

Stormwater Management Report Example Format

- I. Table of Contents** with page numbers
- 1. Stormwater Management Summary**
- II. Project Narrative**
- 2. Pre-Development Hydrograph Calculations**
 - A. Weighted CN Calculations
 - B. Tc Calculations
 - C. Hydrographs – 2, 10, 25, 50 and 100 Year Frequencies
- 3. Post-Development Hydrograph Calculations** (for each Drainage Area)
 - A. Design Point 1 (Drainage Area 1)
 1. Weighted CN Calculations
 2. Tc Calculations
 3. Hydrographs – 1, 2, 10, 25, 50 and 100 Year Frequencies
 - B. Design Point 2 (Drainage Area 2)
 1. Weighted CN Calculations
 2. Tc Calculations
 4. Hydrographs – 1, 2, 10, 25, 50 and 100 Year Frequencies
- 4. Post-Development Hydrograph Combinations – Drainage Area 1 and 2**
- 5. Detention Basin Calculations**
 - A. Basin Characteristics
 5. Basin Stage Storage – Elevation Data
 6. Outlet Structure Configuration
 - a. Schematic Details: Orifice, Elevation, Cross-Section, Trash Rack, Anti-Seep Collar, Clay Core
 7. Basin Routing Table
 - B. Outflow Hydrographs – 1, 2, 10, 25, 50 and 100 year Frequencies
 - C. Outfall Protection/Level Spreader Design Calculations
 - D. Emergency Spillway Calculations
 1. Orifice Blocked Outflow Hydrograph – 100 Year Frequency
 2. Spillway Sizing – Weir Equation
 - E. Anti-Seep Collar Calculations
- 6. Extended Detention of 1 Year Frequency Hydrograph Calculations**
- 7. Basin Empty Time Analysis – 100 Year Storm**

8. Best Management Practices (BMP) Calculations and Details

- A. Water Quality
 - 1. Volume Calculations
 - 2. BMP Design and Application

- B. Groundwater Recharge
 - 1. Geologic Analysis
 - 2. Volume Calculations – 2-Year 24 Hour rainfall
 - 3. BMP Design and Application

9. Conveyance Calculations

- A. Pipe Design Calculations
 - 8. Weighted CN Calculations
 - 9. Tc Calculations
 - 10. Peak Flow or Hydrographs, 10, 25 and 100 Year Frequencies
 - 11. Hydraulic Grade Line Calculations, using 10, 25 and 100 Year Frequency Peak Flows
 - 12. Pipe Outlet Lining Calculations – rip-rap or matting

- B. Culvert Design Calculations

- C. Swale Design Calculations
 - 1. Weighted CN Calculations
 - 2. Tc Calculations
 - 3. Peak Flow or Hydrographs, using 10, 25 and 100 Year Frequencies
 - 4. Capacity Calculations – permanent/lined condition
 - 5. Stability Calculations – temporary and permanent conditions

Appendix A: Pre-Development Drainage Area Map, including Tc information

Appendix B: Post-Development Drainage Area Map, including Tc information

Appendix C: Off Site Drainage Area Map, including Tc information

Appendix D: Inlet Drainage Area Map

Appendix E: SCS Runoff Curve Numbers

Appendix F: Regional Rainfall Curve Chart

Appendix G: C Values for Rational Method

Appendix H: Hydrologic Soil Group Listing

Assumptions:

1. If off-site runoff drains to design point, include calculations under Pre-Development Hydrograph Calculations.
2. If an existing detention facility discharges to the site, the hydrograph analysis to document discharge rate will be added to Pre-Development Hydrograph Calculations using the same format as Post-Development.
3. Hydraulic Grade Line Calculations use a program that considers inlet efficiency and bypass, and ponding over inlets (depth at curb line).