

Stormwater Erosion Control & Post-Construction Plans (Stormwater Quality Plans)

Allen County Stormwater Plan Submittal Checklist

The following items must be provided when applying for an Allen County Stormwater Management Plan Permit.

1A. Stormwater Pollution Prevention Plan for Construction Sites

Stormwater Pollution Prevention Plan to include the following:	
1.	Title sheet which includes location map, vicinity map, and an index that shows the locations of the required Stormwater Pollution Prevention Plan and Post-Construction Stormwater Pollution Prevention Plan elements.
2.	A copy of a legal boundary survey for the site, performed in accordance with Rule 12 of Title 865 of the Indiana Administrative Code or any applicable and subsequently adopted rule or regulation for the subdivision limits, including all drainage easements and wetlands.
3.	A narrative describing the nature and purpose of the project.
4.	Legal Description of the Project Site (Include Latitude and Longitude)
5.	14-Digit Watershed Hydrologic Unit Code.
6.	A reduced plat or project site map showing the parcel identification numbers, the lot numbers, lot boundaries, easements, and road layout and names. The reduced map must be legible and submitted on a sheet or sheets no larger than eleven (11) inches by seventeen (17) inches for all phases or sections of the project site.
An existing project site layout that must include the following information:	
7.	A general site plan exhibit with the proposed construction area superimposed on the county/City GIS map/Intelligent Map Allen County (IMAP) at a scale of 1"=100'. The exhibit should provide 2-foot contour information and include all roads and buildings within a minimum 500' radius beyond the project boundaries. All on-site elevations shall be given in North American Vertical Datum of 1988 (NAVD). The horizontal datum of topographic map shall be based on Indiana State Plane Coordinates, NAD83. The map will contain a notation indicating the noted datum information.
8.	Location, name, and normal water level of all wetlands, lakes, ponds, and water courses on or adjacent to the project site.
9.	Identification and delineation of sensitive areas.
10.	Existing site topographic information at a contour interval appropriate to indicate drainage patterns.
11.	Location of all existing structures on the project site including the location of storm, sanitary, combined sewer, septic tanks systems, regulated drains, farm drains, inlets, and outfalls, if any of record.
12.	One hundred (100) year floodplains, floodway fringes, and floodways. Please note if none exists.
13.	Identification and delineation of vegetative cover such as grass, weeds, brush, and trees on the project site.
14.	Land use of all adjacent properties, including upstream watershed.
A grading, drainage, and erosion & sediment control plan including the following information:	
15.	Location of all proposed site improvements, including roads, utilities, lot delineation and identification, proposed structures, and common areas.
16.	One hundred (100) year floodplains, floodway fringes, and floodways. Please note if none exists.
17.	Soil map of the predominant soil types, as determined by the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Soil Survey, or as determined

