



# Clay County

## Stormwater Pollution Prevention Plan (SWPPP) Requirements

FOR PROJECTS DISTURBING 1 OR MORE ACRES

Planning & Zoning Department  
 234 W Shrader, Suite C  
 Liberty, MO 64068

Office (816) 407-3380  
 Fax (816)-407-3381

### SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

**Instructions:**

1. List the project name and general location, property owner, general contractor(s), project managers, stormwater contact(s), and person/consultant or organization that prepared the SWPPP. Indicate respective responsibilities, where appropriate.
2. Also, list other contractors, subcontractors, contractors performing blasting, and utility companies expected to work on-site. Notify them of stormwater requirements applicable to their work.
3. List a licensed professional\*, who has primary responsibility for ensuring compliance with the SWPPP during construction. Erosion & Sediment Control Drawings & SWPPP need to be signed/sealed by the preparer.
4. Attach 8.5" x 11" location map & legal description of property.
5. Attach-Land Disturbance Permit (MoDNR)

\* Either a Licensed State of Missouri Professional Engineer, Landscape Architect or Qualified Erosion Control Specialist as defined in the Clay County Erosion and Sediment Control Regulations (Attach Licensing or Certification).

**PROJECT NAME & LOCATION:**

**PROPERTY OWNER'S NAME:**

**ADDRESS:**

**CITY:**

**STATE:**

**ZIP:**

**PHONE#:**

**FAX:**

**E-MAIL:**

**MOBILE#:**

**RESPONSIBILITY/AREA OF CONTROL:**

**SWPPP PREPARER:**

**COMPANY:**

**ADDRESS:**

**CITY:**

**STATE:**

**ZIP:**

**PHONE#:**

**FAX#:**

**E-MAIL:**

**MOBILE#:**

**RESPONSIBILITY/AREA OF CONTROL:**

<b>GENERAL CONTRACTOR'S NAME:</b>			
ADDRESS:			
CITY:		STATE:	ZIP:
PHONE#:		FAX#:	
E-MAIL:		MOBILE#:	
<b>RESPONSIBILITY/AREA OF CONTROL:</b>			
<p><b>NOTE:</b> <i>The Property Owner will need to designate a licensed professional*, who has primary responsibility for ensuring compliance with the SWPPP during construction.*Either a Licensed State of Missouri Professional Engineer, Landscape Architect or Qualified Erosion Control Specialist as defined in the Clay County Erosion and Sediment Control Regulations. (Attach Licensing or Certification)</i></p>			
<b>NAME OF LICENSED PROFESSIONAL:</b>			
PHONE#:		FAX#:	
E-MAIL:		MOBILE#:	
<b>RESPONSIBILITY/AREA OF CONTROL:</b>			
<b>OTHER CONTRACTORS:</b> check all land disturbance items for which other contractors are to be used.			
Grading	Seeding & mulching	Sanitary sewers	Water
Storm sewers	Gas	Concrete drainage	Electric
Paving	Blasting	structures	Other (specify)
Concrete flatwork		Curb and gutter	
<p>List all <b>other contractors, sub-contractors and utility companies</b> expected to work on-site (<i>water, electric, telephone, cable, etc</i>), list their contact information and area of control:  <i>Notify contractors, sub-contractors and utility companies of stormwater requirements applicable to work.</i></p>			
<b>Contact Information</b>		<b>Responsibility/Area of Control</b>	

**BLASTING:** List all contractor(s) who will perform blasting work or handle explosives. Attach insurance certificates for all on this list. (*See Ordinance 2007-ORD-11, Article 6*)

## SECTION 1.1: RECEIVING WATERS

### Instructions:

1. List the waterbody(s) that would receive stormwater from your site, including streams, rivers, lakes and wetlands. Describe each as clearly as possible, such as *Fishing River, a tributary of the Missouri River*, and so on.
2. Indicate the location of all waters, including wetlands, on the site map.
3. Note any stream crossings, if applicable.
4. List the storm sewer system or drainage system that stormwater from your site could discharge to and the waterbody(s) that it ultimately discharges to.
5. If any of the waterbodies above are impaired and/or subject to Total Maximum Daily Loads (TMDLs), please list the pollutants causing impairment and any specific requirements in the TMDL(s) that are applicable to construction sites. Your SWPPP should specifically include measures to prevent the discharge of these pollutants. A list of TMDL contacts & links is available at:  
[www.dnr.mo.gov/env/wpp/tmdl](http://www.dnr.mo.gov/env/wpp/tmdl).

Detailed below      See Attachment      (input identifier text, e.g. "5", "A", "B", etc.)

