

Stormwater Pollution Prevention Plan (SWPPP) Guidance and Design Criteria

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City of Lincoln Watershed Management**

Prior to any disturbance or grading of (1.) any parcel one (1) acre or larger in size; or (2.) any parcel less than one (1) acre for which an application for a subdivision permit is required by the CITY; the landowner / land developer shall prepare on forms provided by the NRD/CITY a Notice of "Intent" ("NOI") and a Stormwater Pollution Prevention Plan ("SWPPP"), following the requirements for a NPDES Permit Number NER 100000, "Construction Site Storm Water General Permit," and in conformance with CITY ordinances and design standards.

A. SWPPP GENERAL INFORMATION

1. The purpose of the SWPPP is to:

- i) minimize accelerated soil erosion on disturbed areas;
- ii) minimize the discharge of sediment and other pollutants in storm water runoff; and
- iii) maintain compliance with the NPDES Permit, state statutes administered by the Nebraska Department of Environmental Quality, and City standards and ordinance regarding erosion and sediment control by the City of Lincoln and the Lower Platte South Natural Resources District (NRD).

2. The SWPPP shall be implemented at least 7 calendar days prior to the initiation of construction activity. SWPPP activities shall be maintained throughout the period construction activities are ongoing until 95% site stabilization is achieved.

3. A current and updated copy of the SWPPP shall be available on-site at all times that work is being performed. Persons and / or subcontractors responsible for carrying out duties pursuant to the SWPPP shall be properly trained and informed of their responsibilities.

4. The SWPPP shall be dynamic. If deficiencies in the plan arise during the course of the project, or differing site conditions warrant, the application shall implement effective corrective actions that may require modification of the SWPPP.

5. The City / NRD may require revisions to the SWPPP:

- i) if it is not effective in minimizing erosion or the release of storm water pollutants from the site;
- ii) if more effective procedures are available and practical;
- iii) if previous experience has shown the control methods specified have proven to be inadequate in similar circumstances;
- iv) to meet basin specific water quality requirements or goals;
- v) to correspond to changes in the development plan for the site; or
- vi) in the event of repetitive failure to adequately maintain practices.

B. SWPPP GENERAL REQUIREMENTS

At a minimum the following shall be provided on the SWPPP.

- 1. Name and address of the owner of the property where the construction activity is proposed; of the land developer; and of the applicant.
- 2. The existing and proposed topography of the site taken at a contour interval sufficiently detailed to define the topography over the entire site.
- 3. Contour intervals sufficient to show on and off-site drainage.
- 4. The site's property limits shown in true location with respect to the plan's topographic information.
- 5. The proposed grading and land disturbance including: surface area involved; limits of grading including limitation of mass clearing and grading wherever possible; and provisions to preserve topsoil and limit disturbance.
- 6. Appropriate and applicable information from the Federal Emergency Management Agency (FEMA) flood maps and federal and state protected wetland maps.
- 7. Specifications for a sequence of construction operations shall be contained on the SWPPP describing the relationship between the implementation and maintenance of sediment controls, including permanent and temporary stabilization and the various stages or phases of earth disturbance and

construction. The specifications for the sequence of construction shall, at a minimum, including the following activities:

