

DESIGN STANDARDS/SPECIAL CONDITIONS

For Storm Water Pollution Prevention

As required by the City of Iowa City NPDES General MS4 Permit #52-25-0-05 and the Title 14, Chapter 5, Article 1 - Grading Ordinance, the following requirements serve to the maximum extent possible (MEP) prevent the pollution of surface water runoff from construction projects by keeping pollution out of the storm drains, by reducing the exposure and discharge of materials and wastes to storm water, and by reducing erosion and sedimentation.

FYI: The USEPA reports that sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands.¹

Contractor shall comply with the following requirements.

A. Storm Water Pollution Prevention Plan (SWPPP)

- a. SWPPP documents must be available for all regulatory inspections. An up-to-date copy of the applicable SWPPP shall be kept at all individual sites. If a Development SWPPP will be utilized by a Co-Permittee² or Transfer-Permittee³, a copy of the original SWPPP must be kept on site or at a readily accessible location of each development.
- b. Relevant on-site documents will at minimum include an updated SWPPP site plan and the weekly/storm inspection forms.
- c. Unless otherwise specified, the SWPPP documents must be kept for three years by SWPPP permittee.

B. Scheduling

- a. Land will not be disturbed until it is necessary for construction to begin (i.e., the start-date specified on your CSR application). The Contractor shall implement site SWPPP controls prior to the start of any construction activity.
- b. The Contractor must continue to incorporate erosion and sediment control items in the construction schedule.
- c. Seasonal weather changes will be considered when outlining the intended sequence of construction activities.

C. Contractor Training and Awareness

Contractor shall train all employees and sub-contractors on the storm water pollution prevention requirements contained in these specification and those contained in any other pertinent regulatory requirements (i.e. City of Iowa City CSR/Erosion Control Ordinance, Storm Water Pollution Prevention Plan).

D. Monitoring

- a. Contact the City of Iowa City Developmental Regulation Specialists at 356-5119/5132 for SWPPP site changes, monitoring form specifications and/or examples of site BMPs (Best Management Practices). SWPPP changes must be reported within 24-hrs of the change.
- b. Inspections –
 1. Contractor shall monitor the effectiveness of the BMPs used on site every 7-days.
 2. Contractor shall also monitor within 24-hrs of the end of a storm events of .5-in or more. Local meteorological information can be accessed at NOAA's National Weather Service Weather Forecast Office website, <http://www.crh.noaa.gov/dvn/climate/index.php>.

¹ NPDES Phase II Storm Water Fact Sheet 2.6. USEPA, January 2000

² Per the IDNR General Permit #2 Part II Section F, 'Transfer of Coverage Under This Permit' (2002-2007), a Co-permittee is a party who has taken ownership of a property or portion thereof covered under a current NPDES permit, and has assumed dual responsibility of all applicable stormwater regulatory compliance with the original NPDES permittee. The original SWPPP reflects the change(s).

³ A transferee-permittee has not only taken ownership of a property or portion thereof currently covered under a current NPDES permit, but has also taken sole responsibility in writing for the compliance of all applicable storm water regulations. The official notice of transfer of responsibility has been submitted to the IDNR and the original SWPPP reflects the change(s).