	by a soil scientist. Hydrologic classification for soils should be shown when hydrologic methods requiring soils information are used. A soil legend must be included with the soil map. Provide the soil properties, characteristics, limitations, and hazards associated with the project site and the measures that will be integrated into the project to overcome or minimize adverse soil conditions.
18.	Delineation of all proposed land disturbing activities, including off-site activities that will provide services to the project site.
19.	Proposed final topography contours at intervals appropriate to indicate drainage patterns.
20.	Locations and approximate boundaries of all disturbed areas (construction limits).
21.	An estimate of the peak discharge, based on the ten (10) year storm event, of the project site for post-construction conditions.
22.	Name of all receiving waters. If the discharge is to a separate municipal storm sewer, identify the name of the municipal operator and the ultimate receiving water.
23.	Identification and delineation of vegetative cover such as grass, weeds, brush, and trees on the project site that will not be disturbed or removed during construction.
24.	A description of potential pollutant sources associated with the construction activities, which may reasonably be expected to add a significant amount of pollutants to stormwater discharges.
25.	Show the locations, size, and dimensions of proposed stormwater management systems such as pipe, wetlands, retention or detention facilities, streams, and swales along with arrows designating the direction of stormwater runoff.
26.	Location, dimensions, detailed specifications, and construction details of all temporary and permanent stormwater erosion and sediment control measures for all sheet flow and concentrated flow areas, along with any runoff control measures (e.g. diversion dikes, rock check dams, slope drains, etc.) that will be utilized.
27.	Stable construction entrance locations and specifications (at all points of ingress and egress) with statement to keep all public and private streets clean of sediment, debris and mud.
28.	Storm sewer inlet/manhole protection measure locations and specifications.
29.	Identification and status of any state or federal water quality permits (such as wetland or stream work permits) that are required for construction activities associated with the owner's project site.
30.	The location of and the erosion and sediment control protection measures utilized for all wetlands, lakes, ponds, and water courses on or adjacent to the project site.
31.	Provide stormwater outlet protection measures and specifications.
32.	Locations where stormwater may be directly discharged into groundwater, such as abandoned wells or sinkholes. Please note if none exists.
33.	Locations of specific points where stormwater discharge will leave the project site.
34.	Temporary stabilization plans and sequence of implementation appropriate for each season (Note: unvegetated, disturbed ground that will be left dormant for 15 days or more must be addressed).
35.	Permanent stabilization plans and sequence of implementation.
	Temporary and permanent stabilization plans shall include the following:
	36. Specifications and application rates for soil amendments and seed mixtures.
	37. The type and application rate for anchored mulch.
38.	General construction sequence of how the project site will be built, including phases of construction.
39.	Construction sequence describing the relationship between implementation of stormwater quality measures and stages of construction activities.
40.	Location of all soil stockpiles and borrow areas, including any off-site borrow, stockpile, or disposal areas that are associated with the project site. Off-site areas under the control of the project site owner must have erosion and sediment control measures shown.
41.	A typical erosion and sediment control plan for individual lot development.
42.	Self-monitoring program including plan, procedures, and name, address, phone number, FAX number, and email (if available) of trained individual in charge of monitoring the erosion & sediment control and stormwater pollution prevention plan of the project site.
43.	Specify that material handling and storage associated with construction activity shall meet the spill prevention and spill response requirements in 327 IAC 2-6.1.
44.	Show and describe where equipment washout will be properly deposited by indicating a clearly marked designated washout area established specifically for equipment washout and located away from storm drains, ditches, and wetlands.

45.	Provide specifications for solid waste and non-stormwater materials/pollutants to be properly contained and handled, prevented from entering the inlets and receiving waters, and have a stable access provided to the storage & pickup area.
46.	Provide specifications for fuel tanks and other hazardous materials to be safely stored, protected and properly handled.
47.	Provide specifications for all dewatering or water pumping operations to have measures in place to minimize sediment discharge and include a stabilized outlet.

2A. Post-Construction Storm Water Pollution Prevention Plan

	Post-Construction Plan to include the following:
48.	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.
49.	Location, dimensions, detailed specifications, and construction details of all post-construction stormwater quality measures.
50.	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.
51.	A sequence describing when each post-construction stormwater quality measure will be installed.
52.	Stormwater quality measures that will remove or minimize pollutants from stormwater run-off.
53.	Stormwater quality measures that will be implemented to prevent or minimize adverse impacts to stream and riparian habitat.
54.	Show that new BMPs, individually or in combination, meet the 80% Total Suspended Solids removal rate of 110 microns or larger without re-entrainment.
55.	An operation and maintenance manual for all post-construction stormwater quality measures to facilitate their proper long term function. This operation and maintenance manual shall be made available to future parties who will assume responsibility for the operation and maintenance of the post-construction stormwater quality measures. The manual shall include the following:
56.	Contact information for the BMP owner (i.e. name, address, business phone number, cell phone number, pager number, e-mail address, etc.).
57.	A statement that the BMP owner is responsible for all costs associated with maintaining the BMP.
58.	A right-of-entry statement allowing County personnel to inspect and maintain the BMP.
59.	Specific actions to be taken regarding routine maintenance, remedial maintenance of structural components, and sediment removal. Sediment removal procedures should be explained in both narrative and graphical forms. A tabular schedule should be provided listing all maintenance activities and dates for performing these required maintenance activities.
60.	Site drawings showing the location of the BMP and access easement, cross sections of BMP features (i.e. pond, forebay(s), structural components, etc.), and the point of discharge for stormwater treated by the BMP. These drawings need to be submitted both in hard copy and in digital format acceptable to the Allen County Surveyor.

