



# Land Disturbance Manual

Prepared for  
City of Moberly, Missouri

December 2021



# Land Disturbance Manual

December 2021

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This Manual is intended to be used as a guidance and requirements manual by developers, contractors, and professional engineers prior to construction to develop a Stormwater Pollution Prevention Plan (SWPPP) in order to receive a Land Disturbance Permit from the City of Moberly (City) and during and after construction to comply with Land Disturbance Permit requirements. The City will also use this Manual to update Land Disturbance requirements. This Manual is enforceable by City ordinance and the Clean Water Act. Once the SWPPP is accepted by the City, the permittee(s) are also advised to consult the City's *Land Disturbance Field Manual*, which focuses on providing guidance and requirements to the contractor(s) in the field during and after construction and references this Manual for further details. Applicants and permittees are also advised to consult the City's *Post-Construction Stormwater Manual* for additional guidance and requirements that may be applicable prior to, during, and after construction.

## Land Disturbance Permit Process

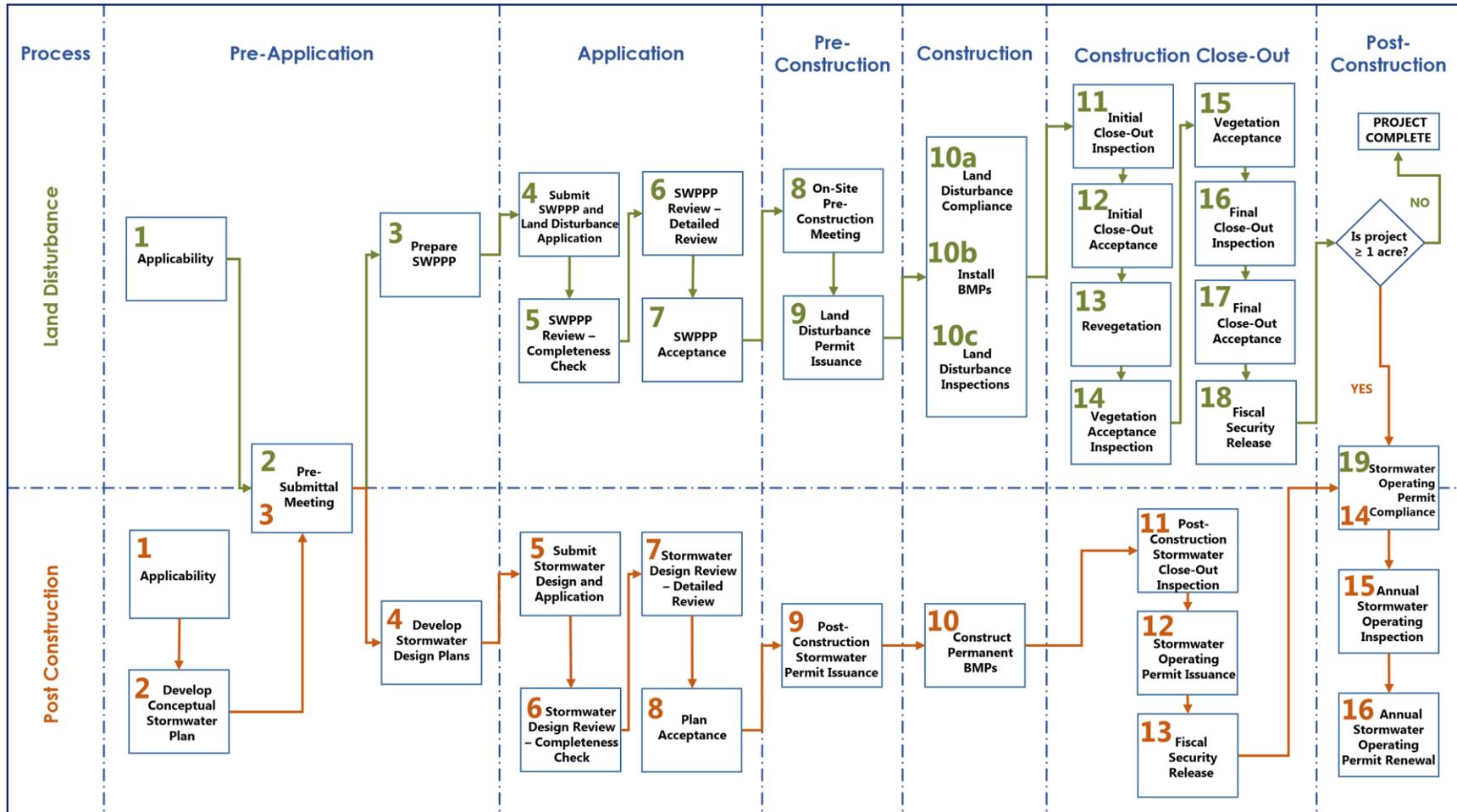
Phase	Step No.	Land Disturbance Step Description	Section No.
<b>Pre-Application</b>	1	<b>Applicability:</b> Confirm that a Land Disturbance Permit is required.	1.2
	2	<b>Pre-Submittal Meeting:</b> <ul style="list-style-type: none"> <li>Contact the City of Moberly Public Utilities Department (City) to schedule a pre-submittal meeting.</li> <li>Meet with City to discuss applicable permits and stormwater pollution prevention plan (SWPPP) requirements.</li> </ul>	2.0
	3	<b>Prepare SWPPP:</b> Prepare a SWPPP in accordance with Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Land Disturbance Manual (Manual).	3.1 - 3.3
<b>Application</b>	4	<b>Submit SWPPP and Land Disturbance Application:</b> Submit Land Disturbance Application, SWPPP, and other required documents to City for review. An application fee shall be included with this submittal.	4.1
	5	<b>SWPPP Review – Completeness Check:</b> The City shall conduct a pre-review of SWPPP to check the basic level of completeness based on compliance with Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual. If deemed incomplete, the submittal shall be returned to the Applicant for modification and resubmission.	4.2
	6	<b>SWPPP Review – Detailed Review:</b> Once the submittal is deemed complete, the City shall conduct a detailed review of the SWPPP and supporting documents for compliance with Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual. If deficiencies are noted, the City shall provide written comments to the Applicant; such comments may include questions, requests for additional information, and/or requests for modifications to the SWPPP in order to comply with applicable requirements. If such comments are received, the Applicant shall address each comment and resubmit revised documents along with a summary of how each comment was addressed.	4.2
	7	<b>SWPPP Acceptance:</b> <ul style="list-style-type: none"> <li>When City has found the SWPPP to meet the requirements of Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual, the SWPPP will be accepted.</li> <li>The Applicant shall post the required fiscal security and submit at least 3 copies of the SWPPP to the City to be signed and returned.</li> </ul>	4.2
<b>Pre-Construction</b>	8	<b>On-Site Pre-Construction Meeting:</b> <ul style="list-style-type: none"> <li>Contact the City to schedule an on-site pre-construction meeting.</li> <li>Prepare for and attend on-site pre-construction meeting. Required attendees at this meeting shall include, but are not limited to, the Applicant's Land Disturbance Manager.</li> </ul>	4.3
	9	<b>Land Disturbance Permit Issuance:</b> If Applicant is in compliance with the requirements of Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual, the City shall issue a Land Disturbance Permit.	4.4

Phase	Step No.	Land Disturbance Step Description	Section No.
Construction	10a	<b>Land Disturbance Compliance:</b> Ensure compliance with requirements of the Land Disturbance Permit.	5.1
	10b	<b>Install BMPs:</b> Ensure installation of temporary BMPs prior to land disturbance or construction activities and permanent BMPs at the appropriate times in accordance with the accepted SWPPP and stormwater designs, requirements of Ch. 34, Art. III of the City's Code of Ordinances, and guidance provided in this Manual and the <i>Post-Construction Stormwater Manual</i> .	5.3
	10c	<b>Land Disturbance Inspections:</b> <ul style="list-style-type: none"> <li>• Contact the City to schedule land disturbance inspections.</li> <li>• Permittee's Land Disturbance Manager shall attend scheduled City land disturbance inspections.</li> <li>• Correct deficiencies as requested by the City.</li> </ul>	5.4
Construction Close-Out	11	<b>Initial Close-Out Inspection:</b> <ul style="list-style-type: none"> <li>• Prepare site for initial close-out inspection.</li> <li>• Contact the City to schedule initial close-out inspection.</li> <li>• Permittee's Land Disturbance Manager shall attend initial close-out inspection.</li> <li>• Correct deficiencies as requested by the City and, if requested, contact the City of schedule a follow-up inspection.</li> </ul>	6.1
	12	<b>Initial Close-Out Acceptance:</b> Once site is in compliance with the requirements of Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual, City shall issue initial close-out acceptance.	6.1
	13	<b>Revegetation:</b> <ul style="list-style-type: none"> <li>• Perform monthly inspections during the revegetation process.</li> <li>• Correct deficiencies in on-site BMPs and control weeds as deemed necessary during inspections or as requested by City.</li> </ul>	6.1.4
	14	<b>Vegetation Acceptance Inspection:</b> <ul style="list-style-type: none"> <li>• Contact the City to schedule vegetation acceptance inspection when vegetative growth has reached the required coverage.</li> <li>• Permittee's Land Disturbance Manager shall attend vegetation acceptance inspection.</li> <li>• Correct deficiencies as requested by the City and, if requested, contact the City to schedule a follow-up inspection.</li> </ul>	6.1.4
	15	<b>Vegetation Acceptance:</b> Once site is in compliance with the requirements of Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual, City shall issue vegetation acceptance.	6.1.4
	16	<b>Final Close-Out Inspection:</b> <ul style="list-style-type: none"> <li>• Prepare site for final close-out inspection, including removal of temporary BMPs.</li> <li>• Contact the City to schedule the final close-out inspection.</li> <li>• Permittee's Land Disturbance Manager shall attend final close-out inspection.</li> <li>• Correct deficiencies as requested by the City and, if requested, contact the City of schedule a follow-up inspection.</li> </ul>	6.1.6
	17	<b>Final Close-Out Acceptance:</b> Once site is in compliance with the requirements of Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual, City shall issue final close-out acceptance.	6.1.6
	18	<b>Fiscal Security Release:</b> Submit a Fiscal Security Release Form to the City to be signed and returned.	6.1.6

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Phase	Step No.	Land Disturbance Step Description	Section No.
Post-Construction	19	<b>Stormwater Operating Permit Compliance:</b> Ensure compliance with the Stormwater Operating Permit as applicable.	Refer to the <i>Post-Construction Stormwater Manual</i>

# Land Disturbance and Post-Construction Process Overview



# 1.0 Introduction

Step in Section 1.0:

## Step 1 – Applicability:

Confirm that a Land Disturbance Permit is required. (Section 1.2)

## 1.1 Land Disturbance Permit Program

As required by the Missouri Department of Natural Resources (MDNR) State Operating Permit No. MO-R040030 for Regulated Small Municipal Separate Storm Sewer Systems (MS4), the City of Moberly (City) implements, and enforces a program developed to reduce pollutants in stormwater runoff from construction activities that result in land disturbance.<sup>1</sup> This Land Disturbance Permit Program establishes controls activities related to land disturbance and is designed to achieve the following objectives:<sup>2</sup>

- To protect the quality of local streams, lakes, and other bodies of water from the effects of increased erosion and sediment discharge;
- To protect the welfare of individuals and their property by reducing the amount of sediment that leaves land disturbance sites;
- To protect the environment and aquatic habitat of fish and other species; and
- To reduce the need for maintenance of storm sewers and ditches as well as the dredging of lakes and ponds

The City's Land Disturbance Permit Program is authorized by Chapter 34, Article III of the City's Code of Ordinances and administered and enforced by the City's Public Utilities Department through issuance of Land Disturbance Permits. Land Disturbance Permit requirements and guidance are contained within this *Land Disturbance Manual* (Manual) and the supplemental *Land Disturbance Field Manual*. The City also implements and enforces a Post-Construction Stormwater Permit Program with requirements and guidance contained within the City's *Post-Construction Stormwater Manual*.

The requirements within this Manual shall be regarded as the minimum requirements for the protection of the public health, safety, comfort, convenience, prosperity, and welfare of the residents of the City. The City reserves the right to apply more stringent criteria as it deems necessary. Additionally, the City reserves the right to change, modify, or alter these requirements at any time. The *Land Disturbance Manual* shall be construed to further its underlying purposes and intent of erosion and sediment control.

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<sup>1</sup> Adapted from Missouri State Operating Permit (No. MO-R040030), Part 4.2.4.1.

<sup>2</sup> Adapted from the City's Code of Ordinances, Ch. 34, Art. III, Section 34-77.

Whenever a provision in this Manual or any provision in any law, ordinance, resolution, rule or regulation of any kind, contain requirements covering any of the same subject matter, whichever are more restrictive or impose higher standards shall govern.

## 1.2 Projects Requiring a Land Disturbance Permit

### Step 1

#### Applicability

The City requires that a project's owner and contractor obtain a Land Disturbance Permit prior to the start of applicable land-disturbance activities within the City. All such projects within the City must obtain a Land Disturbance Permit even if the project has been approved by a state or federal agency or are covered under the state Land Disturbance Permit, Permit No. MORA00000. Examples include projects in which a 404 Permit has been obtained from the U.S. Army Corps of Engineers (USACE), which can be required when work is on or near a drainageway or wetland. See Table 2-1 for more information.