## SECTION 1.2: SITE FEATURES AND SENSITIVE AREAS TO BE PROTECTED

### Instructions:

1. Describe unique site features including streams, stream buffers, wetlands, specimen trees, natural vegetation, steep slopes, or highly erodible soils that are to be preserved.
2. Describe measures to protect these features.
3. Include these features and areas on your site maps.

Detailed below      See Attachment      (input identifier text, e.g. "1.2", "A", "B", etc.)

## SECTION 1.3: POTENTIAL SOURCES OF POLLUTION

### Instructions:

1. Identify and list all potential sources of sediment, which may reasonably be expected to affect the quality of stormwater discharges from the construction site.
2. Identify and list all potential sources of pollution, other than sediment, which may reasonably be expected to affect the quality of stormwater discharges from the construction site.
3. Put the above in a table format, with the following as headers: Trade Name of Material, Stormwater Pollutants, and Location.

Detailed below      See Attachment      (input identifier text, e.g. "5", "A", "B", etc.)

## SECTION 1.4: ENDANGERED SPECIES CERTIFICATION

### Instructions:

1. Before beginning construction, determine whether endangered or threatened species or their critical habitats are on or near your site.
2. Adapt this section as needed for state or tribal endangered species requirements and, if applicable, document any measures deemed necessary to protect endangered or threatened species or their critical habitats.

Are endangered or threatened species and critical habitats on or near the project area?

Yes            No

Describe how this determination was made:

If yes, describe the species and/or critical habitat:

If yes, describe or refer to documentation that determines the likelihood of an impact on identified species and/or habitat and the steps taken to address that impact. (Note, if species are on or near your project site, EPA strongly recommends that the site operator work closely with the appropriate field office of the U.S. Fish and Wildlife Service or National Marine Fisheries Service.)

## **SECTION 1.5: HISTORIC PRESERVATION**

### **Instructions:**

1. Prior to construction, you should review federal, any applicable state or tribal historic preservation laws and determine if there are historic sites on or near your project. If so, you might need to make adjustments to your construction plans or to your stormwater controls to ensure that these historic sites are not damaged.

Are there any historic sites on or near the construction area?

Yes            No

Describe how this determination was made:

If yes, describe or refer to documentation that determines the likelihood of an impact on this historic site and the steps taken to address that impact.

## **SECTION 1.6: MAPS**

### **Instructions:**

- Attach site maps. For most projects, a series of site maps is recommended. The first should show the undeveloped site and its current features. An additional map or maps should be created to show the developed site or for more complicated sites show major phases of development.

### **These maps should include the following:**

1. Locations of construction access and other access roads to be used;
2. Direction(s) of stormwater flow and approximate slopes before and after major grading activities;
3. Areas and timing of soil disturbances;
4. Areas that will not be disturbed;
5. Natural features to be preserved;
6. Locations of major structural and non-structural BMPs identified in the SWPPP;
7. Location of each BMP;
8. Locations and timing of stabilization measures;
9. Locations of off & on-site material, waste, borrow, or equipment storage areas;
10. Locations of all waters, including wetlands;
11. Locations where stormwater discharges to a surface water;
12. Locations of storm drain inlets; and
13. Areas where final stabilization has been accomplished (*when project is phased*);
14. Note the existing soil conditions at the construction site including soil types, slopes and slope lengths, drainage patterns, and other topographic features that might affect erosion and sediment control;
15. Note the location of any historic contamination from existing site features and known past usage of the site.

## **SECTION 1.7: NATURE & SEQUENCE OF CONSTRUCTION ACTIVITY**

Describe the general scope of the work for the project, major phases of construction, critical construction sequences, time restrictions, etc. (*one or more paragraphs depending on the nature and complexity of the project*):

What is the function of the construction activity? Residential Commercial Industrial  
 Road Construction Utility Other (*specify*):

Estimated Project Start Date:

Estimated Project Completion Date:

Estimated timeline of activity	Construction activity and BMP descriptions
	<i>Before any site grading activities begin</i>
	<i>Site grading</i>
	<i>Infrastructure (utilities, parking lot, etc.)</i>
	<i>Building construction</i>
	<i>Final Stabilization and landscaping</i>

**SECTION 1.8: SOILS, SLOPES, VEGETATION, AND CURRENT DRAINAGE PATTERNS**

**Instructions:**

1. Describe the existing soil conditions at the construction site including soil types, slopes and slope lengths, drainage patterns, and other topographic features that might affect erosion and sediment control.
2. Note any historic contamination evident from existing site features and known past usage of the site.
3. This information should also be included on your site maps.

**Soil type(s)**

**Slopes** (*describe current slopes and note any changes due to grading or fill activities*):

**Drainage Patterns** (*describe current drainage patterns and note any changes due to grading or fill activities*):

**Vegetation:**

**Other:**

## SECTION 1.9: CONSTRUCTION SITE ESTIMATES

### Instructions:

1. Estimate the area to be disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow or fill areas.
2. Calculate the percentage of impervious surface area before and after construction.
3. Calculate the runoff coefficients before and after construction.

