Guidance Document for
Storm Water Pollution Prevention Plan (SWPPP) Submittal

SECTION A

CONSTRUCTION PLAN ELEMENTS

A1 Plan Index showing locations of required items:

The plan index should include a list of the required items in the rule and where they occur in the plan. Plan preparers often have their plan index mirror items in our standard plan review checklist. Placing a high level of importance on the plan index may seem trivial; however it is critical to the efficiency of the plan review process. The presence of the index should significantly increase the speed of the plan review process.

A2 Plat showing building lot numbers/boundaries and road layout/names:

The reduced size plat of the project is intended to be a basic representation of the project layout. At a minimum it should include building lot boundaries, lot numbers, road layout, and road names. It is not intended to be a complete representation of the construction plan or the stormwater pollution prevention plan. The purpose of the reduced plat is primarily to provide staff a simplified layout of the project that can be used as an aide when conducting an inspection of the project site. The plat should be legible.

A3 Narrative describing project nature and purpose:

The plan should include information in narrative form regarding the nature and purpose of the project.

A4 Vicinity map showing project location:

The plan should include a map that depicts the site in relation to other areas in the city or county and should be sufficient for someone not familiar with the area to find the project site location. Acceptable map types include USGS topographic maps, county road maps, city street maps, custom drawn maps, etc. (as long as they adequately depict the site location).

A5 Legal Description of the Project Site:

The legal description of the project site should be identified to the nearest quarter section and include township and range coordinates, and Civil Township name. Longitude and latitude coordinates are also required.

A6 Location of all lots and proposed site improvements:

Lot boundaries and numbers are required to be shown on the plan. In addition, the plan should show all proposed site improvements, including but not limited to utilities, roads (names, if available), structures, and common areas.

Single lot projects should show the location of any proposed structures.

A7 Hydrologic unit code:

The hydrologic unit code should be identified to the 14 digit code. The code identified in the plan should represent the watershed(s) in which the project is located.

Field offices may need to assist applicants in acquiring this information. This information is available at the website of the GIS Atlas for Indiana: http://129.79.145.5/arcims/statewide/viewer.htm

A8 Notation of any State or Federal water quality permits:

The plan should identify any permits required related to water quality, such as Construction in a Floodway from DNR, 401 Water Quality Certification from IDEM, 404 permits from US Army Corps of Engineers, etc.

A9 Specific points where stormwater discharge will leave the site:

The plan should clearly identify where stormwater will exit the site. This may best be addressed in narrative form, as well as visually on the map.

A10 Location and name of all wetlands, lakes, and water courses on and adjacent to the site:

This information is important in evaluating the proposed stormwater pollution prevention measures to insure that they are adequate and appropriate to reduce the impact to natural areas associated with the project site. Identification of nearby watercourses and lakes may place an additional importance on sediment control in a particular area of the project.

A11 Identify all Receiving Waters:

The plan should identify all named streams or other water bodies that will potentially receive runoff from the project site. If the discharge is to a municipal storm sewer, the plan should identify the owner of the storm drain system as well as the ultimate receiving water for the storm drain system.

A12 Identification of potential discharges to groundwater:

The plan should include the location of all areas where stormwater may be potentially discharged to groundwater. These areas include sinkholes or uncapped abandoned wells, which may be located on the project site or downstream of the project site and could potentially be impacted by stormwater discharge. It could also include stormwater infiltration practices such as drywells, which may be planned as part of the project. These areas need to be clearly located in the plan, with adequate protection measures to prevent contaminated runoff from entering the groundwater. Abandoned wells should be properly capped.

A13 100 Year Floodplains, floodways, and floodway fringes:

This information is relevant to the project if a stream is located on or near the property. If applicable to the project site, the plan should at a minimum include a discussion of their existence and to further extent delineation on the plan.

A14 Pre-construction and post construction estimate of Peak Discharge:

This information is a required element of the plan and has been included to place emphasis on the impact projects can have related to runoff quantities and velocities.