#### Projects that require a Land Disturbance Permit:<sup>3</sup>

- Any project that disturbs greater than or equal to one acre of land.
- Any project that disturbs 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.<sup>4,5</sup>
- Land disturbance associated with installation of utilities in excess of 1,000 linear feet.
- Land disturbance located within 100 feet of a drainageway.
- Fill or excavation of 50 or more cubic yards of material, not related to building of a detached single-family residential unit.
- Land disturbance activities less than one acre in size if the City deems it necessary to prevent sediment and erosion from occurring.

Projects not requiring a Land Disturbance Permit are still obligated to control erosion and sediment.

#### Projects that do not require a Land Disturbance Permit:

- Land-disturbance activity as described in 10 CSR 20-6.200.(1)(8)8, where MDNR water quality standards are not exceeded. Examples of water quality standards that shall not be exceeded are unsightly color or turbidity; standards that shall be met are no deposits of sediment, maintenance

<sup>3</sup> Adapted from the City's Code of Ordinances, Ch. 34, Art. III, Section 34-79.

<sup>4</sup> An owner or developer may have several adjacent projects that individually may not be subject to the phasing requirements. Such projects shall not be treated separately for purposes of erosion and sediment control. If the individually platted projects are adjacent to each other and grading may or may not be occurring at the same time, the City will treat the sum of the individual projects as one large project. The sum of the individual projects shall be subject to the area phasing requirements.

<sup>5</sup> If a project meets criteria 1, a Post-Construction Permit must be obtained. Refer to the City's *Post-Construction Stormwater Manual* for further assistance.

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of beneficial uses, no harmful effects on aquatic life, and no impairment of natural biological community.

- Agricultural stormwater discharges and irrigation return flows. Animal Feeding Operations (AFO) are not included in the agricultural exemption.

### **1.3 Who Obtains a Land Disturbance Permit**

The Land Disturbance Permit Application is ordinarily signed by the project owner and the contractor. Before a Land Disturbance Permit is issued, the owner and the contractor are referred to as "applicants". After the permit is issued, they are referred to as "permittees".

A permittee is any person who is issued a Land Disturbance Permit by the City and that person(s) is legally responsible for complying with the Land Disturbance Permit. If a corporation applies for a permit, then a manager, officer of the corporation, or other authorized person must sign the permit as the permittee.

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## 2.0 Pre-Submittal Meeting

Step in Section 2.0:

### Step 2 – Pre-Submittal Meeting:

- Contact the City’s Public Utilities Department (PUD) to schedule a pre-submittal meeting.
- Meet with the PUD to discuss applicable permits and Stormwater Pollution Prevention Plan (SWPPP) requirements.



### Pre-Submittal Meeting

Before preparing a SWPPP or other submittal documents for a construction project, a pre-submittal meeting is required, unless deemed otherwise by PUD staff. The purpose of the pre-submittal meeting is to discuss applicable Land Disturbance Permit Program requirements and confirm what related plans and permits may be required. The meeting will also include initial discussion of the general configuration of controls that may be appropriate for the site.

At minimum, the owner and the design engineer of the SWPPP shall attend the pre-submittal meeting. The owner or design engineer may contact the City to schedule the pre-submittal meeting and it may be held in conjunction with a pre-submittal meeting for the Post-Construction Stormwater Permit Program. The owner or owner's representative shall bring the following information to the meeting:

- Name, type, and location of land disturbance;
- Brief description of site topography and drainage features;
- Size of construction site and anticipated disturbed area in acres; and
- List of anticipated plans and applicable permits to accompany SWPPP.

Table 2-1 provides a list of city, state, and federal permits that may apply to Land Disturbance projects that occur within the City.

**Table 2-1 Additional Potentially Applicable Permits (not all inclusive)**

Unit of Government	Permit	Permit Trigger	Resources
City of Moberly	Post-Construction Stormwater Permit	<ul style="list-style-type: none"> <li>• Development of greater than or equal to one acre of land or development of less than one acre when part of a larger common plan of development or sale that will develop a cumulative total of one or more acres over the life of the project</li> <li>• Any project which has differential runoff between the pre-developed and post-developed peak flows of 0.5 cfs or greater for the 2-year storm with a storm duration equal to the time of concentration for the watershed</li> <li>• Development activities less than an acre in size if the City deems if necessary to control the quantity/quality of post-construction stormwater runoff</li> <li>• Any project the City determines to have a potential impact to health, safety, and welfare of people and/or the environment regardless of the size of the project.</li> </ul>	<i>Post-Construction Stormwater Manual</i>
	Building Permit	Proposed development includes a structure	--
State of Missouri DNR <sup>6</sup>	Land Disturbance Permit <sup>7</sup>	Land disturbance activities equal to or greater than 1.0 acre	Appendix A: Contact List
	Open Burning Permit	Contact City Fire Department	--
	401 Water Quality Certification	Excavation activity associated with a dredge and fill project in "waters of the United States" that require a Federal 404 Permit from the United States Army Corps of Engineers (USACE) may also require this state certification to ensure water quality is not degraded (requirement determined during the federal 404 permitting process)	--
USACE	Section 404 Permit	Excavation or construction projects in "waters of the United States" (including streams, lakes, ponds, wetlands, etc.) may require a USACE Section 404 Permit. The level of permitting depends upon the extent of the disturbance.	Appendix A: Contact information for USACE Kansas City District
Federal Emergency Management Agency (FEMA)	Elevation Certificate or No-Rise Certificate	Proposed land disturbance impacts the regulatory floodplain	--

## 3.0 SWPPP Requirements

Step in Section 3.0:

### **Step 3 – Prepare SWPPP:**

Prepare a SWPPP in accordance with Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual. (Sections 3.1 and 3.3)

### **3.1 Stormwater Pollution Prevention Plan (SWPPP)**

#### **3.1.1 Background**

The applications for city and state land disturbance permits require SWPPPs to reduce erosion and sedimentation. Due to the removal of land cover, construction sites may have erosion rates anywhere from 3 to 100 times that of normal croplands. Erosion is a naturally occurring process, and therefore, almost impossible to entirely prevent on a construction site. For this reason, an effective SWPPP shall contain measures that seek to prevent erosion before it begins, as well as measures that trap sediment once it has begun to erode. Section 3.0 of this Manual provides best management practices (BMPs) to limit erosion and sedimentation at construction sites.

#### **3.1.2 SWPPP Preparation**

SWPPPs prepared in accordance with Section 3.0 of this Manual will additionally meet state requirements. SWPPPs are required to be prepared by, or under the responsible charge of, and signed and stamped by, a professional engineer registered in Missouri. Within this Manual, the professional engineer is referred to as the design engineer. Responsibilities of the design engineer include:

- Attend pre-submittal and on-site pre-construction meetings;
- Prepare the SWPPP in accordance to state and City requirements outlined in this Manual using professional knowledge and judgement; and
- Notify the City of any project safety hazards or concerns and recommend mitigation strategies.

#### **3.1.3 Staged and Phased SWPPPs**

Grading operations may not take place over the whole site at once. Instead, the site may be divided into separate grading phases each disturbing the smallest area possible while performing an activity. During

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<sup>6</sup> This is not to be considered an exhaustive or current list; therefore, applicants are advised to contact the state.

<sup>7</sup> The state requires a SWPPP that is fulfilled by the development of the City SWPPP, requirements for updating SWPPPs, performing site inspections, and keeping an inspection report log.

construction, each grading phase shall be approved by the Land Disturbance Inspector. Additional information on drawing requirements for these stages is provided in Section 3.3.

## 3.2 General SWPPP Requirements

### Step 3

#### Prepare SWPPP

As previously mentioned, the purpose of the SWPPP is to ensure the design, implementation, and management of BMPs to prevent erosion and sedimentation associated with land disturbance. To meet both the City and MDNR SWPPP<sup>8</sup> requirements, the SWPPP must:

- List and describe all outfalls, including discharge flow type (i.e., pipe or sheet flow) and location of the site and outfalls to receiving waterbodies;
- Incorporate the required practices described in this chapter;
- Incorporate erosion control practices specific to site conditions;
- Provide for maintenance and adherence to the plan; and
- Discuss whether or not a 404/401 Permit is required for the project.

### 3.2.1 Nature of Construction Activity

The SWPPP shall describe the nature of the project by including the following:

- A brief description of the project, including its function (e.g., low density residential, highway, etc.) and enough facility and outfall information to be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs;
- The intended sequence and timing of soil disturbance activities at the site; and
- Total area to be disturbed by excavation, grading, or other construction activity.

### 3.2.2 Figures

The SWPPP shall include a general map (e.g., US Geological Survey quadrangle map) with enough detail to identify the location of the construction site and waters of the State within one mile of the project site. In addition to the general location map, a legible map shall be submitted with the SWPPP that includes the following:

- Direction(s) of stormwater flow and approximate slopes anticipated after grading activities;

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<sup>8</sup> Refer to the Requirements section of the Missouri State Land Disturbance Permit.

- 
- 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);
  - Location of major structural and non-structural BMPs identified in the SWPPP;
  - All temporary and permanent access locations;
  - Locations where stabilization practices are expected to occur;
  - Location of off-site material, waste, borrow, or equipment storage areas;
  - Locations of all stockpiles;
  - Limits of construction, including areas to be avoided, such as sensitive areas or stream corridors;
  - Locations of all waters of the State (including wetlands);
  - Locations where stormwater discharges to a surface water; and
  - Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.

For any project requiring a land disturbance permit and disturbing more than one acre, separate drawings are required for the initial (i.e., clearing), interim (i.e., grading), and final (i.e., stabilizing) stages of a project. This is to clarify, both to the design engineer and field personnel, what erosion and sediment controls are appropriate at the outset of construction, during site development, and at the end of construction prior to final establishment of vegetation.

### **3.2.3 Description of BMPs**

The SWPPP shall list and describe 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:

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

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

- Whether the BMP is temporary or permanent;
- Where, in relation to other site features, the BMP is to be located;

- When the BMP will be installed in relation to each phase of the land disturbance procedures to complete the project; and
- Site conditions that must be met before removal of the BMP, if the BMP is temporary.

Section 3.3 provides further detail regarding BMP use at a project site.

### **3.3 Specific SWPPP Requirements**

In order to develop an effective SWPPP, the City requires that each of the following ten elements be addressed. The elements are designed to reduce erosion while also trapping sediment that does erode before it leaves the site. Design information for the elements is available from the City.

Elements of an Effective SWPPP:

1. Identify and protect environmentally sensitive areas;
2. Stabilize drainageways;
3. Balance earthwork on-site (or for each phase);
4. Limit the size of grading phases to reduce soil exposure;
5. Stabilize exposed soils in a timely manner;
6. Implement effective perimeter controls;
7. Use sedimentation basins;
8. Protect steep slopes from erosion;
9. Protect inlets, storm sewer outfalls, and culverts from erosion; and
10. Implement construction site chemical control BMPs.

#### **3.3.1 Element 1: Identify and Protect Environmentally Sensitive Areas**

Sensitive resources, particularly downstream waterbodies, shall be identified within and downstream of the project site and may include:

- Sinkholes;
- Losing streams;
- Caves;
- Wetlands;
- Mature timber stands;

- Steep slopes to be undisturbed; and
- Potential stormwater infiltration areas.

These sensitive areas shall be protected whenever possible. In addition, many types of sensitive areas are protected by city, state, or federal law. Sensitive areas shall be clearly labeled on the SWPPP, and clearing and grading operations shall be planned in a way that will avoid and protect these areas. Construction fence, or another approved means, shall be used on the site to protect and preserve sensitive areas. If sensitive areas are identified downstream by the design engineer, it will be noted on the Required Checklist for Preliminary Acceptance of SWPPP in Appendix B. In this case, an attachment to the checklist will be required. This attachment will include an estimated cost to bring the downstream sensitive area back to its original condition prior to the damage. This estimated cost will be included in the opinion of probable cost submitted in the SWPPP.

### 3.3.2 Element 2: Stabilize Drainageways

Existing drainageways shall not be filled or dredged within the limits of the stream without verifying with the USACE that it is not regulated by them. If so, they may require a 404 permit (Table 2-1). Appendix A has contact information for the USACE district that covers the City area. It shall be noted that only the USACE can determine if a drainageway requires a 404 permit.

#### 3.3.2.1 Buffers<sup>9</sup>

Major drainageways, streams, rivers, or lakes within the city limits of the City and located on or adjacent to a project shall be protected by one of the following:

- A 50-foot undisturbed natural buffer;
- An undisturbed buffer less than 50 feet and supplemented by erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer;
- If infeasible to provide 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.

Even if drainageways are not regulated with a stream buffer, construction activities in or around the drainageway shall be minimized.

Buffers shall be measured perpendicularly from any of the following points, whichever is further landward from the water:

- The ordinary high water mark of the waterbody;
- The edge of the stream or river bank, bluff, or cliff, whichever is applicable.

<sup>9</sup> Adapted from Item 8.f of the Requirements section in the Missouri State Land Disturbance Permit.

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Limits of construction shall be clearly shown on the SWPPP to indicate the exact limits of grading adjacent to a stream buffer. Construction fence shall be installed on the stream buffer delineation.

Crossing a drainageway containing a regulated stream buffer with construction equipment requires a temporary stream crossing. Unless otherwise approved by the City, temporary stream crossings must be spaced a minimum of 2,000 feet apart as measured in the drainageway.