3. All inspections shall be documented and verify the status and effectiveness of all SWPPP controls.

ACTIVITY-SPECIFIC REQUIREMENTS

E. Erosion and Sediment Controls

- a. Properly install upstream diversions, down-slope, side-slope and perimeter controls before grading or excavating can begin.
 1. Upstream diversions redirect surface water away from areas where topsoil will be removed during construction.
 2. Down-slope and side-slope perimeter-controls prevent soil laden storm water from leaving site prior to the removal of sediment. Perimeter controls will not be removed until upstream/upslope areas are stabilized with permanent vegetation.
 3. If infiltration methods are used to contain surface water, they will be installed after the upstream areas of the site are stabilized. For instance, if a detention basin is going to capture storm water, ground cover needs to be established up-slope of the basin.
- b. All disturbed areas will be properly covered, stabilized and/or protected.
 1. To the maximum extent possible, cover stockpiled soil to prevent runoff.
 2. All stockpiled-soil and bare ground must be seeded between 15 and 21 days after the end of land disturbing activity. (Stockpile protection details in J.b.1-2.)
 3. Diverting surface water away from disturbed areas using earth dikes, brush barriers, straw bales, and drainage swales.
 4. Protecting land areas from concentrated flows that can erode vegetated areas, using gabions, reinforced soil retaining systems, and rock outlets.
- c. Practices to minimize the removal of sediment from the site during general construction activities and subsequent illicit discharges to local MS4s and surface water include:
 1. Fiber Rolls/Silt Fence - Contractor shall install fiber or silt fence at the perimeter of the site before to prevent rainwater run-on and run-off from the site.
 2. Stabilized Construction Entrance/Exit –
 1. Minimize off-site tracking of sediment using a rocked entrance/exit or tire wash, and identifying limited parking areas to keep vehicles off bare soil.
 2. Contractor shall install a stabilized entrance/exit to minimize the tracking of mud and dirt onto adjacent roads by construction vehicles. Length and width to be as large as practically possible. Depth of stabilized entrance should be at least 6-in., using no less than a 2-in un-graded material
 3. Storm Drain Inlet Protection/Filters - Contractor shall install temporary storm drain inlet protection or filters to improve the quality of water being discharged to the inlets or catch basins or to prevent sediment from accumulating during the rain. Storm Drain protection is required year round.
 4. Use a street-cleaner or bobcat with a flat blade to remove large amounts of soil material from the street immediately after tracking or runoff is identified. Contractor shall sweep area adjacent to site at the end of each work day to ensure all material is removed.

F. Concrete, Grout, and Mortar Waste Management

- a. Material Management – Contractor shall store concrete, grout, and mortar away from drainage areas and ensure that these materials do not enter the storm drain system; cover and protect from rainfall and to prevent run-off.
- b. Concrete Truck/Equipment Wash Out –
 1. Contractor shall not wash out concrete trucks or equipment into streets, gutters, storm drains, or creeks.

2. Contractor shall perform washout of concrete trucks or equipment only in a designated washout area where the water will flow into a temporary pit in a dirt area or onto stockpiles of aggregate base or sand. This area must be an identified location.
3. Contractor shall collect and return sweepings from exposed aggregate concrete to a stockpile or dispose of the waste in a trash container.

G. Dewatering Operations & Sediment Control (The removal of collected non-storm water from site.)

- a. Contractor shall route water through a control measure such as a sediment trap, sediment basin, or filter bag to remove settle-able solids prior to discharge directly to a storm drain basin. Direct discharge to streets, gutters, storm drains, or creeks is prohibited.
- b. Discharge to a landscape area is permissible under City approval on a case-by-case basis.

H. Painting

- a. Painting Cleanup - Contractor shall conduct cleaning of painting equipment and tools in a designated area that will not allow run-on of storm water or runoff of spills. Contractor shall not allow wash water from cleaning of painting equipment and tools into streets, gutters, storm drains, or creeks.
- b. Oil-based Paint – Contractor shall dispose of waste thinner and solvent, and sludge from cleaning of equipment and tools as hazardous waste.
- c. Waste Management –
 1. Contractor shall store paint, solvents, chemicals, and waste materials in compliance with the requirements of the Owner and all applicable Federal, State and County regulations. Contractor shall store these materials in a designated area that will not allow run-on of storm water or runoff of spills.
 2. Contractor shall dispose of dry, empty paint cans/buckets, old brushes, rollers, rags and drop cloths in the trash.

GENERAL REQUIREMENTS

I. Paving Operations and Saw Cutting Activities

- a. Project Site Management - Contractor shall cover or barricade all nearby catch basins using control measures, such as filter fabric, straw waddles, sand bags, and fine gravel dams, as necessary to keep paving material or cutting slurry out of the storm drain system. When protecting a catch basin, Contractor shall ensure the entire opening is covered.
- b. Waste Management – Contractor shall not sweep or wash down excess materials or new surfaces into gutters, storm drains, or creek.