There are several acceptable methods of calculating these figures, including the rational method, TR55, etc.

A15 Adjacent land use, including upstream watershed:

This information provides a basis to evaluate the overall project including potential downstream impacts, but also other contributing factors that are discharging onto the project site. It is important to have an understanding of the impact the project may have on surrounding properties and sensitive areas, but also have an understanding of the runoff and other potential pollutants that may be discharged from areas in the watershed above the project.

The intent of this element is to identify the types of land use, such as single-family residential, multi- family residential, commercial, agricultural, forested, etc.

A16 Locations and approximate boundaries of all disturbed areas:

The plan should identify the construction limits of the project. The extent of disturbance has a profound impact on what practices may be necessary to adequately control erosion and the resulting sediment. If disturbance boundaries are not identified inside of the property boundary, the plan reviewer will consider the entire site as being disturbed for the purposes of evaluating the proposed stormwater pollution prevention measures.

The total disturbed acreage must be calculated by the plan preparer and reported on the application form.

A17 Identification of existing vegetative cover:

The plan should delineate the boundaries of major vegetative cover types, such as grass, brush, trees, etc. It is not necessary for the plan to identify individual vegetative species.

A18 Soils map including descriptions and limitations:

Each plan should provide a soil map for the project site. The map should be accompanied by descriptions of each soil type that occurs on the site. A legible copy of the appropriate soil map from the USDA soil survey for the county is sufficient. Soil surveys are available on-line at http://websoilsurvey.nrcs.usda.gov/app. Boring logs and a geotechnical report or site mapping by a soil scientist should also be considered acceptable means of satisfying this requirement.

In addition to a soil map and a description of the soil types, the plan should include a discussion of the soil characteristics and limitations associated with the project site and the measures that will be integrated into the project to overcome any limitations. For example, if sanitary sewer does not service the site and on-site septic systems will be used for waste disposal, the plan preparer should provide information concerning the suitability of the soil and the type of systems that will be required to overcome soil limitations.

A19 Locations, size and dimensions of proposed stormwater systems:

All proposed stormwater systems, including swales, channels, piping, culverts, etc. should be clearly shown in the plan. In addition to location, the plan should include the size and dimensions of the specific stormwater systems.

A20 Plan for any off-site construction activities associated with this project:

Any off-site services such as sanitary sewers, waterlines, other utilities, roads, etc. which are off of the proposed project site, but are necessary to provide service to the project must be included in the plan submitted for the project, if the project site owner is responsible for paying for the off-site service.

If the utility or local government is paying for the construction of the off-site tie-in, then they do not need to be included as part of the project submittal, but should be submitted separately, if the disturbance will be 1 acre or more.

It is important that the project site owner realize that all land disturbance associated with their project is subject to compliance with the rule. The same burden of compliance is necessary for these off-site areas as they are for the project site itself. If there are not off-site activities, or others are conducting the off-site activities, a simple note to that affect should be sufficient to satisfy this requirement.

A21 Locations of proposed soil stockpiles, borrow and/or disposal areas:

Similar to item A20, this information needs to be submitted as part of the plan. Often times borrow and disposal areas occur off of the project site. Unless these areas are commercially operated facilities, they need to be included as part of the plan submittal. These areas must also be included when they occur on site. If there are no stockpile, borrow or disposal areas planned, a simple note to that affect should be sufficient to satisfy this requirement.

A22 Existing site topography at an interval appropriate to show detailed drainage patterns:

Site topography may be depicted in multiple ways such as continuous contour lines and spot elevations (as long as there are a sufficient number of locations to be able to visualize the site topography). A graphical profile of the project may also be acceptable for highway, road, utility and other lineal projects.

A23 Proposed final topography at an interval appropriate to show detailed drainage patterns:

Site topography may be depicted in multiple ways such as continuous contour lines and spot elevations (as long as there are a sufficient number of locations to be able to visualize the site topography. A graphical profile of the project may also be acceptable for highway, road, utility and other lineal projects.