The following activities are allowed within the stream buffer area:

- Water quality monitoring and stream gauging;
- Removal of individual trees within the stream buffer that are in danger of falling, causing damage to dwellings or other structure or causing blockage of the stream, with the verbal approval from the City; and
- Timber cutting necessary to preserve the forest from extensive pest infestation, disease infestation, or threat from fire may be performed, with the verbal approval from the City.

The following practices and activities are restricted within the stream buffer area:

- Clearing of existing vegetation;
- Soil disturbance by grading, stripping, or other practices;
- Filling or dumping of any material including, but not limited to, yard waste and demolition debris;
- Drainage by ditching, underdrains or other systems;
- Use, storage, or application of pesticides;
- Storage or operation of motorized vehicles, except for maintenance and emergency;
- Development that includes, but is not limited to, structures, roads, bridges, paths, parking lots, outfalls of treated sewer, outfalls of stormwater, and utilities; and
- Removing or cutting vegetation, except for maintenance of existing vegetation.

### **3.3.2.2 Disturbance or Creation of Small Drainageways or Ditches not within a City Regulated Stream Buffer**

It may be impossible, or undesirable, to avoid all construction in existing ditches and minor drainageways that drain a small amount of upland area off the site. Many development projects require existing topography to change. The existing ditches and small drainageways may be moved, resized, or piped to

accept the development. Permittees shall use the Missouri Use Designation Dataset and the National Hydrography Dataset to delineate ditches and drainageways.<sup>10</sup>

Most will require some form of stabilization during the construction phase to include ditch checks or some type of liner, such as rolled erosion control products, plastic liners, and rock liners. Ditch checks will slow down the velocity of the stormwater to reduce erosion and promote sedimentation. The ditch check shall be in place until the channel has been permanently stabilized to handle stormwater flows.

### 3.3.2.3 Temporary (Diversion) Ditches

Most sites will require temporary (diversion) ditches or some other type of conveyance BMP at upslope and downslope perimeters, at the top of steep slopes, and downstream of slope drains to reduce the flow of stormwater over disturbed, unprotected areas. The design engineer shall determine if a permanent ditch will be required, if not, it may be more appropriate to install some other type of conveyance BMP that will not require filling the temporary ditch after the site is stabilized.

### 3.3.3 Element 3: Balance Earthwork on Site (or for each phase)

Earthwork shall be balanced whenever possible; however, there may be some instances where balancing earthwork is not practical. In these cases, a variance shall be requested during the review of the SWPPP. Variances requested after the work has been completed will not be considered. The variance request shall address the following items:

- Reason for variance;
- Amount of material to be imported or exported;
- Location of disposal site, if export, or source site, if import;
- Land Disturbance Permit numbers for disposal or source sites;
- Detailed haul route plan; and
- Type and number of trucks required to complete import or export.

During construction, each grading phase shall be accepted by the Land Disturbance Inspector prior to starting work on the next phase.

### 3.3.4 Element 4: Limit the Size of Grading

For sites where the total disturbed area will exceed 40 acres, or wherever it is possible for areas less than 40 acres, grading operations shall not take place at the same time. In order for this to occur, the site must be divided into separate grading phases. All sites shall be evaluated for the phasing of grading operations regardless of the size of the disturbed area. Techniques such as over excavation, stockpiling, and replacement of soils may be used, if necessary, as long as they are approved by the City. Seeding and

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<sup>10</sup> The Requirements section and Part V of the Missouri State Land Disturbance Permit require BMPs to capture and treat runoff up to and including a 2-year, 24-hour storm event.

mulching shall be completed within 5 days of the Land Disturbance Inspector's acceptance of the phase or a Stop Work Order shall be issued (Section 7.3).

### **3.3.5 Element 5: Stabilize Exposed Soils in a Timely Manner<sup>11</sup>**

Topsoil stripping and replacement is critical for the successful re-establishment of vegetation after a project is constructed. Topsoil shall be stripped to a depth of 6 inches unless otherwise accepted by the Land Disturbance Inspector. Wood material in the area to be stripped shall be removed prior to stripping, but grasses shall be left in the topsoil layer to be stripped. Topsoil stripping shall not take place outside the accepted limits of construction. Topsoil stripping, stockpiling, and re-spreading in areas to be vegetated shall be a mandatory practice. The location of all topsoil stockpiles must be shown in the SWPPP. Stockpiles shall have side slopes no steeper than 3:1.

Stabilization of all areas disturbed by construction shall be **initiated immediately** and **completed** within **14 calendar days** after the disturbance has temporarily or permanently ceased, unless infeasible due to weather and equipment malfunctions. For temporary stabilization, the permittee shall construct BMPs. For final stabilization, the permittee shall perform the following procedures:

- After a minimum of 4 inches of topsoil is re-spread on the site, the installation of final stabilization BMPs shall be completed;
- Applicable BMPs for final stabilization consist of seeding and mulching, rolled erosion control products and hydraulic erosion control;
- For permanent stabilization, the City requires areas to be seeded, mulched, or permanently landscaped.

### **3.3.6 Element 6: Implement Effective Perimeter Controls**

#### **3.3.6.1 Upslope Perimeters**

Design engineers shall estimate the flow rate and volume of stormwater from the upslope area and determine if the stormwater shall be ponded uphill of the disturbed area or conveyed around or through the land disturbance area. If the upslope stormwater is conveyed down a disturbed slope greater or equal to 4:1, the design engineer shall consider using temporary slope drains.

If the design engineer decides to pond the sheet flow-stormwater upslope of the land disturbance, instead of moving the stormwater through or around the site, the design engineer shall consider a silt fence or a ponding berm. Upslope-stormwater is not required to run through a sedimentation structure or be ponded on site.

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<sup>11</sup> Adapted from Item 8.h of the Requirements section in the Missouri State Land Disturbance Permit.

### 3.3.6.2 Downslope Perimeters

All disturbed sheet flow areas shall run through a sediment control measure, for example, ponded behind a BMP prior to leaving the site or entering an undisturbed drainageway or ditch.

### 3.3.7 Element 7: Use Sedimentation Basins<sup>12</sup>

Runoff from disturbed areas less than 1.0-acre may be treated by a sediment trap. It is suggested that land disturbance areas greater than 1.0-acre use a sediment basin. The following practices apply to the use of sedimentation basins:

- The outlet and spillway of a sedimentation basin shall be designed and constructed as a stable conveyance channel. Conveyance channels shall consist of a stabilized diversion ditch or some other stable conveyance BMP;
- The sedimentation basin shall be designed, at a minimum, to treat a local 2-year, 24-hour storm.
- Sediment shall be removed from the sedimentation basin when the basin is 50% full;
- The sedimentation basin shall be maintained until final stabilization of the disturbed area served by the basin;
- If the use of a sedimentation basin is infeasible, the SWPPP shall evaluate and specify other similarly effective BMPs from appropriate BMP guidance documents available from the City.

If the downstream area for any sediment structure is considered environmentally sensitive, the design engineer shall use flocculants to enhance the settling of the sediment in the sedimentation structures and ponding BMPs.

### 3.3.8 Element 8: Protect Steep Slopes<sup>13</sup>

Slopes steeper than 3:1 are difficult to vegetate and maintain. If the slope is greater than 3% and greater than 150 feet in length, the permittee shall establish interim stabilization within seven days of ceasing operations on that part of the site. The following BMPs apply to steep slopes:

- Approved permanent stabilization is required to control erosion on all sites that cannot be graded at a 3:1 slope;
- At a minimum, slopes steeper than 4:1 shall be protected with a rolled erosion control product. In some cases, retaining walls may be necessary to control grades on a site;
- New steep slopes between 3:1 and 4:1 shall incorporate terracing;

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<sup>12</sup> Adapted from Item 8.j of the Requirements section in the Missouri State Land Disturbance Permit.

<sup>13</sup> Adapted from Item 8.h of the Requirements section in the Missouri State Land Disturbance Permit.

- A stable conveyance BMP like a permanent or temporary diversion ditch shall be placed above all steep slopes on the site that may receive concentrated or sheet flows. A temporary slope drain may be used until a permanent diversion ditch can be stabilized with vegetation;
- Where steep-cut slopes are planned near the site perimeters, a minimum of 6-feet between the property line and the top of the cut slope shall be reserved for the diversion ditch, unless otherwise accepted by the City.

### **3.3.9 Element 9: Erosion Protection of Inlets, Storm Sewer Outfalls, and Culverts<sup>14</sup>**

The entrances to storm sewer inlets shall be protected to reduce the inflow of sediment. Likewise, storm sewer outfalls and culvert outlets shall be protected against scour and erosion. In general, the following BMPs apply for storm sewers and culverts:

- All storm sewer inlets on a site must be provided with inlet protection. The type of inlet protection to be used must be specified on the SWPPP;
- All culvert inlets on a site shall be provided with a reinforced rock berm or another BMP to slow down the water prior to entering the culvert;
- Inlets shall be cleaned weekly or following a rainfall that generates runoff;
- Storm sewer outfalls and culvert outlets shall be permanently protected against erosion with a riprap apron or other approved means. Riprap shall be installed at the same time as construction of the storm sewer outfall or culvert;
- All disturbed sheet flow areas shall be treated by running through a sediment structure or ponded behind a BMP with the proper amount of storage prior to leaving the site. Most inlet protection does not provide sufficient volume of storage for ponding. When storage is not available at the inlet, the stormwater must run through a sediment structure or be ponded behind a BMP with proper storage prior to leaving the site, which can occur before or after entering the inlet.

### **3.3.10 Element 10: Construction Site Chemical and Waste Control BMPs**

Construction often produces many other pollutants in addition to sediment, including, but not limited to:

- Construction materials, such as discarded building materials, concrete truck and mortar mix washout
- Pesticides;
- Petroleum products;

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<sup>14</sup> Adapted from Item 8.i of the Requirements section in the Missouri State Land Disturbance Permit.

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- Nutrients;
  - Sanitary waste;
  - Other solid wastes; and
  - Other construction chemicals, such as paint, oils, etc

General construction practices regarding potential pollutants include:

- When applicable, all potential pollutants shall be properly, stored, handled, applied, and disposed of to minimize discharge from wash waters, spills and leaks, and exposure of building materials;
- Sanitary facilities shall be provided for construction workers. Sanitary facilities shall be located in the stabilized staging area away from drainageways. Sanitary facilities shall never be placed near storm sewer inlets;
- Minimize access locations while accounting for traffic and pedestrian safety;
- Provide vehicle tracking control at all access locations and adjacent to staging areas;
- Do not wash equipment and machinery on site;
- Manage dewatering with appropriate BMPs sufficient to treat water pumped off site;
- Provide a concrete washout area, when applicable; and
- Provide solid and hazardous waste management, including proper disposal.

Specifically, for pesticides, storage areas shall be protected from the elements, warning labels and signage shall be properly displayed, and properly disposed of through a licensed firm or facility. Petroleum products require more stringent guidelines that include:

- Protect product from the elements;
- Line the storage area with plastic sheeting or similar material;
- Create an impervious berm around the perimeter with a capacity 100% of the largest container's capacity;
- Clearly label all products;
- Store tanks off the ground;
- Securely fasten lids;
- Properly dispose of oily and oily wastes, such as cans, rags, etc.;
- Do not mix used oil for recycling with degreasers, solvents, antifreeze, or brake fluid; and

- Fuel and maintain vehicles in stabilized staging areas.

### 3.3.11 Spill Response

#### 3.3.11.1 Spill Response Procedures

All 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. Spill response procedures shall be posted in a conspicuous place, and persons trained in spill handling shall be on site and/or on call at all times. Materials for cleaning up spills shall be kept on site and made easily available. Spills shall be cleaned up immediately, and the contaminated material shall be properly disposed of.

#### 3.3.11.2 Spill Reporting

It is required by state law that spills of a petroleum product in excess of 50 gallons be reported to the MDNR. Spills shall be reported to the following number:

**Missouri Department of Natural Resources**  
**(573) 634-2436**

Federal law requires the responsible party to report any release of oil if it reaches or threatens a sewer, lake, creek, stream, river, groundwater, wetland, or area like a road ditch that drains into one of the above. If applicable, report oil releases to:

**National Response Center**  
**(800)-424-8802**

In the event of a spill that is reported to the state or federal government, the City shall also be notified. Failure to report and clean up any spill shall result in issuance of a Stop Work Order (Section 7.3). Spills released onto soil shall be dug up and properly disposed of, while spills on pavement shall be absorbed with sawdust, kitty litter, or another product designed for that purpose.

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## 4.0 Application, SWPPP Review, and Pre-Construction

Steps in Section 4.0:

### **Step 4 – Submit SWPPP and Land Disturbance Application:**

Submit Land Disturbance Application, SWPPP, and other required documents to City for review. An application fee shall be included with this submittal. (Section 4.1)

### **Step 5 – SWPPP Review – Completeness Check:**

The City shall conduct a pre-review of the SWPPP to check the basic level of completeness based on compliance with Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual. If deemed incomplete, the design engineer's revisions submittal shall be returned to the applicant for modification and resubmission. (Section 4.2)

### **Step 6 – SWPPP Review – Detailed Review:**

Once the submittal is deemed complete, the City shall conduct a detailed review of the SWPPP and supporting documents for compliance with Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual. If deficiencies are noted, the City shall provide written comments to the Applicant; such comments may include questions, requests for additional information, and/or requests for modifications to the SWPPP in order to comply with applicable requirements. If such comments are received, the Applicant shall address each comment and resubmit revised documents along with a summary of how each comment was addressed. (Section 4.2)

### **Step 7 – SWPPP Acceptance:**

- When the City has found the SWPPP to meet the requirements of Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual, the SWPPP will be accepted;
- The Applicant shall post the required fiscal security and submit at least 3 copies of the SWPPP to the City to be signed and returned (Section 4.2).

