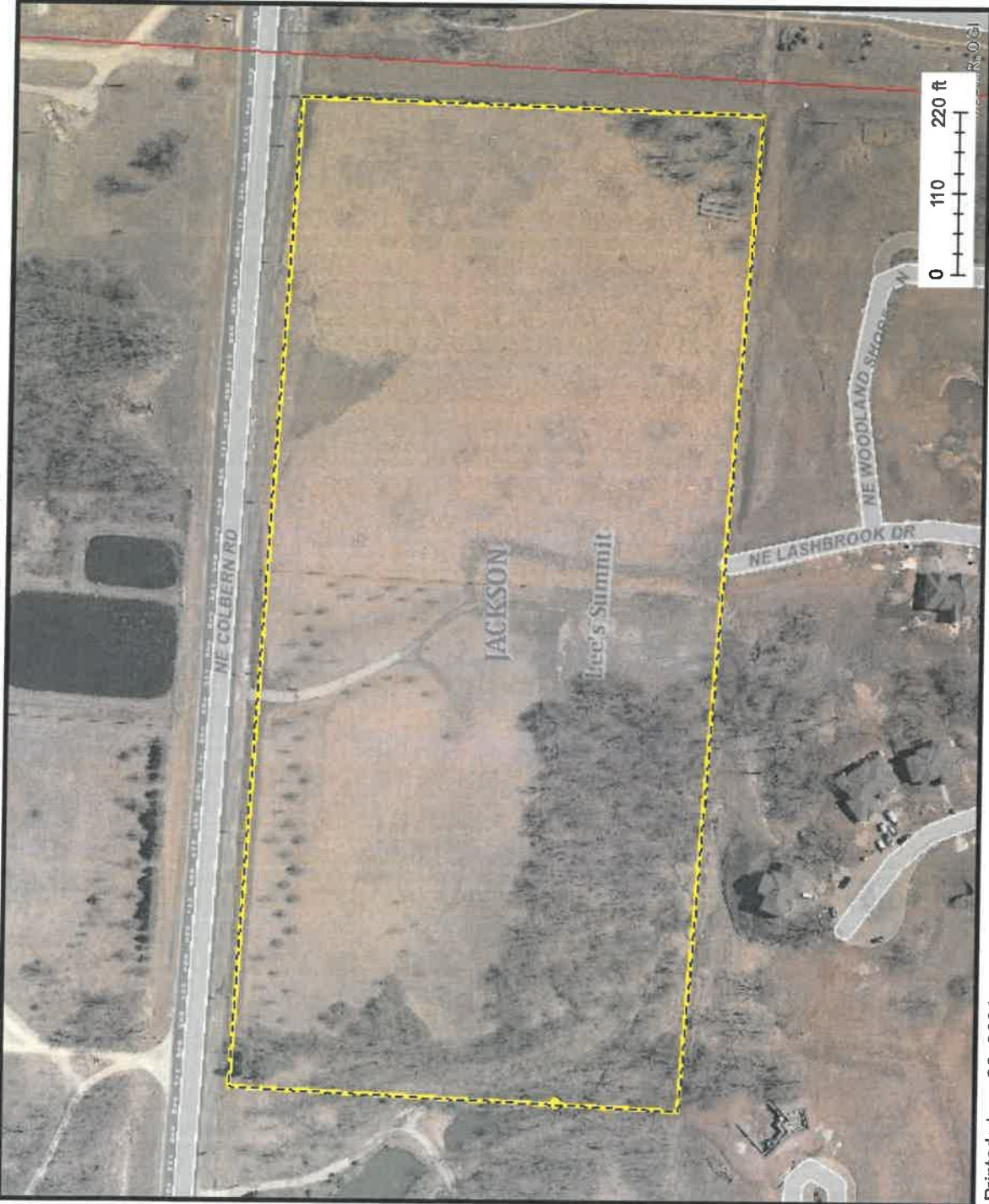
For persons wanting to submit comments regarding this proposed permit, please refer to the Public Notice page located at the front of this draft permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period seeking comments on this permit occurred from September 2, 2016 to October 3, 2016.

**DATE OF FACT SHEET:** 8/23/2016; REVISED 11/30/2016

**COMPLETED BY:**  
**CHRISTOPHER MILLER**  
**ENVIRONMENTAL SPECIALIST**  
**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
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**OPERATING PERMITS SECTION**  
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# MoDNR Geographic Information System Editor



## Legend

- Land Disturbance Point
- Land Disturbance Area
- 12 Digit Watershed Boundaries
- Impaired Streams - 303(d)
- Impaired Lakes - 303(d)
- Stream Classifications and Use Designations
- Lake Classifications and Use Designations
- Public Land Survey System
- Interstates and U.S. highways
- State numbered routes
- State lettered routes
- ramps
- Major roads
- Minor roads
- Railroads
- County Boundaries
- Lake or Pond
- Lake or Pond / Intermittent
- Lake or Pond / Perennial
- Reservoir
- Swamp or Marsh
- Other; Artificial Path
- Canal or Ditch
- Stream or River
- Stream or River / Intermittent
- Stream or River / Perennial
- Municipalities Boundary
- Municipalities Fill