- a. clearing and grubbing for those areas necessary for installation of perimeter controls.
 - b. installation of sediment basins and traps.
 - c. construction of perimeter controls.
 - d. remaining clearing and grubbing.
 - e. road grading.
 - f. grading for the remainder of the site.
 - g. utility installation and whether storm drains will be used or blocked until the completion of project.
 - h. final grading, landscaping, or stabilization.
 - i. operation and maintenance, inspection of practices
 - j. removal of sediment controls.
- 8.** Changes to sequence of construction operations may be modified by the person conducting land disturbing activity or their representatives and do not constitute a violation unless measures to control stormwater runoff and sediments are not utilized.
- 9.** If the SWPPP is designed by and carries the seal and / or signature of a “designated design professional” (Professional Engineer, Certified Landscape Architect, Certified Professional in Erosion & Sediment Control), it shall be given approval pending plan review. If the SWPPP is prepared by someone other than a “designated design professional” the NRD shall review the SWPPP, and after review notify the landowner / land developer of approval or denial within seven (7) days after receipt of the SWPPP. If the SWPPP has been denied, it may be revised and resubmitted for approval. If the approval or denial has not been received within such seven (7) day period by the landowner / land developer, then the SWPPP shall be deemed approved.
- 10.** If the SWPPP carries the seal and / or signature of a “designated design professional” it shall include placement of the following statement. “The undersigned certifies this plan has been designated in accordance with federal NPDES guidelines and approved erosion, sediment and stormwater ordinances, programs, regulations, standards and criteria of the City of Lincoln.”

C. SWPPP EROSION AND SEDIMENT CONTROL REQUIREMENTS

1. The applicant shall incorporate erosion and sediment control practices into the SWPPP and implement said practices at all locations undergoing construction activity. The erosion and sediment control practices utilized shall consider site-specific variables including slope, soil types, the size of the project, the duration of construction activities, the proximity of perennial and seasonal streams, and the existence of impounded waters downstream of the project. The controls utilized may vary from site-to-site, but the controls used shall be effective in minimizing erosion and sediment release from the site, and in protecting the water quality in receiving stream or water body.
2. The existence of downstream lakes or other impounded waters increase water quality concerns relative to sediment release. In these instances, more stringent erosion and sediment controls may need to be implemented.
3. The applicant shall upgrade the erosion and sediment control practices utilized in the SWPPP and implement additional controls, if existing controls prove inadequate in minimizing erosion and sediment releases, or in protecting the water quality of the receiving stream or water body. The applicant shall comply with City / NRD requests to implement additional controls to minimize erosion and sediment releases, and to protect receiving water bodies.
4. Physical erosion and sediment control practices incorporated into the SWPPP shall comply with the design standards specified in the *City of Lincoln Drainage Criteria Manual*, 2000, or the Lower Platte South Natural Resources District: *A Manual of Erosion and Sediment Control and Stormwater Management Standards*, 1994. Alternative designs will require approval by the City / NRD.
5. All SWPPP plans submitted for approval shall include placement of the following statement, "Unless otherwise indicated, all vegetative and structural erosion and sediment control practices and stormwater management practices will be constructed and maintained according to the minimum standards and specifications of the Lower Platte South NRD Manual of Erosion and Sediment Control and Stormwater Management Standards, dated 1994 and approved supplements.
6. All of the following practices shall be considered for inclusion in the SWPPP.
 - a. Construction practices and structural controls to slow storm water run off and minimize erosion from the site.

Practices and controls that should be considered for implementation include, but are not limited to the following:

- i) horizontal slope grading;
- ii) temporary placement terraces, berms, cuts or other physical structures placed horizontal to sloped surfaces;
- iii) silt fence, synthetic barriers, check dams or other physical barriers placed at intervals in drainage ways, on sloped surfaces and at property boundaries;
- iv) geotextile mats, rock rip-rap or other methods to prevent erosion in drainage ways and below conduit outlets; and
- v) storm drain inlet protection (i.e., gravel filter or silt fence).

b. The schedule of construction activities so as to minimize the extent and time that soils are left unstabilized.

This shall include, when possible, phased construction planning so as to minimize the area of the site that is not stabilized by vegetative cover, or other temporary or permanent soil covers (e.g., pavement, mulch, or geotextile mats).

The construction schedule shall take into account areas within the construction site that may be available for reseeded prior to the completion of the overall project.

Construction activities scheduling shall specify an appropriate timetable for initiating sediment retention and erosion controls. When possible, sediment retention controls shall be installed prior to the initiation of clearing and grading activities and erosion controls shall be implemented concurrent with the initiation of construction activity.

c. The use of existing vegetation and revegetation.