### **Step 8 – On-Site Pre-Construction Meeting:**

- Contact the City to schedule an on-site pre-construction meeting.
- Prepare for and attend on-site pre-construction meeting. Required attendees at this meeting include, but are not limited to, the Applicant's Land Disturbance Manager (Section 4.3).

## Step 9 – Land Disturbance Permit Issuance:

If Applicant is in compliance with the requirements of Ch. 34, Art. III of the City's Code of Ordinances and guidance provided in this Manual, the City shall issue a Land Disturbance Permit (Section 4.4).

### 4.1 Land Disturbance Application

#### Step 4

##### Submit SWPPP and Land Disturbance Application

Upon completion of the SWPPP in accordance with this Manual and when ready to apply for a Land Disturbance Permit, the permittee shall submit the following to the City:

- Signed and stamped SWPPP;
- Signed and stamped Checklist for Preliminary Acceptance of SWPPP (Appendix B);
- Signed Land Disturbance Application (Appendix C);
- MDNR Land Disturbance Permit Coverage;
- Other required documents; and
- Permit application fees, which consist of a base fee and per-acre charge (Appendix D).

### 4.2 SWPPP Review and Acceptance

#### 4.2.1 SWPPP Review

#### Step 5

##### SWPPP Review – Completeness Check

The City will review the SWPPP for completeness within one week of the initial submittal. Upon the submittal of the SWPPP, the applicant shall be prepared to promptly respond to any questions, requests for additional information, and/or requests for SWPPP modifications. If the SWPPP does not meet a basic level of completeness based on the requirements outlined in Section 3.0, it will be returned to the applicant for revisions. The one-week review period will begin again upon submittal of the revised SWPPP. The revision and review process will continue until the SWPPP is deemed complete by the City.

#### Step 6

##### SWPPP Review – Detail Review

Once the City deems the SWPPP complete, a detailed review based on the requirements outlined in Section 3.0 will take place. Typically, written comments will be provided to the applicant within 25 business days of the City accepting the SWPPP as complete, for the purpose of beginning the administrative revision process. This applies to initial submittals as well as resubmittals. The applicant shall revise the SWPPP and fully address each comment from the City. If the City does not deem the comment revisions sufficient, the SWPPP must be revised. Beginning with the third comment resubmittal, the City may charge an additional review fee each time the SWPPP must be resubmitted.

## 4.2.2 SWPPP Acceptance



### SWPPP Acceptance

When City has found the SWPPP to be in compliance with the guidance provided in this Manual, the SWPPP will be accepted. Once the SWPPP has been accepted, the applicant shall submit the following documents and fees to the City:

- Specified number of copies (at least 3) of SWPPPs signed and sealed by the design engineer, bound and stapled, and folded to 9 by 12 inches; and
- Fiscal security for projects that have a probable cost of sediment and erosion control installation of 250 dollars or more (refer to fiscal security estimate worksheet in Appendix E).<sup>15</sup>

Signed SWPPPs will be returned to the applicant and are valid for two years following the signature date. The City will retain one set of signed SWPPPs and a variable number of project drawings, depending on the project type. If additional time is needed at the end of two years, the applicant must submit the SWPPP to the City for re-review and re-acceptance.

## 4.2.3 Fiscal Security

The City accepts an Irrevocable Letter of Credit (ILOC). A copy of an approved ILOC Form is located in Appendix F. The ILOC shall allow for the security to be held until final close-out acceptance. Information regarding the release of fiscal security is provided in Section 6.2. The cost of the erosion and sediment controls shall be estimated using the probable cost worksheet included in Appendix E of this Manual and secured with an ILOC prior to final acceptance of the SWPPP for the subdivision.

If the project, including the revegetation process, takes longer than two years, the permittee shall extend the posted letter of credit for a minimum of one additional year. The letter of credit shall be extended a minimum of 14 days prior to the expiration date. The City will draw upon the fiscal security if it is not extended prior to the 14-day deadline.

## 4.3 Applicant Tasks Prior to Permit Execution

Prior to a Land Disturbance Permit execution, the applicant shall perform the following tasks, which are described in subsequent sections:

- Designate a Land Disturbance Manager and Alternate Land Disturbance Manager (Section 4.3.1);
- Contact the City to schedule the on-site pre-construction meeting with at least three days' notice;

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<sup>15</sup>Fiscal security insures the site can be stabilized by the City if the permittee does not fulfill the requirements of the permit within a specified time frame by the City. If the design engineer notes that sensitive areas exist downstream of the land disturbance on the Required Checklist for Preliminary Acceptance of SWPPP, which is submitted as part of the SWPPP, the City may require an additional fiscal security to insure that the area is protected. This will ensure the permittee's attempt to protect downstream sensitive areas to the maximum practical extent, which will reduce future litigations with downstream property owners, the City, and permittees for land disturbance.

- Prepare for the on-site pre-construction meeting (Section 4.3.3);
- Install initial BMPs prior to pre-construction meeting. No formal notification to the City is required unless modifications are to be made. If the applicant proposes BMP modifications, they must be accepted by the City; and
- Attend on-site pre-construction meeting (Section 4.3.3).

### **4.3.1 Land Disturbance Manager**

At the pre-construction meeting (Section 4.3.3), the permittee(s) must designate a Land Disturbance Manager and Alternate Land Disturbance Manager. The Land Disturbance Manager and Alternate must provide the City with a 24-hour emergency contact number. In the event the Land Disturbance Manager (or Alternate Land Disturbance Manager) is not on site, and cannot be reached during any level of violation, a Stop Work Order shall be issued. The Land Disturbance Manager, who may be any employee of the owner or contractor, will be the primary contact person between the permittee and the City. Responsibilities of the Land Disturbance Manager include:

- Act on behalf of the permittee to ensure the project remains in compliance (permittee remains legally responsible);
- Be present at the project site a majority of the time;
- Respond to requests made by the City staff;
- Correct any project deficiencies;
- Until final BMPs are installed, perform inspections in accordance with Section 5.4.1;
- After final BMPs are installed, perform monthly inspections until the close of the permit; and
- Maintain all records throughout the Project's duration.

The Alternate Land Disturbance Manager shall be able to serve in the same capacity as the Land Disturbance Manager and will be the contact person if the Land Disturbance Manager is not available. The Land Disturbance Manager must inform the Alternate Land Disturbance Manager of any absences, keep the Alternate up-to-date on the status of the SWPPP implementation, and ensure that the Alternate Land Disturbance Manager assumes the Land Disturbance Manager's responsibilities during any absence.

If the permittee(s) intend to change personnel for any reason, written notification must be provided to the City. A field meeting between the City Land Disturbance Inspector and new Land Disturbance Manager or Alternate must be scheduled within seven days of the change. The meeting will be to discuss site conditions and the responsibilities of the Land Disturbance Manager.

## 4.3.2 Preparation for On-site Pre-Construction Meeting

Prior to the pre-construction meeting, the Land Disturbance Manager shall:

- Thoroughly review the SWPPP and Land Disturbance Field Manual. It is the Land Disturbance Manager's responsibility to understand all of the requirements of the Land Disturbance Permit process as laid out in these document;
- Sign the Responsible Party Designation Form (Appendix G; owner/operator must also sign the form)

## 4.3.3 On-site Pre-Construction Meeting

### **Step 8** On-Site Pre-Construction Meeting

#### 4.3.3.1 Attendees

In addition to the City Land Disturbance Inspector, the following representatives shall attend the pre-construction meeting:

- Owner or Owner's representative (the contractor may NOT be the owner's representative);
- General contractor;
- Land Disturbance Manager and Alternate Land Disturbance Manager (one or both may be the same as the owner or general contractor representative);
- Grading sub-contractor, if different than the general contractor;
- Design engineer (the design engineer's attendance is not mandatory; however, it is strongly recommended that the design engineer attend to avoid possible delays if the City or the permittee(s) determine that modifications to the SWPPP are necessary).

If one of the mandatory attendees is not present at the pre-construction meeting, the accepted SWPPP is not in the Land Disturbance Manager's possession, or if the installation of the initial BMPs is not approved by the Land Disturbance Inspector, the meeting will be rescheduled and the applicant will be assessed a \$50.00 re-inspection fee. The fee shall be paid to the City prior to scheduling another pre-construction meeting.

#### 4.3.3.2 General Meeting Items

The following items will be addressed at the pre-construction meeting:

- Introductions;
- Exchange of contact information;

- Field review of SWPPPs;
- Acceptance of Responsible Party Designation Form;
- Inspection of initial BMPs;<sup>16</sup>
- Acceptance of initial BMPs and the Responsible Party Designation Form – if accepted, the City Land Disturbance Inspector sign the Land Disturbance Permit application, and submit it to the City for processing. Construction shall not start until an issued Land Disturbance Permit is obtained from the City as described in Section 4.4.

## 4.4 Issuance of Land Disturbance Permit

### Step 9

#### Land Disturbance Permit Issuance

The City will issue the Land Disturbance Permit generally within 24 hours after the signing of the Land Disturbance Permit Application by the Land Disturbance Inspector (either at the pre-construction meeting or at a follow-up inspection). Once the permittee(s) picks up the issued Land Disturbance Permit, construction can begin. Other than the installation of the initial BMPs shown on the SWPPP, no stripping operations, haul road grading, or other construction shall occur before a Land Disturbance Permit has been issued.

A Land Disturbance Permit is valid for one year after the permit is signed by the City. If additional time is needed, the permittee(s) shall contact the City and begin the renewal process at least 14 days prior to the original permit's application date. The permit must be valid at the project's final close-out.

#### 4.4.1 Permit Transfer

In the instance a project or portion of a project is sold to a new owner, or if the contractor on the permit has changed, the Land Disturbance Permit must be transferred to a new owner and/or contractor. The transfer requires a new Land Disturbance Permit Application form, transfer fee, new fiscal security (new owner only), and another pre-construction meeting. If the transfer does not occur, the City will issue a Stop Work Order (Section 7.3).

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<sup>16</sup> If modifications or corrections to the BMPs are necessary, the Land Disturbance Inspector will inform the permittee(s) that such corrections must be made and that a follow-up inspection shall be scheduled with the City. The Land Disturbance Inspector must accept the corrected BMPs before the Land Disturbance Permit can be signed or any other inspections can take place. If schedule completion of stabilization is required and major revisions are needed to the schedule, the Land Disturbance Manager will be required to submit a revised schedule prior to the Inspector signing the Land Disturbance Permit application. Modifications to the SWPPP will, in most cases, require acceptance of the design engineer who sealed and signed the SWPPP. The re-inspection requires a one-day notice (by 3:30 pm the weekday prior to the inspection).

## 5.0 Construction

Steps in Section 5.0:

### **Step 9a – Land Disturbance Compliance:**

Ensure compliance with requirements of the Land Disturbance Permit. (Section 5.1)

### **Step 9b – Install BMPs:**

Ensure installation of temporary and permanent BMPs at the appropriate times in accordance with the accepted SWPPP and stormwater designs, requirements of Ch. 34, Art. III of the City's Code of Ordinances, and guidance provided in this Manual and the *Post-Construction Stormwater Manual*. (Section 5.3)

### **Step 9c – Land Disturbance Inspections:**

- Contact the City to schedule applicable land disturbance inspections;
- Permittee's Land Disturbance Manager shall attend scheduled City land disturbance inspections;
- Correct deficiencies as requested by the City (Section 5.4).

## 5.1 Land Disturbance Permit Compliance

### **Step 10a**

#### **Land Disturbance Compliance**

Once the Land Disturbance Permit is obtained and on site, construction can begin. The permittees (owner and contractor) are responsible for ensuring compliance with requirements of the Land Disturbance Permit at all times.

## 5.2 Documents that Shall Remain On Site

A copy of the SWPPP, any amendments to the SWPPP, inspection records, results of any monitoring or analysis, and any project permits must remain on site at all times. Once the Land Disturbance Permit is obtained, it must also remain on site. In the event the required documents are not on site, a Level III Violation (Section 7.2) will be issued.

## 5.3 Temporary and Permanent BMPs

### **Step 10b**

#### **Install BMPs**

It is the responsibility of the Land Disturbance Manager to ensure that temporary and permanent BMPs are installed at the earliest opportunity that grading or construction of new facilities allow or as identified on the SWPPP.

## 5.4 Construction Phase Inspections

### 5.4.1 Land Disturbance Inspections

#### Step 10c

#### Land Disturbance Inspections

During the construction phase, erosion, and sediment controls will be inspected regularly by the Land Disturbance Manager and the City Land Disturbance Inspector to consider the following:

- Overall effectiveness of the controls for reducing erosion and trapping sediment on the site; and
- Proper installation and maintenance of the controls.

The Land Disturbance Manager is responsible for inspecting the site according to the following schedules:

- At least once per 14 calendar days; and

Within 72 hours of any storm event, and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour rainfall event (2.94 inches) has ceased. If problems are found on the site, the Land Disturbance Manager shall ensure corrections be performed within 48 hours. It is recommended the Land Disturbance Manager performs inspections on Wednesday each week so that problems can be fixed by Friday of the same week. The Land Disturbance Manager Inspection Form is located in Appendix H.