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Missouri  
Department of  
Natural Resources

STORMWATER DISCHARGES  
FROM THIS LAND DISTURBANCE  
SITE ARE AUTHORIZED BY THE  
MISSOURI STATE OPERATING  
PERMIT NUMBER:

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ANYONE WITH QUESTIONS OR  
CONCERNS ABOUT  
STORMWATER DISCHARGES  
FROM THIS SITE, PLEASE  
CONTACT THE MISSOURI  
DEPARTMENT OF NATURAL  
RESOURCES AT

**1-800-361-4827**



# MISSOURI DEPARTMENT OF NATURAL RESOURCES

## Division of Environmental Quality Regional Offices

### Kansas City Area

- Kansas City Regional Office**  
 500 NE Colbern Rd.  
 Lee's Summit, MO 64086-4710  
 816-251-0700 FAX: 816-622-7044

### St. Louis Area

- St. Louis Regional Office**  
 7545 S. Lindbergh, Ste 210  
 St. Louis, MO 63125  
 314-416-2960 FAX: 314-416-2970

### Northeast Area

- Northeast Regional Office**  
 1709 Prospect Drive  
 Macon, MO 63552-2602  
 660-385-8000 FAX: 660-385-8090

### Southwest Area

- Southwest Regional Office**  
 2040 W. Woodland  
 Springfield, MO 65807-5912  
 417-891-4300 FAX: 417-891-4399

### Southeast Area

- Southeast Regional Office**  
 2155 North Westwood Blvd.  
 Poplar Bluff, MO 63901  
 573-840-9750 FAX: 573-840-9754

### Central Area

- Department Central Offices**  
 P.O. Box 176  
 Jefferson City, MO 65102-0176  
 573-751-3443

**Central Field Operations**  
 P.O. Box 176  
 Jefferson City, MO 65102-0176  
 573-522-3322 FAX: 573-522-3522



## Appendix D – Certifications

### Project Owner 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.

---

Signature

Date

### Contractor Certification

( \_\_\_\_\_ )

**CONTRACTOR COMPANY NAME**

I certify under penalty of law that I understand the terms and conditions of this SWPPP and all procedures of storm water discharges associated activities from the construction site identified as part of this certification

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

## **Appendix E – Inspection and Maintenance Logs**

# WOODLAND OAKS

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

## LARGE DISTURBED AREA INSPECTION FORM

To be completed every 7 days and within 24 hours of any precipitation event

Inspector: \_\_\_\_\_

Date: \_\_\_\_\_

Inspector's Qualifications:

Days since last rainfall: \_\_\_\_\_

Amount of last rainfall: \_\_\_\_\_ inches

### Stabilization Measures

Area	Date of Last Stabilization	Stabilization Measures	Current Condition

Stabilization required:

To be performed by: \_\_\_\_\_

On or Before: \_\_\_\_\_



# WOODLAND OAKS

## STORM WATER POLLUTION PREVENTION PLAN

### INSPECTION AND MAINTENANCE REPORT FORM

## SEDIMENT BASIN & ROADWAY INSPECTION FORM

#### Sediment Basin(s):

Basin ID/Depth	Condition of Basin Side Slope	Any Evidence of Overtopping of the Embankment	Condition of Outfall from Sediment Basin

Maintenance required from sediment basin:

To be performed by: \_\_\_\_\_

On or Before: \_\_\_\_\_

#### Other Controls / Stabilized Construction Entrance

Is Sediment on Paved Roadway?	Is Gravel Clean or is it Filled with Sediment?	Does all Traffic use the Stabilized Entrance to Leave the Site?	Is the Culvert Beneath the Entrance Working?

Maintenance required from stabilized construction entrance:

To be performed by: \_\_\_\_\_

On or Before: \_\_\_\_\_

# WOODLAND OAKS

STORM WATER POLLUTION PREVENTION PLAN

INSPECTION AND MAINTENANCE REPORT FORM

## PERIMETER BARRIER PROTECTION INSPECTION FORM

To be completed every 7 days and within 24 hours of any precipitation event

Inspector: \_\_\_\_\_

Date: \_\_\_\_\_

### **Silt Fence and/or Straw Bales**

Area	Date of Last Stabilization	Stabilization Measures	Current Condition

Maintenance required for silt fence and straw bales:

To be performed by: \_\_\_\_\_

On or Before: \_\_\_\_\_

# WOODLAND OAKS

## STORM WATER POLLUTION PREVENTION PLAN

### INSPECTION AND MAINTENANCE REPORT FORM

Changes required to the SWPPP:

Reasons for changes:

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 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 possibility of fine for knowing of violations.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date