Stormwater Construction & Drainage Plans (Stormwater Quantity Plans)

1B. Construction Plans	
Construction Plan to include the following information:	
1.	Title sheet which includes location map, vicinity map, and an index that shows the locations of the required Construction Plan and Stormwater Drainage Technical Report elements.
2.	A copy of a legal boundary survey for the site, performed in accordance with Rule 12 of Title 865 of the Indiana Administrative Code or any applicable and subsequently adopted rule or regulation for the subdivision limits, including all drainage easements and wetlands.
3.	A reduced plat or project site map showing the parcel identification numbers, the lot numbers, lot boundaries, easements, and road layout and names. The reduced map must be legible and submitted on a sheet or sheets no larger than eleven (11) inches by seventeen (17) inches for all phases or sections of the project site.
An existing project site layout that must include the following information:	
4.	A general site plan exhibit with the proposed construction area superimposed on the county/City GIS map/Intelligent Map Allen County (IMAP) at a scale of 1"=100'. The exhibit should provide 2-foot contour information and include all roads and buildings within a minimum 500' radius beyond the project boundaries. All on-site elevations shall be given in North American Vertical Datum of 1988 (NAVD). The horizontal datum of topographic map shall be based on Indiana State Plane Coordinates, NAD83. The map will contain a notation indicating the noted datum information.
5.	Location, name, and normal water level of all wetlands, lakes, ponds, and water courses on or adjacent to the project site.
6.	Location of all existing structures on the project site.
7.	One hundred (100) year floodplains, floodway fringes, and floodways. Please note if none exists.
8.	Identification and delineation of vegetative cover such as grass, weeds, brush, and trees on the project site.
9.	Location of storm, sanitary, combined sewer, and septic tank systems and outfalls.
10.	Land use of all adjacent properties.
11.	Identification and delineation of sensitive areas.
12.	The location of regulated drains, farm drains, inlets and outfalls, if any of record.
13.	Location of all existing PLSS corners within the proposed development and a plan to protect and preserve them.
A grading and drainage plan, including the following information:	
14.	All information from the existing site layout items listed above
15.	Location of all proposed site improvements, including roads, utilities, lot delineation and identification, proposed structures, and common areas.
16.	One hundred (100) year floodplains, floodway fringes, and floodways. Please note if none exists.
17.	Delineation of all proposed land disturbing activities, including off-site activities that will provide services to the project site.
18.	Information regarding any off-site borrow, stockpile, or disposal areas that are associated with a project site, and under the control of the project site owner.
19.	Existing and proposed topographic information at a contour interval appropriate to indicate drainage patterns.
20.	Location, size, and dimensions of all existing streams to be maintained, and new drainage systems such as culverts, bridges, storm sewers, conveyance channels, and 100-year overflow paths/ponding areas shown as hatched areas, along with the associated easements.
21.	Pipes and associated structures data, including sizes, lengths, and material
22.	Location, size, and dimensions of features such as permanent retention or detention