SECTION B
STORMWATER POLLUTION PREVENTION PLAN – CONSTRUCTION COMPONENT

B1 Description of potential pollutant sources associated with the construction activities:

This item is included in the rule to place an emphasis on identification of pollutants that are associated with construction activity. In the past, the emphasis has been on sediment reduction; however the rule requires the plan preparer to identify other potential pollutants and their sources. Potential pollutant sources include material and fuel storage areas, fueling locations, exposed soils, leaking vehicles and equipment, concrete washout, etc.

To satisfy this item, the plan needs to contain a written description of the expected pollutants that could enter stormwater during the construction operation, and where those potential pollutants might be generated. In addition, the plan preparer should include a discussion of measures or operational activities that will be initiated to minimize the danger of pollutants entering stormwater.

B2 Sequence describing stormwater quality measure implementation relative to land disturbing activities:

Each plan should contain multiple stormwater pollution prevention measures. All measures will not be installed at the same time. Various measures will be installed at different times throughout the construction process. Some will be installed prior to any land disturbance, such as the construction entrance and some initial perimeter sediment control measures. Others may not be necessary until work at the site progresses to an area where they are necessary. Each proposed measure should be identified in the sequence as to when it is to be installed in relation to land disturbing activities. Specific dates of installation are not necessary or the intent of this requirement.

B3 Stable construction entrance locations and specifications:

All projects with the exception of some lineal projects and residential strip developments should have a stable construction entrance. All access points to a project must have a stabilized entrance. The plan should clearly show the location of all proposed stable entrance locations, as well as specifications and construction details regarding how the stable entrance is to be constructed and maintained.

B4 Sediment control measures for sheet flow areas:

This item is intended to evaluate the areas of the site where runoff will be primarily in a sheet flow condition. The reviewer should evaluate these areas and the proposed sediment control measures to insure that the proposed measures are adequate for the situation. Each proposed measure must be accompanied by construction details and specifications.

B5 Sediment control measures for concentrated flow areas:

This item is intended to evaluate the areas of the site where runoff will be primarily in a concentrated flow condition. The reviewer should evaluate these areas and the proposed sediment control measures to insure that the proposed measures are adequate for the situation. Each proposed measure must be accompanied by construction details and specifications.

B6 Storm sewer inlet protection measure locations and specifications:

If surface inlets, including curb inlets, are present, the plan should include protection measures to prevent sediment from entering the storm drain system. The proposed practices should be appropriate for the type of inlet it is proposed to protect. Alternate measures, such as seeding and curbside protection may be considered as adequate protection, if sufficient to prevent sediments from entering the street and curb inlets. Each proposed measure must be accompanied by construction details and specifications.

B7 Runoff control measures:

This item refers to measures such as diversions, rock check dams, slope drains, etc. These types of measures may not be necessary on every project. However, if the plan reviewer feels that they are necessary, the plan should be evaluated as to whether the issue was adequately addressed in the plan. Each proposed measure must be accompanied by construction details and specifications.

B8 Stormwater outlet protection specifications:

All stormwater discharge locations need to be adequately protected to prevent scour erosion. The plan should specify protection measures appropriate for the situation. Each proposed measure must be accompanied by construction details and specifications.

B9 Grade Stabilization structure locations and specifications:

This item refers to measures such as rock chutes, toe wall and drop structures, etc. These types of measures may not be necessary on every project. However, if the plan reviewer feels that they are necessary, the plan should be evaluated as to whether the issue was adequately addressed in the plan. Each proposed measure must be accompanied by construction details and specifications.

B10 Location, dimensions, specifications and construction details of each stormwater quality measure:

Each proposed measure should be clearly located in the plan. Some plans may not provide the location in a pictorial format on the plan drawings, but may provide clear text or a table to depict where various practices should be located. This should be adequate to satisfy the requirement as long as the reviewer can determine the location in the plan. Each proposed measure must also be accompanied by construction details and specifications.

Temporary or permanent surface stabilization is required on any bare or thinly vegetated area that is scheduled or likely to remain inactive for a period of 15 days or more.