Total Project Area:	acres
Construction site area to be disturbed:	acres
Project Phasing?      Yes      No      Frequency:	acres      sq. ft. every
Percentage impervious area before construction:	%
Runoff coefficient before construction:	
Percentage impervious area after construction:	%
Runoff coefficient after construction:	

## SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

### Instructions:

Describe the BMPs that will be implemented to control pollutants in stormwater discharges. For each major activity identified, do the following:

Clearly describe appropriate control measures.

Describe the general sequence during the construction process in which the measures will be implemented.

Describe the maintenance and inspection procedures that will be used for that specific BMP.

Include protocols, thresholds, and schedules for cleaning, repairing, or replacing damaged or failing BMPs.

Identify staff responsible for maintaining BMPs.

(If your SWPPP is shared by multiple property owners or general contractors, indicate the party responsible for each BMP.)

Categorize each BMP under one of the following 10 areas of BMP activity as described below, and include BMP description, note whether the BMP is permanent or temporary, installation schedule, maintenance and inspection, and responsible staff:

**2.1 Minimize disturbed area and protect natural features and soil**

**2.2 Phase Construction Activity**

**2.3 Control Stormwater flowing onto and through the project**

**2.4 Stabilize Soils**

**2.5 Protect Slopes**

**2.6 Protect Storm Drain Inlets**

**2.7 Establish Perimeter Controls and Sediment Barriers**

**2.8 Retain Sediment On-Site and Control Dewatering Practices**

**2.9 Establish Stabilized Construction Exits**

**2.10 Any Additional BMPs**

Detailed below

See Attachment

(input identifier text, e.g. "2", "A", "B", etc.)

Note the location of each BMP on your site map(s).

For any structural BMPs, you should provide design specifications and details and refer to each of them. Attach them as appendices to the SWPPP or within the text of the SWPPP.

For more information see: [www.epa.gov/npdes/stormwater/swppp](http://www.epa.gov/npdes/stormwater/swppp)

## SECTION 3: GOOD HOUSEKEEPING BMPs

### Instructions:

Describe the key good housekeeping and pollution prevention measures that will be implemented to control pollutants in stormwater.

Categorize each good housekeeping and pollution prevention BMP under one of the following seven categories, and include BMP description, installation schedule, maintenance and inspection, and responsible staff::

**3.1 Material Handling and Waste Management**

**3.2 Establish Proper Building Material Staging Areas**

**3.3 Designate Washout Areas**

**3.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices**

**3.5 Allowable Non-Stormwater Discharges and Control Equipment/Vehicle Washing**

**3.6 Spill Prevention and Control Plan**

**3.7 Any Additional BMPs**

Detailed below      See Attachment      (input identifier text, e.g. "3", "A", "B", etc.)

For more information or ideas on BMPs, go to <http://www.epa.gov/npdes/stormwater/menuofbmps>

## SECTION 3.1: ALLOWABLE NON-STORMWATER DISCHARGE MANAGEMENT

### Instructions:

Identify all allowable sources of non-stormwater discharges that are not identified. The allowable non-stormwater discharges identified might include:

Discharges or flows from emergency fire-fighting activities

Uncontaminated ground water infiltration (*infiltration is defined as water other than wastewater that enters a sewer system, including sewer service connections and foundation drains, from the ground through such means as defective pipes, pipe joints, connections, or manholes. Infiltration does not include, and is distinguished from, inflow.*)

Waters used to wash vehicles where detergents are not used

Uncontaminated pumped ground water

Discharges from potable water sources

Routine external building wash down that does not use detergents

Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used

Uncontaminated air conditioning condensate

Uncontaminated ground water or spring water

Foundation, crawl space pumps or footing drains where flows are not contaminated with process materials such as solvents

Landscape irrigation and lawn watering

Flows from riparian habitats and wetlands

De-chlorinated residential swimming pool discharges

Identify measures used to eliminate or reduce these discharges and the BMPs used to prevent them from becoming contaminated.

List allowable non-stormwater discharges and the measures used to eliminate or reduce them and to prevent them from becoming contaminated.

Detailed below      See Attachment      (input identifier text, e.g. "3.1", "A", "B", etc.)