The City Land Disturbance Inspector will perform quality assurance inspections at random to ensure the Land Disturbance Manager is performing the required Land Disturbance Inspections. The City Inspection Form is located in Appendix H. During these quality assurance inspections the City Land Disturbance Inspector will also perform his/her own inspection of the Land Disturbance BMPs. If sediment appears to be leaving the site; or the City takes stormwater samples when less than 3.51 inches of rainfall has fallen in a 24-hour period reading greater than 280 nephelometric turbidity units (NTUs), the City will require the Land Disturbance Manager to request a revision to the SWPPP by the design engineer.

If a new Land Disturbance Manager or Alternate Land Disturbance Manger is chosen, the permittee(s) shall contact the City to schedule an inspection. All inspection requests need to be called into the City by 3:30 pm the day before the inspection (3 business days prior to the inspection for the pre-construction meeting).

### 5.4.2 Re-Inspection Fees

To offset the cost of additional inspections on noncompliant sites, the City requires that re-inspection fees be paid in person at the City offices prior to receiving subsequent inspections. Re-inspection fees shall be charged for all projects that are deficient due to the following:

- Permittee(s) fails to properly install all initial BMPs prior to the scheduled pre-construction meeting;
- Required attendees fail to attend the scheduled pre-construction meeting;

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- Permittee(s) fails to have the SWPPP on site during the pre-construction meeting;
  - Permittee(s) receives a Stop Work Order (fee consists of new permit fee in this case);
  - Permittee(s) fails to obtain vegetation acceptance from the City prior to requesting a final release of fiscal security;
  - Permittee(s) removes any BMPs prior to receiving authorization by the City;
  - Land Disturbance Inspector finds violations of Land Disturbance Permit requirements during routine inspections; and

Failure to cancel any inspection before 3:30 pm the day prior to a scheduled inspection in the event that a site is not ready for an inspection.

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## 6.0 Project Close-Out

Steps in Section 6.0:

### **Step 11 – Initial Close-Out Inspection:**

- Prepare site for initial close-out inspection;
- Contact the City to schedule initial close-out inspection. Permittee’s Land Disturbance Manager shall attend initial close-out inspection.
- Correct deficiencies as requested by the City and, if requested, contact the City of schedule a follow-up inspection (Section 6.1).

### **Step 12 – Initial Close-Out Acceptance:**

Once the site is in compliance with the requirements of Ch. 34, Art. III of the City’s Code of Ordinances and guidance provided in this Manual, the City shall issue initial close-out acceptance (Section 6.1).

### **Step 13 – Revegetation:**

- Perform monthly inspections during the revegetation process;
- Correct deficiencies in on-site BMPs and control weeds as deemed necessary during inspections or as requested by City (Section 6.1.4).

### **Step 14 – Vegetation Acceptance Inspection:**

- Contact the City to schedule vegetation acceptance inspection when vegetative growth has reached the required coverage;
- Permittee’s Land Disturbance Manager shall attend vegetation acceptance inspection;
- Correct deficiencies as requested by the City and, if requested, contact the City and schedule a follow-up inspection. (Section 6.1.4)

### **Step 15 – Vegetation Acceptance:**

Once the site is in compliance with the requirements of Ch. 34, Art. III of the City’s Code of Ordinances and guidance provided in this Manual, the City shall issue vegetation acceptance (Section 6.1.4).

### **Step 16 – Final Close-Out Inspection:**

- Prepare the site for final close-out inspection, including removal of temporary BMPs;
- Contact the City to schedule final close-out inspection;

- Permittee’s Land Disturbance Manager shall attend final close-out inspection;
- Correct deficiencies as requested by the City and, if requested, contact the City and schedule a follow-up inspection (Section 6.2.1).

**Step 17 – Final Close-Out Acceptance:**

Once the site is in compliance with the requirements of Ch. 34, Art. III of the City’s Code of Ordinances and guidance provided in this Manual, the City shall issue final close-out acceptance (Section 6.2.1).

**Step 18 – Fiscal Security Release:**

Submit a Fiscal Security Release Form to the City to be signed and returned (Section 6.2.2).

**Step 19 – Stormwater Operating Permit Compliance:**

Ensure compliance with the Stormwater Operating Permit as applicable (refer to the *Post-Construction Stormwater Manual*).

## 6.1 Initial Close-Out

### 6.1.1 Preparation for the Initial Close-Out Inspection



**Step 11**

**Initial Close-Out Inspection**

Once land disturbance activities are completed, the Land Disturbance Manager shall contact the City to schedule an initial close-out inspection. The Land Disturbance Manager shall contact the City prior to 3:30 pm the day before the inspection. To allow time for the resolution of issues, the initial close-out inspection shall be scheduled a minimum of 2 weeks prior to a scheduled request for closing a building permit and allowing occupancy.

In preparation for the initial close-out inspection before the permittee(s) leave the site, the Land Disturbance Manager shall undertake the following:

- Clean all streets, sidewalks, and flowlines of sediment with a street sweeper or other approved means. Washing of streets, sidewalks, and flowlines is in direct violation of City criteria. Clean all inlets, trickle channels, and all other drainage features;
- Remove temporary erosion and sediment controls (if directed by approved Land Disturbance Inspector) and install/maintain permanent erosion and sediment control BMPs according to the final SWPPP; and
- Ensure that all disturbed areas are seeded and mulched, or otherwise stabilized, per the City’s criteria.

Failure to properly complete these items may result in a hold being placed on the issuance of any new building permits or the closing of existing building permits and allowing occupancy.

## 6.1.2 Inspection Attendees and Agenda

Representatives of the permittee(s), including the Land Disturbance Manager, shall attend the initial close-out inspection along with the Land Disturbance Inspector.

The following agenda items will be addressed at the initial close-out inspection:

- Inspection of permanent BMPs: All permanent BMPs will be inspected including topsoil spreading, soil preparation, and seeding and mulching;
- Inspection of site cleanup: Cleanup of the site and adjoining streets is checked; and
- Discussion of vegetation requirements: The required vegetation inspections and coverage are described in the following sections.

## 6.1.3 Site Corrections and Initial Close-Out Acceptance

### Step 12

#### Initial Close-Out Acceptance

The permittee(s) shall make any corrections to the site requested by the City Land Disturbance Inspector. If the corrections are substantial, the Land Disturbance Inspector may require a follow-up inspection be scheduled prior to issuing initial close-out acceptance.

## 6.1.4 Vegetation Establishment

### Step 13

#### Revegetation

The permittee(s) shall perform monthly inspections during the revegetation process and correct deficiencies in on-site BMPs and control weeds as deemed necessary during inspections or as requested by City.

## 6.1.5 Vegetation Inspections and Maintenance

The permittee(s) shall undertake the following inspections and maintenance operations until the vegetated areas meet the required coverage, or final stabilization. In addition, Land Disturbance Inspector will make periodic inspections of the revegetation area. Required vegetation coverage shall be at least 70% over 100% of the site.

Inspection and maintenance requirements include the following:

- Seeded and mulched areas shall be inspected monthly by the permittee(s) until a written acceptance of vegetation is received from the City. Repairs, reseeding, and mulching shall be undertaken at least twice per year, or as requested by the Land Disturbance Inspector, for any areas failing to meet the required coverage;
- Rill and gully erosion shall be filled with topsoil prior to reseeding. The reseeding method shall be approved by the City; and
- Noxious weeds shall be controlled in a manner approved by the City.

## 6.1.6 Acceptance

### Step 14

#### **Vegetation Acceptance Inspection**

Once a site as met the coverage outlined in Section 6.1.5, the permittee(s) shall contact the City to schedule the vegetation acceptance inspection. It is the duty of the City Land Disturbance Inspector to confirm that vegetation has met the required coverage and that noxious weeds have been controlled. The permittee's Land Disturbance Manager shall attend the vegetation acceptance inspection.

At the inspection, the City Land Disturbance Inspector will either accept the vegetation or stipulate the corrections that have to be made. Corrections shall be made as requested by the City. If corrections are substantial, the Land Disturbance Inspector may require that a follow-up inspection be scheduled with the City.

### Step 15

#### **Vegetation Acceptance**

If the required vegetation coverage has been met, the Land Disturbance Inspector will issue written acceptance of the vegetation and give the permittee(s) instructions to remove the remaining on-site BMPs.

## 6.2 Final Close-Out

### 6.2.1 Final Close-Out Inspection

### Step 16

#### **Final Close-Out Inspection**

After obtaining written acceptance of the vegetation coverage, the remaining on-site BMPs shall be removed and properly disposed of. The site shall be cleaned and any areas disturbed as a result of the BMP removal shall be seeded and mulched. Once the site is prepared for the final close-out inspection, permittee(s) shall contact the City to schedule the inspection. The permittee's Land Disturbance Manager shall attend the final close-out inspection.

Land Disturbance Inspector will check the removal of BMPs and either accept the work or stipulate the required corrections. Corrections shall be made as requested by the City. If corrections are substantial, the Land Disturbance Inspector may require that a follow-up inspection be scheduled with the City.

### Step 17

#### **Final Close-Out Acceptance**

Once the site is in compliance, the City shall issue final close-out acceptance.

### 6.2.2 Release of Fiscal Security

### Step 18

#### **Fiscal Security Release**

Once final close-out acceptance has been obtained, the permittee(s) may submit a copy of all Land Disturbance Manager Inspection Reports and a Release of Land Disturbance Fiscal Security Request Form to the City. A copy of this form is included in Appendix I. After the City has received a completed request form, it will be signed by the Land Disturbance Inspector and the project's fiscal security will be released.

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After the fiscal security is released by the City, the project is complete.



**Step 19**

**Stormwater Operating Permit Compliance**

As mentioned in Section 1.0, if the project disturbs 1.0 acre or more of land or disturbs 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, refer to the City's *Post-Construction Stormwater Manual*. If applicable, compliance with the Stormwater Operating permit shall be ensured.

## 7.0 Violations and Enforcement

### 7.1 Penalties and Enforcement

Failure to comply with any term, condition, limit, deadline, or other provision of the Land Disturbance Permit, or failure to obtain a Land Disturbance Permit, constitutes a violation of the City's Land Disturbance Ordinance and may also constitute a violation of state and federal laws.

In addition to any other legal or equitable remedies that the City may have for Land Disturbance Permit violations, the City may cease issuance of all building permit approvals and other permissions until such violations are corrected and the permittee(s) takes additional steps to ensure compliance with the Land Disturbance Permit.

### 7.2 Violations

The City classifies violations in three categories depending upon the severity of the violation. Enforcement action varies for each category. Level I Violations have the most severe impact on people and the environment while Level III Violations have the least severe impact.

Violations can be issued any time the City finds a site to be out of compliance with any of the land disturbance requirements found in this Manual. When a violation occurs, written notice will be given by the City through an inspection form or other written means. When a violation is issued, corrective actions, along with a timeframe to complete the corrective actions, will be specified by the City. If violations are not resolved within the specified timeframe, they may become an increasingly severe violation.

Violations of the Land Disturbance Ordinance may result in a violation of state and federal laws and be subject to civil penalties.

#### 7.2.1 Level I Violations

Level I Violations are viewed by the City to pose an immediate serious risk to the health, safety, or welfare of people and/or the environment. Level I Violations result in an immediate issuance of a Stop Work Order (Section 7.3). Example Level I Violations include the following:

- Clearing, grubbing, or grading without a Land Disturbance Permit;
- Failure to schedule a pre-construction meeting;
- Failure to be able to contact the Land Disturbance Manager or Alternate Land Disturbance Manager during any level of violation;
- Failure to restrict operations to approved limits of construction;
- Failure to clean up the tracking of material onto roadways and adjacent paved areas;
- Exporting material to, or importing material from, a non-permitted site;

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- Exporting/importing soil material without a variance;
  - Failure to follow an approved phasing plan; and/or
  - Failure to correct Level II Violations per the directives of the Land Disturbance Inspector.

### **7.2.2 Level II Violations**

Level II Violations are viewed by the City to pose a moderate immediate risk to the health, safety, or welfare of people and/or the environment; however, if not immediately corrected, may pose a serious risk. Remediation for Level II Violations shall commence immediately after the permittee(s) is notified of the violation(s). Example Level II Violations include the following:

- Tracking of material onto roadways and adjacent paved areas;
- Failure to make required plan revisions;
- Failure to perform BMP maintenance as directed by the City Land Disturbance Inspector; and
- Failure to correct Level III Violations per the directives of the Land Disturbance Inspector.

### **7.2.3 Level III Violations**

Level III Violations are viewed by the City to pose a low immediate risk to the health, safety, or welfare of people and/or the environment; however, if not corrected quickly, may pose a more serious risk. Level III Violations shall be corrected within 48 hours of inspection unless otherwise specified in writing by the Land Disturbance Inspector. Example Level III Violations include the following:

- Failure to provide routine maintenance for erosion and sediment controls;
- Installation of non-City-accepted erosion and sediment control BMPs;
- Failure to provide temporary inlet protection within 48 hours of pouring of an inlet;
- Failure to provide inlet protection within 48 hours of placement of asphalt or concrete pavement;
- Staging of equipment outside of the stabilized staging area;
- Failure to have accepted Land Disturbance Permit, SWPPP, and inspection forms on site; and
- Failure to follow schedule of installation of BMPs in SWPPP for interim and final BMPs.