B11 Temporary surface stabilization methods appropriate for each season:

The plan should provide detailed specifications, including sequencing information, regarding which stabilization methods are to be employed. There should be multiple methods, as the various seasons need to be considered. Even if the project is expected to be short lived, these seasonal options must be supplied. Delays are common in the construction industry and projects take longer than expected. The plan needs to cover these contingencies.

For applications that include seeding, the plan preparer should provide application rates for soil amendments and seed mixtures, and type and application rate for anchored mulch.

B12 Permanent surface stabilization specifications:

The permanent stabilization methods should be clearly specified, including sequencing information, in the plan.

The plan preparer should provide application rates for soil amendments and seed mixtures and the type and application rate for anchored mulch.

B13 Material handling and spill prevention plan:

The plan should include a list of expected materials that may be present on the site during construction operations. A written description of how these materials will be handled to minimize the potential the materials will enter stormwater runoff should accompany the list of materials. There should also be procedures directing the contractor on the required response to any spills that may occur during construction operations. (This item goes along with B1.)

B14 Monitoring and maintenance guidelines for each proposed pollution prevention measure:

Each proposed measure must be accompanied by instructions for evaluating the practice for maintenance needs once installed. The maintenance guidelines for the project should also include instructions on how the monitoring and maintenance procedures are to be carried out. The Phase II version of the rule requires that the project site owner or their representative, knowledgeable in erosion and sediment control, inspect the site for stormwater pollution prevention deficiencies at least weekly and again within 24 hours of every ½ inch rain event. The plan should clearly describe these required maintenance procedures.

The application form requires a name and contact information for an on-site supervisor who will be responsible for monitoring and maintenance of stormwater pollution prevention practices.

B15 Erosion & Sediment control specifications for individual building lots:

If the project has multiple lots where independent activities are likely to occur, the plan should provide clear guidance as to the required minimum standards for erosion and sediment control during construction operations on the individual lots. Rule 5 places specific requirements on activities conducted on individual building lots. The minimum standards in the plan should meet the minimum lot requirements established in Section 7.5 of the rule. The plan preparer should also take into account the relative size and steepness of the lots.

SECTION C
STORMWATER POLLUTION PREVENTION PLAN – POST CONSTRUCTION COMPONENT

Rule 5 post construction requirements

Note: Each local entity is implementing a post-construction program, including provisions for plan review, inspection, and maintenance. The guidance issued here is not meant to supersede the authority of local authorities to implement post-construction stormwater management.

Every land use has certain pollutants that are generated simply based on the facility or the activities being conducted on the property. The intent of the Clean Water Act rules established by US EPA is to minimize pollutants generated from new construction projects, including the post construction pollutants that will be generated by the proposed land use change. Rule 5 has incorporated requirements to address these issues.

The post construction stormwater pollution prevention plan must include the implementation of stormwater quality measures to address pollutants that will be associated with the final land use of the project. Post construction stormwater quality measures should be functional upon completion of the project. Long-term functionality of the measures is critical to their performance and should be monitored and maintained. The intent of these provisions in the regulation is not simply to plug in practices to treat the expected post construction pollutants. Emphasis should be on designing the project, or modifying the design of a project, to minimize the generation of pollutants in the first place.

Once design considerations have been made to minimize the generation of pollutants, then additional practices may need to be added to treat the runoff and trap pollutants that could not be prevented. The main objective is that everyone realizes that all types of land use carry with them pollutants and pollutant sources, and that it is possible to modify the project site design to reduce the pollutant sources and, with additional treatment practices, reduce the amount of pollutants potentially impacting the environment.

Projects need to comply with the post construction requirements set forth in 327 IAC 15-5-6.5(a)(8). The following descriptions should help in determining whether the information submitted in a plan is sufficient to comply with the intent of the rule.

C1 Description of pollutants and their sources associated with the proposed land use.

