# Model Stormwater Report Checklist

## Section 1. Report Format

1.1 Does the Hydrologic & Hydraulic Report contain the following information:

| ***Provided*** | ***Missing*** | |
|---|---|---|
| ☐ | ☐ | Name of the Development |
| ☐ | ☐ | Name of the Developer |
| ☐ | ☐ | Location Map of the Site referencing the nearest major road |
| ☐ | ☐ | Stormwater Impact Certification |
| ☐ | ☐ | Seal of the Professional having prepared the Report |

## Stormwater Impact Certification

I hereby certify that the stormwater management system for this development has been designed under my supervision in accordance with the applicable stormwater management requirements. Based on the hydrologic and hydraulic analyses contained in this report, the proposed development and stormwater management facilities have been designed so that stormwater runoff from the project will not create adverse impacts to downstream or adjacent properties when constructed and maintained in accordance with the approved plans and specifications.

**Engineer:** _____

**Georgia P.E. No.:** _____

**Signature:** _____

**Date:** _____

## Section 2. Existing Conditions Hydrologic Analysis

2.1 This section should provide the reader with a comprehensive evaluation of the site conditions prior to development of the project.

2.2 **Narratives** - A narrative and supporting calculations of the pre-development conditions of the site as related to stormwater management should be provided to determine the current characteristics of the site.

- ☐ Written description of the existing conditions found on the site
- ☐ Name of the receiving waters from which runoff drains to after leaving the site
- ☐ Analysis of runoff provided by off-site areas upstream of the project site

- ☐ Methodologies, assumptions, site parameters and supporting design calculations used in the analyzing the existing conditions site hydrology

2.3 **Existing Conditions Map** - A map documenting the following elements should be provided with the following information if applicable.

- ☐ Topography (2-ft. or less contour interval) of existing site conditions
- ☐ Perennial / intermittent streams, wetlands, lakes and other surface water features
- ☐ Drainage basin delineations showing the location of each drainage sub-basin
- ☐ Drainage basin delineations for each contributing drainage basin upstream of the project site on an appropriate map (USGS Quadrangle, etc.)
- ☐ Existing stormwater conveyances and structural control facilities
- ☐ Soil types including hydrologic soil groups
- ☐ Direction of flow and discharge points from the site including sheet flow areas

2.4 **Existing Conditions Tables** - Tables documenting the following information should be provided if applicable.

- ☐ A table listing the acreage, soil types and land cover characteristics for each sub-basin
- ☐ A table listing the peak runoff rates and total runoff volumes from each sub-basin
- ☐ A table listing the peak runoff rates and total runoff volumes for each drainage area upstream of the project site

## Section 3. Post-Development Hydrologic Analysis

3.1 The post-development hydrologic analysis should provide the reader with a comprehensive evaluation of the anticipated site conditions following development of the project. The designer should provide the following information with this element of the report:

3.2 **Narratives** - A narrative and supporting calculations of the post-development conditions of the site as related to stormwater management should be provided to determine the future stormwater characteristics of the site.

- ☐ Written description of the existing conditions found on the site
- ☐ Stormwater calculations for water quality, channel protection and post construction detention for each sub-basin affected by the project
- ☐ Documentation and calculations for any applicable site design credits that are being utilized
- ☐ Methodologies, assumptions, site parameters and supporting design calculations used in the analyzing the post development conditions site hydrology

3.3 **Post Development Conditions Map** - A map documenting the following elements should be provided with the following information if applicable.

- ☐ Topography (2-ft or less contour interval) of proposed site conditions

- ☐ Perennial / intermittent streams, wetlands, lakes and other surface water features
- ☐ Drainage basin delineations showing the location of each drainage sub-basin
- ☐ Proposed stormwater conveyances and structural control facilities
- ☐ Direction of flow and discharge points from the site including sheet flow areas
- ☐ Location and boundaries of proposed natural feature protection areas

3.4 **Post Development Conditions Tables** - Tables documenting the following information should be provided if applicable.

- ☐ A table listing the acreage, soil types, impervious surface area and land cover characteristics for each sub-basin
- ☐ A table listing the peak runoff rates and total runoff volumes from each sub-basin
- ☐ A table listing the peak runoff rates and total runoff volumes for each drainage area upstream of the project site
- ☐ A table listing the peak discharge rates, total runoff volumes and peak elevations for all detention ponds studied.

## Section 4. Stormwater Management System

4.1 The stormwater management system section should provide the reader with a comprehensive description of the proposed stormwater management system components on site. The designer should provide the following information with this element of the report:

4.2 **Narratives** - A narrative and supporting calculations describing the on-site stormwater management controls to be utilized. This narrative should include appropriate narratives / tables demonstrating compliance with the various stormwater management requirements outlined in the post-development article of the stormwater ordinance and local design manual.

- ☐ Narrative describing that appropriate and effective structural stormwater controls have been selected
- ☐ Design calculations and elevations for all existing and proposed stormwater conveyance elements including stormwater drains, pipes culverts catch basins, channels, swales and areas of overland flow

4.3 **Stormwater Management System Map(s)** - A map(s) illustrating the location, type and specifications of all stormwater management components to provide stormwater management for the proposed site.

- ☐ Location of all non-structural stormwater controls
- ☐ Location of all existing stormwater controls to remain after development
- ☐ Location of all proposed stormwater controls
- ☐ Location of all proposed impoundment type controls (i.e. detention ponds, stormwater ponds, stormwater wetlands, etc.)
- ☐ Location of all conveyance structures

- [ ] All impoundment type controls should be labeled with the following information: maximum water surface elevation, depth and storage volumes for both the design storm and maximum water surface if the design storm event is exceeded (i.e. top of dam)
- [ ] All inlets to conveyance structures should be labeled with the following information: maximum design water surface and maximum potential water surface
- [ ] All pipes should be labeled with length, material and slope
- [ ] All pipes should be profiled and labeled with length, material, slope and hydraulic grade line

## Section 5. Downstream Analysis

5.1 The downstream analysis should provide the reader with a comprehensive picture of the downstream areas and their capacity to accommodate stormwater runoff from the proposed development.

5.2 **Narratives** - A narrative and supporting calculations for a downstream peak flow analysis using the ten-percent rule necessary to show safe passage of the post-development design flows downstream. This narrative should include appropriate descriptions / tables for points of interest such as culverts and channel constrictions downstream of the project where increases in stormwater runoff rates could be of concern.

5.3 A map(s) illustrating the location, type and specifications of all stormwater management components to provide stormwater management for the proposed site

- [ ] Drainage basin delineations showing the point at which the contributing area of the project represents 10% of the total drainage basin area
- [ ] Identify culverts, channels and other structural stormwater controls that the stormwater runoff must pass through prior to the 10% point identified previously

## Section 6. Erosion & Sedimentation Control Plan

6.1 The erosion and sedimentation control plan should be included in the report demonstrating the plan to effectively mitigate stormwater impacts during construction. The following elements should be included in the section of the report.

- [ ] All elements specified in the Georgia Erosion and Sediment Control Act and local ordinances and regulations
- [ ] Sequence/phasing of construction and temporary stabilization measures
- [ ] Temporary structures that will be converted into permanent stormwater controls

## Section 7. Planting Plan

7.1 If necessary, a planting plan should be included for all stormwater controls that utilize vegetation as part of the functional design.

## Section 8. Operations & Maintenance Plan

8.1 A narrative of what maintenance tasks will be required for the stormwater controls specified for the site as well as the responsible parties. Additionally, the report will need to identify access and safety issues for the site.