	facilities, including existing or manmade wetlands, used for the purpose of stormwater management. Include existing retention or detention facilities that will be maintained, enlarged, or otherwise altered and new ponds or basins to be built.
23.	Emergency flood routing path(s) and their invert elevations from detention facilities to the receiving system
24.	One or more typical cross sections of all existing and proposed channels or other open drainage facilities carried to a point above the 100-year high water and showing the elevation of the existing land and the proposed changes, together with the high water elevations expected from the 100 year storm under the controlled conditions called for by the ordinance, and the relationship of structures, streets, and other facilities
25.	A drainage summary, which summarizes the basic conditions of the drainage design, including site acreage, off-site/upstream acreage, allowable release rates, post-developed 10-year, and 100-year flows leaving the site, volume of detention required, volume of detention provided, and any release rate restrictions
26.	Arrows designating the direction of stormwater runoff
27.	Spot elevations appropriate to define elevations
28.	Utility plan sheet(s) showing the location of all existing and proposed utility lines for the project, including all available information related to the utilities, such as pipe size and material, and invert elevations
29.	Storm sewer plan/profile sheet(s) at a scale of 5 vertical and 50 horizontal showing the elevation, size, length, location of all proposed storm sewers. Existing and proposed ground grades, storm sewer structures elevations, and utility crossings also must be included. The actual correct datum (not an assumed one) must be used for the profile sheets and all pipe inverts, top of casting elevations, casting types, structure numbers, and pipe slopes clearly labeled.
30.	A 24-inch by 36-inch plat on the same sheet size used for recording, including the following information:
31.	Legal description.
32.	Cross reference to Rule 12.
33.	Regulated drain statement and table.
34.	Proposed subdivision landscape plans
35.	A copy of the subdivision covenants
36.	Any other information required by the Allen County Surveyor in order to thoroughly evaluate the submitted material.

2B. Stormwater Drainage Technical Report

A summary report, including the following information:

37.	Description of the nature and purpose of the project.
38.	The significant drainage problems associated with the project.
39.	The analysis procedure used to evaluate these problems and to propose solutions.
40.	Any assumptions or special conditions associated with the use of these procedures, especially the hydrologic or hydraulic methods.
41.	The proposed design of the drainage control system along with storm design and detention design computations.
42.	The results of the analysis of the proposed drainage control system showing that it does solve the project's drainage problems and that it meets the requirements of the ordinance and these standards. This must include a table summarizing, for each eventual site outlet, the pre-developed acreage tributary to each eventual site outlet, the unit discharge allowable release rate used, the resulting allowable release rate in cfs for the post-developed 10-year and 100-year events, pre-developed 2-year flow rates in cfs as well as pre- and post-developed flow rates for 10- and 100-year events. The worksheet provided in the Allen County Stormwater Technical Standards Manual as Table 6-1 should be filled and submitted as part of the report. Any hydrologic or hydraulic calculations or modeling results must be adequately cited and described in the summary description. If hydrologic or hydraulic models are used, the input and output files for all necessary runs must be included in the appendices. A map showing any drainage area subdivisions used in the analysis

		must accompany the report.
	43.	Soil properties, characteristics, limitations, and hazards associated with the project site and the measures that will be integrated into the project to overcome or minimize adverse soil conditions.
	44.	A narrative and photographic record of the condition of the downstream receiving system
	45.	Identification of any other state or federal water quality permits that are required for construction activities associated with the owner's project site.
	A Hydrologic/Hydraulic Analysis, consistent with the methodologies and calculation included in the [technical standards], and including the following information:	
	46.	A hydraulic report detailing existing and proposed drainage patterns on the subject site. The report should include a description of present land use and proposed land use. Any off-site drainage entering the site should be addressed as well. This report should be comprehensive and detail all of the steps the engineer took during the design process.
	47.	All hydrologic and hydraulic computations must be included in the submittal. These calculations must include, but are not limited to: runoff curve numbers and runoff coefficients, runoff calculations, stage-discharge relationships, times-of-concentration and storage volumes.
	48.	Copies of all computer runs. These computer runs must include both the input and the outputs. Electronic copies of the computer runs with input files will expedite the review process and is required to be submitted.
	49.	A set of exhibits must be included showing the drainage sub-areas and a schematic detailing of how the computer models were set up.
	50.	A conclusion which summarizes the hydraulic design and details how this design satisfies the Ordinance.