(This checklist item relates to 327 IAC 15-5-6.5(a)(8)(A) A description of potential pollutant sources from the proposed land use, which may reasonably be expected to add a significant amount of pollutants to stormwater discharges.)

The plan should include a narrative description that discusses the proposed project and the expected pollutants that typically are generated by this type of land use. The description should also discuss the sources of these pollutants within the finished project site (e.g., oil, grease, antifreeze, brake fluid, brake dust, rubber fragments, gasoline, diesel fuel and other hydrocarbons, and metals from vehicular and other sources, grit (sediment) from wearing of the road surface and falling or washing off of vehicles, trash (including bacteria and other biological agents contained in the trash) from littering and other types of improper disposal or storage, and elevated receiving water temperatures from stormwater runoff contact with impervious surfaces).

C2 Sequence describing stormwater quality measure implementation.

(This checklist item relates to 327 IAC 15-5-6.5(a)(8)(D) A sequence describing when each post construction stormwater quality measure will be installed.)

The plan should provide a sequence of when the proposed post construction stormwater quality measures will be installed. Pay close attention to practices like basins or ponds that could be utilized during construction for sediment control. They should not be installed late in the project simply to reduce cleanout burdens.

C3 Description of proposed post construction stormwater quality measures.

(This checklist item relates to 327 IAC 15-5-6.5(a)(8)(C) A description of measures that will be installed to control pollutants in stormwater discharges that will occur after construction activities have been completed. Such practices include infiltration of run-off, flow reduction by use of open vegetated swales and natural depressions, buffer strip and riparian zone preservation, filter strip creation, minimization of land disturbance and surface imperviousness, maximization of open space, and stormwater retention and detention ponds, 327 IAC 15-5-6.5(a)(8)(E) Stormwater quality measures that will remove or minimize pollutants from stormwater run-of, and 327 IAC 15-5-6.5(a)(8)(F) Stormwater quality measures that will be implemented to prevent or minimize adverse impacts to stream and riparian habitat.)

Items C, E & F from the rule listed above require similar information and may be provided in a single narrative description within the plan. The reviewer needs to be familiar with each of these requirements and be conscious that multiple requirements may be satisfied within a single description.

The plan should include a narrative description that discusses how the project was designed to minimize the generation of post construction pollutants, and how the proposed post construction stormwater quality measures will improve the quality of the stormwater discharge from the finished project. Many times, it will be possible for a project to comply without installing elaborate and expensive treatment systems. Reducing impervious surfaces and increasing vegetative surfaces to trap pollutants may be sufficient. Sometimes, management practices, such as more frequent street sweeping or reduced fertilizer and pesticide applications, may have a significant positive impact on stormwater quality.

If a stream is located on, or near, the project site, the plan preparer should provide a narrative description of what measures were specifically implemented or how the project was designed to protect the stream from post construction pollutants.

C4 Location, dimensions, specifications and construction details of each stormwater quality measure.
(This checklist item relates to 327 IAC 15-5-6.5(a)(8)(B) Location, dimensions, detailed specifications, and construction details of all post construction stormwater quality measures.)

All proposed post construction stormwater quality measures should be clearly shown on the plan, and should include specifications and construction details similar to those that have long been required for erosion and sediment control measures during construction

C5 Description of maintenance guidelines for proposed post construction water quality measures. *(This checklist item relates to 327 IAC 15-5-6.5(a)(8)(G) A narrative description of the maintenance guidelines for all post construction stormwater quality measures to facilitate their proper long term function. This narrative description shall be made available to future parties who will assume responsibility for the operation and maintenance of the post construction stormwater quality measures.)*

All proposed measures must be accompanied by guidelines for monitoring and maintenance. If manufactured products are involved, the manufacturer should be able to provide detailed information about monitoring and maintenance procedures and frequencies. The plan should also identify the parties or individuals that will be responsible for the future long-term maintenance. This identification does not need to be a name of an individual, as they may not be known at the time of plan submittal. A description of the entity (e.g., homeowner's association, name of the government department, if the measures will be turned over to the local government, etc.) should be sufficient.