

STORMWATER MANAGEMENT SUMMARY

Project: _____ **Date:** _____

Drainage Area: _____ **ID Number** _____ **Acres** _____ **Release Rate:** _____

Note: Use a separate sheet for each Drainage Area.

Design Year Storm Event

Discharge Rates: cubic feet per second (cfs)	2	5	10	25	50	100
Pre-development discharge						
Allowable post-development discharge (per release rate)						
Post-development discharge to SWM facility						
Post-development bypass						
Post-development discharge from SWM facility						
Post-development combined routed discharge						

WATER QUALITY REQUIREMENTS

Computed Water Quality Volume: _____ cubic feet

Proposed BMP(s) to meet the WQ requirements:

GROUNDWATER RECHARGE REQUIREMENTS

Computed Groundwater Recharge Volume: _____ cubic feet

Proposed BMP(s) to meet GR requirements:

GENERAL PROTECTION REQUIREMENTS

Dewatering Time: 1-year storm event: _____ hours

SWM Facility Maximum Capacity: _____ hours

Stormwater Management Report Format

I Stormwater Management Summary

II Project Narrative

III Pre-Development Hydrograph Calculations

A. Weighted CN Calculations

B. Tc Calculations

C. Hydrographs - 2, 10, 25, 50 & 100 Year Frequency

IV. Post-Development Hydrograph Calculations

A. Design Point 1 (Drainage Area 1)

1. Weighted CN Calculations

2. Tc Calculations

3. Hydrographs – 1, 2, 10, 25, 50 & 100 Year Frequency

B. Design Point 2 (Drainage Area 2)

1. Weighted CN Calculations

2. Tc Calculations

3. Hydrographs – 1, 2, 10, 25, 50 & 100 Year Frequency

V. Post Development Hydrograph Combinations Drainage Area 1 and 2

VI Detention Basin Calculations

A. Basin Characteristics

1. Basin Stage Storage - Elevation Data

2. Outlet Structure Configuration

3. Basin Rating Table

B. Outflow Hydrographs – 1, 2, 10, 25, 50 & 100 Year Frequency

C. Level Spreader Design Calculations

D. Emergency Spillway Calculations

1. Orifice Blocked Outflow Hydrograph – 100 Year Frequency

2. Spillway Sizing - Weir Equation

VII. Extended Detention of 1 Year Frequency Hydrograph Calculations

VIII. Basin Empty Time Analysis – 100 Year Storm

IX. Water Quality Volume Calculations, 2-Year 24 hour and Infiltration Design

X. Conveyance Calculations

A. Pipe Design Calculations

1. Weighted CN Calculations
2. Tc Calculations
3. Peak Flow or Hydrographs 25 and 100 Year Frequency
4. Hydraulic Grade Line Calculations Using 25 Year Frequency Peak Flow
5. Hydraulic Grade Line Calculations Using 100 Year Frequency Peak Flow
6. Pipe Outlet Lining Calculations (NAG P-300 or Rip Rap)

B. Culvert Design Calculations

C. Swale Design Calculations

1. Weighted CN Calculations
2. Tc Calculations
3. Peak Flow or Hydrograph 100 Year Frequency
4. Capacity Calculations (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:

6. If off-site water drains to design point, include calculations under Pre-Development Hydrograph Calculations.
7. If an existing detention pond discharged 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.
8. Hydraulic Grade Line Calculations use a program that considers inlet efficiency and bypass, and ponding over inlets (depth at curb line)