J. Non-hazardous Material/Waste Management

- a. Designated Area – Contractor shall propose designated areas of the project site, for approval by the City, suitable for material delivery, storage, and waste collection that, to the maximum extent practical, are near construction entrances and away from catch basins, gutters, drainage courses, and creeks.
- b. Granular Material – (i.e. any excavated or imported earth, sand, aggregate base, etc.)
 1. Contractor shall store granular material at least ten feet away from catch basins or curb returns, and kept clear of gutters, swales, and drainage channels. No stockpiling is allowed in the street.
 2. When rain is forecasted within the next 24-hours and stored granular material is a potential point source for an illicit discharge material must be covered with tarpaulin or plastic sheeting and surrounded with sandbags to prevent run-off.

- c. Street Sweeping - At the end of each working day or as directed by the City, Contractor shall clean and sweep public roadways and public right-of-way sidewalks of all materials attributed to site work. Contractor shall not use water to flush down streets.
- d. Disposal –
 - 1. At the end of each working day, Contractor shall collect all scrap, debris, and waste material, and dispose of such material.
 - 2. Contractor shall inspect any utilized dumpster(s) for leaks. If material is leaking from the dumpster, the dumpster must be replaced/repaired to prevent further discharges. Dumpster waste may not be discharged on-site.
 - 3. Contractor shall arrange for regular waste collection before dumpster(s) overflow(s).

K. Hazardous Material/Waste Management

- a. Storage – Contractor shall store all hazardous materials, such as pesticides, paints, thinners, solvents and fuels; and all hazardous wastes, such as waste oil and antifreeze; in accordance with City ordinances and all applicable Federal, State, and County regulations.
- b. Usage –
 - 1. When rain is forecasted within 24-hours or during wet weather, the City may prohibit Contractor from applying chemicals to the outside areas.
 - 2. Contractor shall to extent possible refrain from over-application of pesticides or fertilizers and shall follow material manufacturer’s instruction regarding uses, handling, and application.
- c. Disposal and Spill Control –
 - 1. All hazardous material must be disposed of properly. For assistance in proper chemical handling and disposal contact Iowa City Hazardous Waste Collection Facility at (319) 356-5185.
 - 2. For emergency assistance and/or spill control of hazardous material spills (i.e. gasoline, antifreeze, etc.) contact Iowa City Fire Department at 911 or 319-356-5260.

L. Vehicle/Equipment Cleaning

Contractor shall perform vehicle or equipment cleaning, with water only, in a designated, bermed area that will not allow rinse water to run off-site into streets, gutters, storm drains, or creeks.

M. Vehicle/Equipment Maintenance and Fueling

- a. Contractor shall perform maintenance and fueling of vehicles or equipment in a designated, bermed area or over a drip pan that will not allow run-on of storm water or run-off of spill.
- b. Contractor shall clean up leaks and spills of vehicle or equipment fluids immediately and dispose of waste and cleanup materials as hazardous waste.

Storm Water Pollution Prevention Plan Resource List

1. Publications:

Iowa Erosion Control Document -

Iowa Construction Site Erosion Control (.PDF), <http://www.ctre.iastate.edu/erosion/>

Iowa Statewide Urban Design and Specification (SUDAS) Manual, <http://www.iowasudas.org/design.cfm>

2. Agencies and Associations that can offer technical assistance:

Iowa Stormwater Partnership, <http://www.iowastormwater.org/>

International Erosion Control Association, <http://www.ieca.org/>

Natural Resources Conservation Service, <http://www.nrcs.usda.gov/>

NOAA's National Weather Service Weather Forecast Office, <http://www.crh.noaa.gov/dvn/climate/index.php>

United States Geologic Service, <http://www.usgs.gov>