When possible, existing vegetative covers should be left undisturbed. When possible, vegetative strips shall be maintained on the down gradient perimeter of sites, and adjacent to waterways and drainage ways that are within the site.

Temporary or permanent seeding shall be established as soon as possible after grading and clearing activities are completed, and during interim periods on areas that are not being actively worked.

d. Contingencies for planned and unplanned work stoppages.

The SWPPP needs to address requirements for stabilizing exposed slopes and stockpiles (e.g., the installation of terraces or berms, temporary seeding, etc.) if work on the site is stopped. In instances, where the original project schedule is disrupted, the SWPPP may need to be modified to prevent erosion on exposed soils where grading has been temporarily or permanently discontinued.

e. Storm Detention Basins.

The need for storm water detention basins is contingent upon the area disturbed and the slope of the site. In general, storm water basins need to be used in disturbed drainage areas of 5 acres or more in size. Where slopes are equal to or steeper than 3:1, storm basins may be required for smaller drainage areas. The use of storm water detention basins does not circumvent the need to implement the erosion and sediment control practices previously cited.

- 7.** All SWPPP plans submitted for approval shall include placement of the following statement, "Following soil disturbance, permanent or temporary stabilization shall be completed within seven (7) calendar days to the surface of all perimeter sediment controls, topsoil stockpiles, and any other disturbed or graded areas on the project site which are not being used for material storage, or on which actual earth moving activities are being performed." In subdivisions, this permanent or temporary stabilization must be maintained until development commences on street work, utility work or individual lots within the subdivision.
- 8.** Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land disturbing activity and shall be made functional before upslope land disturbance takes place.
- 9.** Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.
- 10.** Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilization measures until the problem is corrected.
- 11.** Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

12. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.
13. Before newly constructed stormwater conveyance channels are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.
14. When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Non-erodible materials shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by non-erodible cover materials.
15. When a live watercourse must be crossed by construction vehicles more than twice in any six month period, a temporary stream crossing constructed of non-erodible material shall be provided.
16. All applicable federal, state and local regulations pertaining to working in or crossing a live watercourse must be met.
17. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.
18. Where construction vehicle access routes intersect paved public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a public road surface, the road shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual subdivision lots as well as to larger land disturbing activities.
19. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the implementing agency. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sediment.

D SWPPP INSPECTION AND MAINTENANCE REQUIREMENTS AND ENFORCEMENT PROCEDURES

- 1.** All SWPPP plans submitted for approval shall include placement of the following statement, "All sediment and erosion control practices will be inspected at least once every seven (7) calendar days and after any storm event of greater than .5 inches of precipitation during any 24-hour period by responsible personnel. Any necessary repairs or cleanup to maintain the effectiveness of the best management practices shall be made immediately."
- 2.** All erosion and sediment control practices shall be maintained in accordance with the requirements specified in the *City of Lincoln Drainage Criteria Manual*, 2000 or the *Lower Platte South Natural Resources District Manual of Erosion and Sediment Control and Stormwater Management Standards*, dated 1994 and approved supplements.
- 3.** By submittal of the SWPPP plan for approval, the applicant certifies the right of the City / NRD to conduct on-site inspections at any time.
- 4.** Inspection reports shall be maintained by the City / NRD and shall include the following items:
 - a.** the date of inspection.
 - b.** the name of the inspector.
 - c.** whether the approved SWPPP is being properly implemented and maintained and any practice deficiencies.
 - d.** description of needed maintenance.
 - e.** action taken.
- 5.** The City / NRD shall provide procedures to ensure that deficiencies indicated by inspections are rectified. The procedures shall include the following:
 - a.** notification of noncompliance to the landowner / land developer including a "Notice to Comply" which shall set out the deficiencies which shall be cured within five (5) days of receipt of the notice.
 - b.** subsequent inspection to ensure completion of repairs upon notification by landowner / land developer that such deficiencies have been cured. If deficiencies have been cured a "Notice to Continue" will be issued.