For more information, see SWPPP Examples at: [www.epa.gov/npdes/stormwater/swppp](http://www.epa.gov/npdes/stormwater/swppp)

## SECTION 4: SELECTING POST-CONSTRUCTION BMPs

### Instructions:

Describe all post-construction stormwater management measures that will be installed during the construction process to control pollutants in stormwater discharges **after construction operations have been completed.**

Examples of post-construction BMPs include the following:

- Biofilters
- Detention/retention devices
- Earth dikes, drainage swales, and lined ditches
- Infiltration basin or trench
- Porous pavements
- Other proprietary permanent structural BMPs
- Outlet protection/velocity dissipation devices
- Slope protection
- Vegetated strips and/or grassed swales
- Rain gardens (bioretention) /bioswales
- Environmental Site Design (ESD) strategies such as; stream buffers, permeable paving, bioretention, vegetative filter strips, riparian/forested buffer, Low-Impact Development (LID) and other Green Designs, etc.

Detailed below      See Attachment      (input identifier text, e.g. “4”, “A”, “B”, etc.)

Include when describing each of the post-construction measures the BMP description, installation schedule, maintenance and inspection, and responsible staff.

For design, construction and maintenance standards please refer to the *Clay County Land Development Code, Erosion and Sediment Control Regulations, Section 151-8.19(3)*.

For any structural BMPs, you should have design specifications and details and refer to them. Attach them as appendices to the SWPPP or within the text of the SWPPP.

For more information, visit the post-construction section at [www.epa.gov/npdes/menuofbmps](http://www.epa.gov/npdes/menuofbmps) or [www.dnr.gov/env/wpp](http://www.dnr.gov/env/wpp)

## SECTION 5: INSPECTIONS AND RECORDKEEPING

### Instructions:

List a licensed professional\*, who has primary responsibility for ensuring compliance with the SWPPP during construction.

*\*Either a Licensed State of Missouri Professional Engineer, Landscape Architect or Qualified Erosion Control Specialist as defined in the Clay County Erosion and Sediment Control Regulations. (Attach Licensing or Certification)*

Detailed below      See Attachment      (input identifier text, e.g. “5”, “A”, “B”, etc.)

1. Documentation of inspections and maintenance of erosion and sediment control structures.
  - a. Site inspected weekly and within 24 hours of the end of a storm with rain >0.5”.
  - b. Deficiencies corrected within 3 calendar days.
  - c. Describe storm frequency and intensity.
  - d. Beginning date of grading activities, dates construction is temporarily or permanently ceased
  - e. Dates stabilization measures have been initiated.
  - f. May use the *Clay County Erosion and Sediment Control Inspection Form and Log* forms.  
(If not using these forms, attach forms that will be used for inspections and corrections).
2. Document –A record of amendments or updates to the SWPPP, these will include the addition of new BMPs, replacement of failed BMPs, changes in the activities or their timing on the project, changes of personnel, changes to the inspection and maintenance procedures, updates to site maps, and so on. May use the *Stormwater Pollution Prevention Plan, Record of Amendments* form (If not using this form, attach form that will be used).
3. All documentation should be copied to Clay County Planning and Zoning Dept.
4. A copy of the most current SWPPP shall be kept at the construction site until the Land Disturbance Permit (LD) is closed. See *Clay County Land Development Code, Erosion and Sediment Control Regulations, Section 151-8.19*.

## SECTION 5.1: DELEGATION OF AUTHORITY

### Instructions:

Identify the individual(s), with pertinent contact information or specifically describe the position where the construction site operator has delegated authority for the purposes of signing inspection reports, certifications, or other information.

Attach a copy of the signed delegation of authority form that will be used.

Detailed below      See Attachment      (input identifier text, e.g. "5", "A", "B", etc.)

For more on this topic, go to [www.epa.gov/npdes/pubs/exampleswppp](http://www.epa.gov/npdes/pubs/exampleswppp), Appendix K

## SECTION 5.2: TRAINING

### Instructions:

Training your staff and subcontractors is an effective BMP. As with the other steps you take to prevent stormwater problems at your site, you should document the training that you conduct for your staff, for those with specific stormwater responsibilities (e.g. installing, inspecting, and maintaining BMPs), and for subcontractors.

- Include dates, number of attendees, subjects covered, and length of training.

Detailed below      See Attachment      (input identifier text, e.g. "5", "A", "B", etc.)

For more on this subject, go to [www.epa.gov/npdes/stormwater/swpp](http://www.epa.gov/npdes/stormwater/swpp), Appendix J.

## SECTION 6: FINAL STABILIZATION

### Instructions:

Describe procedures for final stabilization by listing the, BMP description, installation schedule, maintenance and inspection, and responsible staff.

Final stabilization is defined as: "A site shall be considered stabilized and restored when perennial vegetation, pavement, buildings, or structures using permanent materials cover a minimum of seventy-percent (70%) of the area defined in the Land Disturbance permit".

Detailed below      See Attachment      (input identifier text, e.g. "5", "A", "B", etc.)

Please note a Land Disturbance (LD) Permit is required with the approved SWPPP **before any land disturbance activity** may occur (See *Clay County Land Development Code, Erosion and Sediment Control Regulations, Section 151-8.19*).