## **7.3 Stop Work Order**

The City is authorized to order work to be stopped on any project that disturbs the land that is not in compliance with the requirements of the Land Disturbance Permit. The Stop Work Order form is located in Appendix J. A Stop Work Order may be issued for any Level I Violation.

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If a project is issued a Stop Work Order, the City will post the Stop Work Order on the site and all on-site work must be stopped. The posted Stop Work Order will specify what corrective actions are needed before land disturbance activities can continue. Safety-related items (e.g., backfilling of holes and trenches) as well as corrective actions may be completed; however, the permittee(s) shall inform the Land Disturbance Inspector of such activities. The following actions are considered a direct violation of the City's Land Disturbance Code when a Stop Work Order has been issued:

- Removing a posted Stop Work Order by anyone other than an official of the City;
- Continuing land disturbance activities without performing the required corrective actions listed in the Stop Work Order; and
- Not performing the required corrective actions within the time frame specified in the Stop Work Order.

When placed on a permitted site, a Stop Work Order will either suspend or revoke the Land Disturbance Permit for that site. If the permit is suspended, the permittee(s) must perform the tasks stated in the Stop Work Order and obtain a signed Stop Work Order Release Form (Appendix K) from the City before land disturbance activities can continue. An inspection may be required for the City to determine if sufficient corrective actions have been taken. If the permit is revoked, the following steps must be taken:

- Correct the deficient practices that caused the Stop Work Order;
- Reapply for a Land Disturbance Permit and pay the permit fee;
- Call the City to schedule a site inspection; and
- Obtain a new Land Disturbance Permit after approval of the corrected work from a Land Disturbance Inspector.

If the property owner chooses to stop work and not renew a permit after it has been revoked, then the site topography and vegetation must be returned to its original condition within the timeframe stated in the Stop Work Order. If the site is not reestablished within the stated time frame, it is considered a direct violation of the City Land Disturbance Code.

Any person violating any provision of the City Land Disturbance Code shall be deemed guilty of a misdemeanor and each day during which any violation of any of the provisions of this division is committed, continued, or permitted shall constitute a separate offense.

## **7.4 Default**

### **7.4.1 Default of Permittee**

In the event that there is a default by the permittee(s) of any of the requirements of the Land Disturbance Permit, SWPPP, and/or *Land Disturbance Manual*, remedies will be in accordance with the remedies

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identified in this *Land Disturbance Manual* and any other remedies provided by law. A default by permittee(s) shall be based on conditions including, but not limited to, the following.

**Default Conditions:**

- Permittee(s) fails to construct the improvements in substantial compliance with the SWPPP and the other requirements of the Land Disturbance Permit;
- Permittee(s) fails to complete construction of the Land Disturbance improvements by the completion date provided in the schedule of completion in the SWPPP or Permit;
- Permittee(s) fails to fix any noncompliance issues specified in any written notice of noncompliance within the timeframe specified in the notice;
- Permittee(s) breaches or fails to comply with any obligation of the Land Disturbance Permit;
- Permittee(s) becomes insolvent, files a voluntary petition of bankruptcy, is adjudicated as bankrupt pursuant to an involuntary petition in bankruptcy, or a receiver is appointed for the permittee; and
- Permittee(s) fails to maintain in full force and effect a letter of credit in the amounts specified above or in the Land Disturbance Permit.

#### **7.4.2 Notice of Default**

If the City, or representative of the City, gives notice that a default by the permittee(s) exists, and if the permittee(s) fails to cure such default within the time specified, the City shall be entitled to: (a) make a draw on the letter of credit for the amount reasonably determined by the City to be necessary to cure the default in a manner consistent with the approved SWPPP up to the face amount of the letter of credit; and (b) sue the permittee(s) for recovery of any amount necessary to cure the default over and above the amount available under the letter of credit.

#### **7.4.3 City Right to Complete Improvements**

The City shall have the right to complete the Land Disturbance improvements in substantial accordance with the SWPPP, the opinion of probable costs, and other requirements of this *Land Disturbance Manual*. It can do this either itself, by contract with a third party, or by assignment of its rights to a successor permittee(s) who has acquired the property by purchase, foreclosure, or otherwise. The City, any contractor under contract with the City, or any such successor permittee(s), their agents, subcontractors, and employees shall have the nonexclusive right to enter the subject property for the purpose of completing the Land Disturbance improvements.

#### **7.4.4 Use of Funds by City**

Any funds obtained by the City under a letter of credit, or recovered by the City from the permittee(s) by suit or otherwise, will be used by the City to pay the costs of completing the Land Disturbance improvements in accordance with the SWPPP and the other requirements of this *Land Disturbance*

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*Manual.* The funds will also be used to pay the reasonable costs and expenses of the City in connection with the default by the permittee(s), including reasonable attorneys' fees, with the surplus, if any, to be returned to the permittee(s).

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## 8.0 Revisions

This section is intended to provide a location for any revisions and updates to the information in this Manual that may be made available by the City prior to the complete republishing of the Manual.

Any revisions will be dated and will refer back to the section modified. It is suggested that revisions be kept in chronological order within this section.

<b>Date</b>	<b>Section</b>	<b>Revision</b>
December 2021	3.2, 3.3.10, 5.4.1	Revised text for requirements of the new Comprehensive MS4 Permit, effective October 1, 2021.

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## 9.0 Glossary of Terms

Following is a glossary of some of the terms used in this Manual.

**Applicant(s)** refers to the owner and contractor who complete and sign the Land Disturbance Permit application.

**Alternate Land Disturbance Manager** refers to an on-site representative who serves, in the absence of the Land Disturbance Manager, as the permittee(s) contact person with the City of Moberly and who is responsible for ongoing compliance with the Land Disturbance Permit.

**Best Management Practice (BMP)** refers in this Manual to a measure implemented by a contractor to control construction site erosion or sediment.

**Concrete Washout Area** is a shallow excavation with a small perimeter berm to isolate concrete truck washout operations.

**Construction** refers to the implementation of a proposed plan of improvements by a contractor that may include excavating, site grading, utility work, paving, building, and other activities that may contribute to the disturbance of land and elevated levels of erosion and sediment.

**Construction Fence** consists of orange plastic fencing, or other approved material, attached to support posts and used to control access to the construction site and delineate limits of construction.

**Design Engineer** refers to the professional engineer responsible for the development of the SWPPP.

**Development** refers to the process of creating new residential, commercial, office, or other land uses through the process of construction.

**Dewatering** consists of a gravel filter provided on the suction end of a pump to reduce the pumping of sediment and a riprap pad at the discharge end of the pump to provide erosion protection. Dewatering includes settling the discharge water in a small basin or sediment pond before releasing to receiving waters.

**Diversion Ditch** is a small earth channel used to divert and convey runoff to a sediment basin, check dam, or drainageway. Depending on slope, the diversion swale may need to be lined with erosion control matting, plastic (for temporary installations only), or riprap.

**Drainageway** is any natural or artificial watercourse including, but not limited to, streams, rivers, creeks, ditches, channels, canals, waterways, gullies, ravines, or washes in which water flows in a definite direction or course, either continuously or intermittently, including any area adjacent to it that is subject to inundation by reason of overflow or floodwater and meets any of the following conditions:

- Provides for conveyance of stormwater runoff from an upstream property or development.

- Defined as "waters of the United States" by the USACE.
- Supports riparian area or sensitive habitat.
- Tributary area equal to or greater than 20 acres.
- Alternation or filling will change the manner in which runoff is discharged onto a downstream property and potentially results in a negative impact to that downstream property.

**Erosion** is the process by which the land surface is worn away by the action of wind, water, ice, and gravity.

**Export** means transporting material from a construction site to another location.

**Fiscal Security** refers to an irrevocable letter of credit that an owner submits to the City of Moberly to be held as security during the construction process and to be drawn upon in the case of nonperformance on the part of the permittee(s).

**Import** means transporting material from an off-site area to the project site to be used as fill.

**Inlet Protection** consists of a reinforced rock berm placed in front of (but not blocking) a curb opening inlet or around an area inlet to reduce sediment in runoff entering the inlet.

**Land Disturbance Inspector** refers to the City of Moberly representative who visits construction sites to check for compliance with the Land Disturbance Permit.

**Land Disturbance Manager** refers to an on-site representative who serves as the permittee(s)' contact person with the City of Moberly and who is responsible for ongoing compliance with the Land Disturbance Permit.

**Land Disturbance Permit** refers to the permit obtained from the City of Moberly prior to commencement of land-disturbing activities as defined in the City of Moberly's *Land Disturbance Manual*.

**Land Disturbance Permit Process** refers to the process **applicants** proceed through to obtain a permit to commence land-disturbing activities within the City of Moberly.

**Land Disturbance Permit Program** refers to the program developed and administered by the City of Moberly to regulate land-disturbing activities within the unincorporated limits of the City of Moberly.

**Level I Violations** are viewed by the City of Moberly to pose an immediate serious risk to the health, safety, or welfare of people and/or the environment and result in an immediate issuance of a stop work order.

**Level II Violations** are viewed by the City of Moberly to pose a moderate immediate risk to the health, safety, or welfare of people and/or the environment; however, if not immediately corrected, will pose a serious risk. Remediation for Level II Violations shall commence immediately after the permittees are notified of the violation(s).

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**Level III Violations** are viewed by the City of Moberly to pose a low immediate risk to the health, safety, or welfare of people and/or the environment; however, if not corrected quickly, will pose a more serious risk. Level III Violations shall be corrected within 48 hours of inspection unless otherwise specified in writing by the **Land Disturbance Inspector**.

**Limits of Construction** refers to the area shown on the SWPPP that delineates areas in which construction activities can take place including staging, storage, and stockpiling.

**Moberly Public Utilities** refers to the department within the City of Moberly that has the authority and responsibility to manage, enforce, and regulate stream buffer activities within the City of Moberly.

**Permittee(s)** refers to the owner and contractor who obtain a Land Disturbance Permit.

**Professional Engineer** refers to an individual currently registered with the Missouri State Board of Registration as a professional engineer, practicing engineering in accordance with state law.

**Reinforced Rock Berm** consists of a linear mass of gravel enclosed in wire mesh to form a porous filter, able to withstand overtopping. The berm is heavy and stable and promotes sediment deposition on its upstream side as well as reducing flow velocities.

**Rolled Erosion Control Product** is a fibrous blanket of straw, jute, excelsior, or coconut material trenched in and staked down over prepared, seeded soil. The matting reduces both wind and water erosion.

**Sediment Basin** refers to an impoundment that captures sediment-laden runoff and releases it slowly, providing prolonged settling times to capture coarse and fine-grained soil particles.

**Sediment Trap** consists of a riprap berm with a small upstream basin that acts to trap coarse sediment particles.

**Sedimentation** means the deposition of soil particles dislodged by erosion.

**Seeding and Mulching** consists of seeding disturbed areas with permanent grasses and spreading straw mulch to provide immediate protection against raindrop and wind erosion and, as the grass cover becomes established, to provide long-term stabilization of exposed soils.

**Silt Fence** is a temporary sediment barrier constructed of woven fabric stretched across supporting posts. The bottom edge of the fabric is placed in an anchor trench that is backfilled with compacted soil.

**Stabilized Staging Area** refers to stripping topsoil and spreading a layer of granular material in the area to be used for a trailer, parking, storage, unloading, and loading. A stabilized staging area reduces the likelihood that the vehicles most frequently entering a site are going to come in contact with mud.

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**Stop Work Order** refers to a written notice provided by the City of Moberly's **Land Disturbance Inspector** that revokes a Land Disturbance Permit as a result of a priority violation. Contractors receiving a Stop Work Order shall cease construction operations until the problem is addressed and a signed Stop Work Order Release Form is obtained.

**Stormwater** means runoff generated as a result of a precipitation event.

**Stormwater Pollution Prevention Plan (SWPPP)** refers to the complete package of required information submitted to the City of Moberly for review and acceptance, which include drawings, Land Disturbance report, Report Checklist, and Option of Probable Cost Example Worksheet.

**Temporary Slope Drain** refers to a small culvert or plastic lined channel to convey runoff down a slope or channel bank to reduce the occurrence of rill and gully erosion.

**Temporary Stream Crossing** refers to a rock layer placed temporarily in a stream to allow construction equipment to cross. A stream crossing may include culverts or provide a low-water crossing, or ford. In either case, excavation of the existing channel banks is to be avoided and, in general, disturbance is to be kept to a minimum.

**Terracing** consists of creating one or more flat benches in high, steep cut or fill slopes to interrupt runoff and reduce the formation of rill and gully erosion.

**Vehicle Tracking Control** consists of a pad of 3" to 6" rock at all entrance/exit points for a site that is intended to help strip mud from tires prior to vehicles leaving the construction site.

