



PHASE II STORMWATER  
MANAGEMENT PERMIT APPLICATION FORM

Permit Number \_\_\_\_\_

Project Number \_\_\_\_\_

(No.'s to be provided by C.O.K.)

## DRY DETENTION BASIN SUPPLEMENT

*This form must be filled out, printed and submitted.*

*The Required Items Checklist (Part III) must be printed, filled out and submitted along with all of the required information.*

### I. PROJECT INFORMATION

Project name	
Drainage structure ID	
Design Engineer	
Date	

### II. DESIGN INFORMATION

#### Site Characteristics

Receiving stream / tributary name		
Is structure located in watershed overlay district?		Name: _____
Drainage area		acre
Impervious area		acre
% impervious		%
Design rainfall depth		in

#### Storage Volume: Non-SR Waters

Runoff coefficient, $R_v$		(unitless)
Minimum water quality volume required		ft <sup>3</sup>
Main basin water quality volume provided		ft <sup>3</sup>
Additional sediment volume provided (main basin)		ft <sup>3</sup>
Forebay provided?		(Y or N)
Forebay water quality volume provided		ft <sup>3</sup>
Additional sediment volume provided (forebay)		ft <sup>3</sup>
Total water quality volume provided	0.00	ft <sup>3</sup>

Provide additional water quality vol

#### Peak Flow Calculations

If this BMP is used for stormwater detention, complete table below

	1-yr, 24-hr storm	10-yr, 24-hr storm	50-yr, 24-hr storm	100-yr, 24-hr storm
Rainfall depth (in)				
Runoff coefficient, pre-development (unitless)				
Runoff coefficient, post-development (unitless)				
Rainfall intensity (in/hr)				
Pre-development peak flow (ft <sup>3</sup> /sec)				
Post-development peak flow (ft <sup>3</sup> /sec)				
Routed post-development peak flow (ft <sup>3</sup> /sec)				
Maximum pool elevation (ft)				

## II. DESIGN INFORMATION

### Basin Elevations and Data

Seasonable High Water Table (SHWT) elevation		ft	Source:	
Sediment clean-out bottom elevation		ft		Increase bottom elevation
Bottom of pond elevation (sediment cleanout top elev)		ft		
Sediment storage depth	0.00	ft		Increase depth to provide at least
Low flow orifice / weir size				
Temporary water quality storage elevation		ft		
Water quality depth of storage	0.00	ft		OK
Stormwater detention outlet size				
Stormwater detention outlet elevation (ft)				
Stormwater detention outlet size				
Stormwater detention outlet elevation (ft)				
Emergency spillway elevation (if provided)		ft		
Freeboard provided		ft		
Top of embankment elevation		ft		
Height of embankment		ft		
Top width of embankment		ft		

### Drawdown Calculations

Treatment volume drawdown time		days
Treatment volume average discharge rate		ft <sup>3</sup> /s

### Additional Information

Basin side slopes		:1
Length to width ratio		:1
Trash rack for overflow & orifice?		(Y or N)
Recorded drainage easement provided?		(Y or N)
Captures all runoff at ultimate build-out?		(Y or N)
Is a sediment depth indicator included?		(Y or N)
Method of inflow velocity reduction		
Drain mechanism for maintenance or emergencies		

### III. REQUIRED ITEMS CHECKLIST

Please indicate the page or plan sheet numbers where the supporting documentation can be found. **An incomplete submittal package will result in a request for additional information. This will delay final review and approval of the project.** The Engineer shall initial in the space provided to indicate the following design requirements have been met. **If a requirement has not been met, attach justification.**

Initials	Page/ Plan Sheet No.	
_____	_____	1. Plans of the entire site showing: <ul style="list-style-type: none"> <li>- Design at ultimate build-out,</li> <li>- Off-site drainage (if applicable),</li> <li>- Delineated drainage basins (include runoff coefficient per basin),</li> <li>- Basin dimensions,</li> <li>- Pretreatment system,</li> <li>- Maintenance access,</li> <li>- Proposed drainage easement and public right of way (ROW),</li> <li>- Overflow device, and</li> <li>- Boundaries of drainage easement.</li> </ul>
_____	_____	2. Partial plan and details for the detention basin and forebay(s) showing: <ul style="list-style-type: none"> <li>- Outlet structure with trash rack or similar,</li> <li>- Maintenance access,</li> <li>- Basin dimensions, including top of embankment width,</li> <li>- Forebay(s) dimensions, including top of berm width and spillway length &amp; material,</li> <li>- Forebay and main pond with hardened emergency spillway,</li> <li>- Basin cross-section, and</li> <li>- Vegetation specifications.</li> </ul>
_____	_____	3. Section view of the dry detention basin showing: <ul style="list-style-type: none"> <li>- Side slopes, 3:1 or lower,</li> <li>- Pretreatment and treatment areas, and</li> <li>- Inlet and outlet structures.</li> </ul>
_____	_____	4. Details and specifications of the outlet structure showing: <ul style="list-style-type: none"> <li>- Type of riser and construction material,</li> <li>- Interior &amp; exterior dimensions of riser diameter, widths &amp; height; wall thickness, bottom slab thickness and top slab thickness,</li> <li>- Elevations of riser invert and top of riser,</li> <li>- Sizes and invert elevations of all orifices and weirs,</li> <li>- Type of riser outlet barrel and construction material,</li> <li>- Length, diameter, invert in &amp; out elevations and slope of riser outlet barrel,</li> <li>- Dimensions for widths and depth of antifoatation block (if applicable),</li> <li>- Method of providing watertight joints and connections of riser and outlet barrel, and</li> <li>- Type of trash rack and other debris-control structures</li> </ul>
_____	_____	5. If the basin is used for sediment and erosion control during construction, clean out of the basin is specified on the plans prior to use as a detention basin.
_____	_____	6. A stage-storage table of elevations, areas, incremental volumes & accumulated volumes for overall pond and for forebay, to verify volume provided. Maximum elevation increment to be 1 foot.
_____	_____	7. A stage-discharge table of elevations and flow rates for the pond outlet structure(s). Maximum elevation increment to be 0.1 foot.
_____	_____	8. A construction sequence that shows how the detention basin will be protected from sediment until the entire drainage area is stabilized.

### III. REQUIRED ITEMS CHECKLIST

- \_\_\_\_\_ 9. The supporting calculations, including drainage area, runoff coefficients, time of concentration, peak flows, storage volumes, drawdown, bypass flows, stormwater routing, structure uplift, and antifoatation (if applicable).
- \_\_\_\_\_ 10. A copy of the operation and maintenance (O&M) agreement.
- \_\_\_\_\_ 11. A copy of the deed restrictions (if required).
- \_\_\_\_\_ 12. A soils report that is based upon an actual field investigation, soil borings, and infiltration tests. County soil maps are not an acceptable source of soils information.

#### Revision History:

R1 04/17/2009 Adjusted O&E text