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## 10.0 References

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## Appendices

## **Appendix A**

### **Contact List**

## Contact Information

(Information is subject to change)

### **City of Moberly Public Utilities Department**

101 West Reed Street  
Moberly, MO 65270  
Phone: (660) 269-8705

### **Missouri Department of Natural Resources**

Northeast Regional Office  
1709 Prospect Drive  
Macon, MO 63552  
Phone: (660) 385-8000  
Fax: (660) 385-8090

### **U.S. Army Corps of Engineers – Kansas City District**

Missouri State Regulatory Office  
221 Bolivar Street, Suite #103  
Jefferson City, MO 65101  
Phone: (573) 634-2248  
Fax: (573) 634-7960

## **Appendix B**

### **Required Checklist for Preliminary Acceptance of SWPPP**

# Required Checklist for Acceptance of SWPPP



## A. Addressing the Ten Elements of an Effective SWPPP & Overall Design Intent

### Element 1: Identify and Protect Environmentally Sensitive Areas.

- yes  no 1. Conduct site visit and identify on the drawings the sensitive areas such as the following:
  - yes  no a. Sinkholes or caves. If sinkhole exists on site or disturbed area drains to an off-site sinkhole, it should be shown on all drawings and any area draining to the sinkhole should not be disturbed unless approved by the City.
  - yes  no b. Losing streams (may require a hydrogeological evaluation from the Missouri Geological Survey).
  - yes  no c. Forested areas (not to be disturbed).
  - yes  no d. Single trees (not to be disturbed).
  - yes  no e. Steep slopes (not to be disturbed).
  - yes  no f. Potential stormwater infiltration areas.
  - yes  no g. Other areas deemed sensitive by the City of Moberly.
- yes  no 2. Endeavor to avoid, or minimize, disturbance to the sensitive areas identified above.
- yes  no 3. Show construction fence or, if approved, construction markers to delineate the limits of construction adjacent to sensitive areas.

### Element 2: Stabilize Drainage Ways

- yes  no 1. Identify waterbodies (streams, rivers, or lakes) within city limits and protect on site with a buffer.
- yes  no 2. Show construction fence or, if approved, construction markers to delineate the limits of construction adjacent to stream buffer.
- yes  no 3. All drainageways, ditches, and any other concentrated flow areas are stabilized during and after land disturbance.

### Element 3: Balance Earthwork on Site (Total or for Each Phase)

- yes  no 1. Endeavor to balance earthwork quantities on site through the following tasks:
  - yes  no a. Develop initial grading plan.
  - yes  no b. Check earthwork quantities for balance.
  - yes  no c. Raise or lower portions of the site as necessary to try to balance earthwork.
  - yes  no d. Repeat steps b and c until balance is achieved.
- yes  no 2. If it is impossible to balance earthwork quantities on site, prepare letter requesting variance.

### Element 4: Limit the Size of Grading Phases to Reduce Soil Exposure

- yes  no 1. For large projects, determine separate grading phases, each disturbing less than 40 acres.
- yes  no 2. Consider separate grading phases for any project size in order to minimize the amount of area being disturbed at any one time.
- yes  no 3. Balance earthwork for each phase following the guidance from Element 3, above.

**Element 5: Stabilize Exposed Soils in a Timely Manner**

- yes  no 1. Allow adequate space for topsoil stockpiles.
- yes  no 2. Adequately provide stabilization within 14 calendar days after disturbance has temporarily or permanently ceased.

**Element 6: Implement Effective Perimeter Controls**

**A. Upslope Perimeters.**

- yes  no 1. Determine areas upslope of the land disturbance that will generate stormwater runoff and will enter the site. Determine if it is entering the site as sheet flow or concentrated flow. Determine if the stormwater should be ponded upslope of the disturbed area or conveyed around or through the land disturbance area as stabilized concentrated flow.
- yes  no a. Determine storage requirements behind BMP(s) if ponding upslope stormwater is the proposed method.
- yes  no b. Ensure upslope stormwater is conveyed in a stable ditch or drainageway (concentrated flow area), if moving stormwater through or around the land disturbance area is proposed.

**NOTE: Upslope stormwater does not need to be treated by a ponding BMP or sedimentation facility if it can be conveyed away from or around the land disturbance areas.**

**B. Downslope Perimeters.**

- yes  no 1. Determine the size of sheet flow areas draining to a downslope perimeter or a concentrated flow area. Locate all concentrated flow areas that are disturbed, proposed, or existing. Determine if stormwater from disturbed areas draining to the downslope perimeter is treated or untreated. Treated means all stormwater from disturbed areas has been ponded by a BMP or went through a sedimentation facility.
- yes  no a. Check to ensure all ditches or drainageways that are disturbed, proposed, or existing are made stable.
- yes  no b. Check to ensure all untreated stormwater is ponded by a BMP or flows through a sedimentation facility.

**Element 7: Use Sedimentation Basins**

- yes  no 1. Runoff from all disturbed areas is treated in a sedimentation facility or ponding BMP, when applicable. In the case sedimentation facilities are used in an area to be treated greater than 1.0 acre, they shall be treated in a sediment basin.
- yes  no 2. Wherever possible, sediment basins are to be located within any permanent water quality or quantity detention facilities.

**Element 8: Protect Steep Slopes from Erosion**

**A. Proposed Slopes Shall be no Steeper than 3 to 1.**

- yes  no 1. Ensure that no proposed slopes are steeper than 3H to 1V unless otherwise approved by the City of Moberly.
- yes  no 2. Show erosion control blanket on slopes steeper than 4 to 1.

**B. Runoff Shall be Diverted Away from Steep Slopes.**

- yes  no 1. Use diversion ditch or temporary slope drains at the top of steep slopes to capture runoff before it flows down the slope.

**C. Terracing Shall be Incorporated into the Grading of Steep Slopes.**

- yes  no 1. Use terracing in steep slopes to break up the flow of incidental water and reduce the development of rill and gully erosion runoff before it flows down the slope.

**Element 9: Protect Inlets and Outlets of Storm Sewers and Culverts**

- yes  no 1. Show inlet protection at all street and area inlets.
- yes  no 2. Show culvert protection, temporary at culvert inlets and temporary or permanent at culvert outlets.
- yes  no 3. Design outlet protection for all storm sewer outfalls and culvert outlets.
- yes  no 4. Show immediate method of stabilization in stream areas disturbed by the construction of the outfall or culvert.

**Element 10: General Construction Control BMPs**

- yes  no 1. Identify all limits of construction. Use construction fence or construction markers to delineate the limits of construction.
- yes  no 2. Provide one or more vehicle tracking controls at all entrance/exit points from a public street to the site.
- yes  no 3. Show a stabilized staging area near the main access point.
- yes  no 4. Show a concrete washout area near all concrete work areas.
- yes  no 5. Show temporary access roads and stockpile areas.
- yes  no 6. Show locations of all storage and staging areas for equipment, fuel, waste, chemicals, off-site materials, and temporary restrooms.
- yes  no 7. Select areas for the vehicle tracking control, stabilized staging area, access roads, and stockpile areas that avoid disturbance to trees, desirable vegetation, steep areas, and low, wet areas.

## B. SWPPP Drawings

### 1. Cover Sheet

- yes  no 1. Project name.
- yes  no 2. Project address (if applicable).
- yes  no 3. Owner's contact information.
- yes  no 4. Design firm's contact information.
- yes  no 5. Plan sheet index.
- yes  no 6. Designer's signature block.
- yes  no 7. The following note:  
I, property owner's signature, assume and acknowledge any land clearing, construction, or development involving the movement of earth shall be in accordance with the SWPPP. I will maintain a current copy of the SWPPP on the site in a location visible to anyone entering the site. This will allow City personnel to perform quality assurance inspections when no one representing the SWPPP is on site. I will also maintain all site inspections with the SWPPP on site. I understand that the SWPPP is developed to protect the water quality to the maximum extent practicable and this may require modification to the SWPPP during the duration of the project. I understand the project and this SWPPP meet all applicable local, state, and federal requirements. If the representative of the City of Moberly, the Land Disturbance Manager, or the designer of the SWPPP, notifies me that the SWPPP needs to be amended, I will notify the engineer of the SWPPP to ensure recommendations are considered.
- yes  no 8. SWPPP Designer's signature block with name, date, and Professional Engineer registration number. Signature block shall include the following note:  
I, signature of P.E., certify that the SWPPP has been developed to minimize erosion and reduce sediment from entering any state, city, or privately owned waters to the maximum extent practicable. I have verified any special conditions for this site and have incorporated such into the SWPPP. I shall amend the SWPPP whenever the current SWPPP does not meet state standards for stormwater outfall requirements, site conditions change BMP requirements, excessive amounts of erosion have occurred, and/or noticeable sediment has left the site. I understand that the SWPPP is developed to protect the water quality to the maximum extent practicable, and this may require modification to the SWPPP during the duration of the project. If the owner of properties name or Land Disturbance Manager contacts me to update or change the SWPPP and I agree, then the SWPPP will be updated within 72 hours of noted need of change to the SWPPP. If I disagree with amending the SWPPP and the changes are not required by federal, state, or City requirements, then it should be noted that I take liability for any degradation of water quality that may occur by not making the requested amendment to the SWPPP. If changes are made to the SWPPP, I will publish all changes to the SWPPP with an indicator to all parties as to which copy is current.

- yes  no 9. The following note:  
 I, signature of Land Disturbance Manager , am the agent of owner of properties name to ensure that this site is in accordance with the SWPPP. I will perform site inspections at least once per week by Thursday so that corrections can be made before the end of Friday and no later than 72 hours after a half inch or more of rainfall in 24 hours. These site inspections will be recorded on a Land Disturbance Inspection form located in the City of Moberly *Land Disturbance Manual* . The purpose of such inspections will be to ensure proper installation, operation, and maintenance of BMPs as well as to determine the overall effectiveness of the SWPPP and the need for any additional control measures. If changes to the SWPPP are required I will notify the owner of properties name and Name of P.E. within 24 hours.
- yes  no 10. The following note:  
 The SWPPP included herein has been placed in the Moberly File for this project and appears to fulfill applicable Moberly land disturbance criteria, as amended. Additional erosion and sediment control measures may be required of the permittee(s) due to unforeseen erosion problems or if the submitted SWPPP does not function as intended. The requirements of this SWPPP shall be the obligation of the permittee(s) until such time as the SWPPP is properly completed, modified, or voided.
- yes  no 11. City Acceptance Block.
- yes  no 12. General Location Map at a Scale of 1-inch to 1000- feet to 8000-feet indicating:
- general vicinity of the site location.
  - major roadway names.
  - north arrow and scale.

**2. SWPPP Drawing Index Sheet**

For projects that require multiple plan-view sheets to adequately show the project area (based on the specified scale ranges), a single plan-view sheet shall be provided at a scale appropriate to show the entire site on one sheet. Areas of coverage of the multiple blow-up sheets are to be indicated as rectangles on the index sheet.

### 3. Initial SWPPP Plan Sheet

This plan sheet shall provide erosion and sediment controls for the initial clearing, grubbing, and grading of a project. The layout and design of the initial BMPs should be based off the existing topography at the limits of construction. The initial SWPPP should include BMPs for perimeter control to ensure sediment does not leave the site to the maximum extent possible. The initial BMPs will be placed at the same time and prior to the on-site pre-construction meeting and the signing of the Land Disturbance permit application. At a minimum, it shall contain:

- yes  no 1. Property Lines.
- yes  no 2. Existing and proposed easements.
- yes  no 3. Existing topography at one foot contour intervals, extending a minimum of 100 feet beyond the property line.
- yes  no 4. Location of any existing structures or hydrologic features within the mapping limits.
- yes  no 5. USGS or other Benchmark used for project.
- yes  no 6. Limits of construction showing all areas of land disturbance. Stream buffer, sinkhole drainage area, and other sensitive resource areas to be preserved and all other areas outside the limits of land disturbance shall be lightly shaded to clearly show area not to be disturbed.
- yes  no 7. Location of vehicle tracking control, storage, and staging areas for equipment, fuel, lubricant, chemicals, and waste storage or other off-site materials, and temporary restrooms.
- yes  no 8. Location of temporary roads if needed.
- yes  no 9. Location of initial BMPs. BMP IDs to include: symbol, detail number, two to three letter abbreviation, BMP intent, and BMP number.
- yes  no 10. Design parameters of each BMP placed under BMP ID on initial SWPPP. Nonstandard BMPs must also include design parameter in line with standard design parameters.
- yes  no 11. Moberly acceptance block.
- yes  no 12. Other information as may be reasonably required by Moberly.

#### 4. Interim SWPPP Plan Sheet

This plan sheet shows BMPs to control erosion and sediment during and after grading, site construction, and site revegetation process. This plan sheet will include BMPs within the perimeter and any modifications to the perimeter BMPs due to the proposed grading. The interim BMPs will not all be placed at the same time. Therefore a schedule of installation will be within the construction notes on the plan sheet for each BMP number that is installed. At a minimum, it shall contain the following information.

The Interim SWPPP shall show all the information included on the Initial SWPPP, as noted below:

- yes  no 1. Existing topography at one foot contour intervals extending a minimum of 100 feet beyond the property line, as shown on Initial SWPPP.
- yes  no 2. Location of all existing erosion and sediment control measures on site, as shown on the Initial SWPPP Sheet. Design parameters for initial stage BMPs shall not be shown. If any of the initial BMPs will be moved or removed during the interim plan, the construction notes should state the BMP number and when they the action should occur.
- yes  no 3. All items from the Initial SWPPP are shown on this Plan.

In addition, the Interim SWPPP shall include the following:

- yes  no 4. Proposed topography at one foot contour intervals, showing elevations, dimensions, locations, and slope of all proposed grading.
- yes  no 5. Location of interim BMPs, BMP IDs to include: symbol, detail number, two- to three-letter abbreviation, BMP intent, and BMP number. The BMP number is used for a reference number when construction notes need to call out specifics or sequencing to that BMP.
- yes  no 6. Locations of all buildings, drainage features and facilities, paved areas, retaining walls, water quality facilities, or other permanent features to be constructed in connection with, or as a part of, the proposed work, per approved building permit.
- yes  no 7. The following note:
  - Shaded BMPs were installed in initial stage and shall be left in place in interim stage (not moved or removed)
- yes  no 8. All interim BMP numbers. Have corresponding notes on the sheet to include: when to install, installation or maintenance details specific to that BMP number that are not covered in standard detail notes.
- yes  no 9. Locations of temporary and permanent access locations.
- yes  no 10. Summary of cut and fill volumes.
- yes  no 11. Moberly acceptance block.
- yes  no 12. Other information or data as may be reasonably required by Moberly.

**5. Final SWPPP Plan Sheet**

This plan sheet shows controls for final completion of the site. The final BMPs may not all be placed at the same time. Therefore a schedule of installation will be within the construction notes on the plan sheet for each BMP number that is installed. All final BMPs will be installed prior to initial close-out inspection. At a minimum, this plan sheet shall contain the indicated information.

The Final SWPPP shall include all information shown on the Initial and Interim Plans, as noted below:

- yes  no 1. Existing topography in areas of proposed contours are not shown.
- yes  no 2. Direction(s) of stormwater flow after grading activities.
- yes  no 3. Existing Initial and Interim BMPs shall be shown. Design parameters shall not be shown. If any of the initial or interim BMPs will be moved or removed during the final plan the construction notes should state BMP number and when they the action should occur.

In addition, the following information shall be shown:

- yes  no 4. Location of final BMPs, BMP IDs to include: symbol, detail number, two to three letter abbreviation, BMP intent, and BMP number. The BMP number is used for a reference number when construction notes call out specifics to that BMP. All final BMPs (including seeding and mulching of any areas not stabilized in the Interim Plan), permanent landscaping, and measures necessary to minimize the movement of sediment off site until permanent vegetation can be established.
- yes  no 5. Show area of buildings, pavement, sod, and permanent landscaping per approved site plan for building permit or other drawing required for City approval.
- yes  no 6. Show final stabilization methods everywhere except buildings and pavement areas.
- yes  no 7. Show surface water buffers.
- yes  no 8. Show permanent access locations.
- yes  no 9. Show other BMPs considered by the designer to be appropriate.
- yes  no 10. State in construction notes all BMPs to be removed along with when they are to be removed.
- yes  no 11. Include the following note:
  - Shaded BMPs were installed in initial or interim SWPPP and, unless otherwise indicated, shall be left in place until revegetation establishment is approved by the City.
- yes  no 12. Moberly acceptance block.
- yes  no 13. Other information as may be reasonably required by Moberly.

**6. Moberly General Notes and Details**

These sheets show general notes and details for each BMP shown in the drawings.

Notes and details shall include at a minimum:

- yes  no 1. SWPPP general notes, detail number of all included BMPs, sheet number of BMP detail, BMP symbol and name for all included BMPs.
- yes  no 2. All non-standard BMPs added to drawings have been approved by the City.
- yes  no 3. All BMPs standard and non-standard include enough detail for the contractor to properly construct them.
- yes  no 4. All BMPs standard and non-standard include installation notes and maintenance notes.

**C. Submittals for Acceptance of SWPPP**

These submittals shall contain the following information:

- yes  no 1. SWPPP that addresses all of Section A of this checklist.
- yes  no 2. SWPPP that addresses all of Section B of this checklist.
- yes  no 3. This checklist completely filled out and signed by the design engineer.
- yes  no 4. Probable BMP cost worksheet.

**D. Signing of this Checklist by the Design Engineer**

I, \_\_\_\_\_ as a licensed professional engineer in the State of Missouri certify that the SWPPP has been developed to minimize erosion and reduce sediment from entering any state, city, or privately owned waters to the maximum extent practicable. I have verified any special conditions for this site and have incorporated such into the SWPPP. I have addressed all of the items within this checklist and the Moberly *Land Disturbance Manual*. I understand this SWPPP is in compliance with all applicable permits, including state and federal permits.

Affix professional engineer seal below then sign and date.

## **Appendix C**

### **Land Disturbance Permit Application**



**PERMIT APPROVAL (CITY USE ONLY)**

<b>Base Fee:</b> \$250.00	<b>Additional cost:</b> \$25 x _____ disturbed acres = \$_____	<b>Base Fee:</b> \$_____	<b>Renewal</b> <input type="checkbox"/>	<b>\$100</b>
		<b>Permit Fee:</b> \$_____	<b>Transfer</b> <input type="checkbox"/>	<b>\$100</b>
		<b>Total Fee:</b> \$_____		
<b>Date Paid:</b> _____	<b>Amount:</b> _____	<input type="checkbox"/> <b>Check (list check # _____)</b> <input type="checkbox"/> <b>Cash</b>		
<b>Engineer's Estimate \$_____ x 1.15 = Total Security \$_____</b>			<b>Security Received:</b> <input type="checkbox"/> Y <input type="checkbox"/> N	
<b>Date SWPPP Accepted:</b> _____				

**STAFF APPROVAL**

<b>Name:</b> _____	<b>Title:</b> _____
<b>Signature:</b> _____	<b>Date:</b> _____

## **Appendix D**

### **Land Disturbance Permit Fees**

## Permit Fees

Below is a list of the basic fees that apply to the Moberly Land Disturbance Program.

<b>Standard Land Disturbance Permit Fee:</b>	\$250 + \$25 per acre
<b>Renewal Fee:</b>	\$100
<b>Transfer Fee:</b>	\$100
<b>Re-Inspection Fee:</b>	\$50

**If found working without a City-issued permit, a fee of three times the Initial Permit Fee will be imposed.**

## **Appendix E**

### **Opinion of Probable Cost Example Spreadsheet**



## **Appendix F**

### **Irrevocable Letter of Credit Form**



## IRREVOCABLE LETTER OF CREDIT

We hereby authorize you to draw on \_\_\_\_\_  
(Bank name)

\_\_\_\_\_  
(Street) (City) (State)

\_\_\_\_\_, for the account of \_\_\_\_\_  
(ZIP code) (Customer name)

\_\_\_\_\_  
(Street) (City) (State)

\_\_\_\_\_, up to an aggregate amount of \_\_\_\_\_  
(ZIP code) (Dollars)

(\$ \_\_\_\_\_) available by your drafts at sight accompanied by a certificate purportedly signed by the City of Moberly stating:

- (1) that Moberly is entitled to draw under this Letter of Credit pursuant to that certain Agreement dated \_\_\_\_\_, 20\_\_\_, between the City of Moberly and \_\_\_\_\_; and  
(Customer name)
- (2) the amount of money to be drawn on this Letter of Credit.

This Letter of Credit shall expire on \_\_\_\_\_, 20\_\_\_. This letter shall expire prior to said date if \_\_\_\_\_ received a release purportedly signed by the City stating that all or a portion of this Letter of Credit is to be released.

All drafts drawn under this Letter of Credit are to be endorsed hereon and shall bear the clause DRAWN UNDER \_\_\_\_\_  
(Bank name - must be drawable within Moberly)

LETTER OF CREDIT NO. \_\_\_\_\_, DATED \_\_\_\_\_.

We hereby agree with the drawers, endorsers, and bona fide holders of drafts drawn under and in accordance with the terms of this Letter of Credit that said drafts shall be duly honored on presentation to us at our office specified above on or before the expiration date. Further, we agree that all fees associated with this letter of credit shall not be the responsibility of Moberly.

\_\_\_\_\_  
(Bank name)

By: \_\_\_\_\_  
(Authorized signature)

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## **Appendix G**

### **Responsible Party Designation Form**



**RESPONSIBLE PARTY DESIGNATION**

Site name: \_\_\_\_\_ Date: \_\_\_\_\_

I have been designated the on-site Land Disturbance Manager/Alternate Land Disturbance Manager. I am responsible for maintaining and repairing all erosion and sedimentation controls on the approved site. Additionally, I have read and understand the *Land Disturbance Field Manual* and understand not all City of Moberly requirements are included in the *Land Disturbance Field Manual*. It is my responsibility to ensure compliance with the *Land Disturbance Manual*, Land Disturbance Permit, and accepted SWPPP. I additionally understand I shall be on site the majority of the time and must be able to be reached by the below given phone number 24 hours a day. I reviewed installation sequencing of BMPs in the construction notes of the SWPPP and have identified if any final stabilization will not occur within 30 days from the start of earthmoving activities or within 15 days of substantial completion of grading. If this stabilization will not occur within the required time, I have attached a schedule of completion of stabilization to this sheet. This sheet will be reviewed to ensure that it presents detailed steps of stabilization in a phased format.

Printed Name: \_\_\_\_\_ Company: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Mobile Number: \_\_\_\_\_

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

Alternate Land Disturbance Manager: \_\_\_\_\_ Phone #: \_\_\_\_\_

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

I, being the owner/owner's representative understand it is my responsibility to ensure my Land Disturbance Manager understands and complies with all applicable Moberly criteria and will ensure if I change contractors or the Land Disturbance Manager is removed from this project, the new contractor will contact Moberly to receive the information listed in the *Land Disturbance Field Manual* and become designated as the new on-site Land Disturbance Manager. I further understand the permittee(s), as listed on the Land Disturbance Permit, shall remain the legally responsible party(s).

Printed Name: \_\_\_\_\_ Company: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Mobile Number: \_\_\_\_\_

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

## **Appendix H**

### **Land Disturbance Inspection Forms**

**H1 – City Inspection Form**

**H2 – Land Disturbance Manager Inspection Form**

# Land Disturbance City Inspection Report

**Moberly, MO** City of 

**Level I violations** shall result in issuance of a Stop Work Order and revocation of the Land Disturbance Permit, **Level II violations** shall be corrected immediately upon receipt of this inspection form, and **Level III violations** shall be corrected within 48 hours unless otherwise directed by the City Stormwater Coordinator.

Failure to complete the Level II or Level III violations, as directed below, may result in issuance of a Level I violation and Stop Work Order. This inspection report shall be kept on site and made available to the Stormwater Coordinator upon request until final acceptance is granted.

Project:	Date of Inspection:
Contractor:	Report No:
Owner/Permittee:	Permit No:

Others Present (List title; print and sign name):

- 1.
- 2.
- 3.

Plans on site:

Weekly inspections on site:

Weekly inspections up to date:

# of BMPs currently installed:

BMP Description	Maintenance Required?		Course of Action Required	Date Items to be Completed	Date Completed
	Yes	No			

Comments:

Land Disturbance Manager : \_\_\_\_\_

and/or Alternate Land Disturbance Manager : \_\_\_\_\_

*Name* *Signature*

# Land Disturbance Manager Inspection Report

**Moberly, MO** City of 

**Level I violations** shall result in issuance of a Stop Work Order and revocation of the Land Disturbance Permit, **Level II violations** shall be corrected immediately upon receipt of this inspection form, and **Level III violations** shall be corrected within 48 hours unless otherwise directed by the City Stormwater Coordinator.

Failure to complete the Level II or Level III violations, as directed below, may result in issuance of a Level I violation and Stop Work Order. This inspection report shall be kept on site and made available to the Stormwater Coordinator upon request until final acceptance is granted.

Project:	Date of Inspection:
Contractor:	Report No:
Owner/Permittee:	Permit No:

Others Present (List title; print and sign name):

- 1.
- 2.
- 3.

Plans on site:

Weekly inspections on site:

Weekly inspections up to date:

# of BMPs currently installed:

BMP Description	Maintenance Required?		Course of Action Required	Date Items to be Completed	Date Completed
	Yes	No			

Comments:

Land Disturbance Manager : \_\_\_\_\_

and/or Alternate Land Disturbance Manager : \_\_\_\_\_

*Name* *Signature*

## **Appendix I**

### **Release of Fiscal Security**

# RELEASE OF SECURITY LAND DISTURBANCE PERMIT

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**Date:** \_\_\_\_\_ **File Number:** \_\_\_\_\_

**Project Name:** \_\_\_\_\_

**Location:** \_\_\_\_\_

**Amount of Security:** \_\_\_\_\_

\_\_\_\_\_

**Date of Approval of Final Closeout Inspection:** \_\_\_\_\_

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## **Appendix J**

### **Stop Work Order**

# STOP WORK ORDER

All work on site must be stopped in accordance with the Moberly Land Disturbance Ordinance and Section 7 of the *Land Disturbance Manual*.

Due to violations according to the City of Moberly Land Disturbance Ordinance and *Land Disturbance Manual*, the Land Disturbance Permit has been:

Suspended

Revoked

The following corrective actions need to be taken within the next \_\_\_\_ days:

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Once the required actions have been taken, the City of Moberly should be contacted in order to verify that all requirements have been met. This stop work order may not be removed by anyone other than an official of the City of Moberly.

Authorized By: \_\_\_\_\_  
*signature* *title* *date*

## **Appendix K**

### **Stop Work Order Release**

# RELEASE OF

## Stop Work Order

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The Stop Work Order dated \_\_\_\_\_ is hereby released. All requirements of the Stop Work Order have been met to the satisfaction of the City of Moberly.

If the land disturbance permit was **suspended** by the Stop Work Order, it is hereby reinstated. If the land disturbance permit was **revoked**, you must re-apply for the land disturbance permit and pay the permit fee.

Authorized By: \_\_\_\_\_  
(date) (signature) (title)

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