



PHASE II STORMWATER
MANAGEMENT PERMIT APPLICATION FORM

Permit Number _____
Project Number _____
(No.'s to be provided by C.O.K.)

WETLAND 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 the required information.

I. PROJECT INFORMATION

Project name	
Drainage structure ID	
Design Engineer	
Date	

II. DESIGN INFORMATION

Site Characteristics

Drainage area		acres
Impervious area		acres
Percent impervious		%
Design rainfall depth		inch

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 ³ /sec)				
Post-development peak flow (ft ³ /sec)				
Routed post-development peak flow (ft ³ /sec)				
Maximum pool elevation (ft)				

Storage Volume: Non-SR Waters

Runoff Coefficient (R _v)		(unitless)
Minimum volume required (temporary pool volume)		ft ³
Actual temporary pool volume		ft ³
Depth of temporary pool/ponding depth (D _{Plants})		in

Orifice Design

If the Simplified Method is not used, designer must provide supporting calculations for orifice size.

Simplified orifice design:

Coefficient of discharge (C _d) used for orifice		(unitless)
Orifice diameter (2 day drawdown time)		in
Orifice diameter (5 day drawdown time)		in
Diameter of orifice to be used		in

II. DESIGN INFORMATION

Surface Areas of Wetland Zones

Estimated Surface Area of Entire Wetland required	_____	ft ²
Surface Area of Entire Wetland to be provided:		
Shallow Land	_____	ft ²
The shallow land percentage is:	_____	%
Shallow Water	_____	ft ²
The shallow water percentage is:	_____	%
Deep Pool		
Forebay portion of deep pool (pretreatment)	_____	ft ²
The forebay surface area percentage is:	_____	%
Non-forebay portion of deep pool	_____	ft ²
The non-forebay deep pool surface area percentage is:	_____	%
Total of wetland zone areas	0.00	ft ²
Approximate wetland length	_____	ft
Approximate wetland width	_____	ft
The length to width ratio is:	_____	:1

Topographic Zone Elevations (use site topo elevations)

Temporary Pool		
Shallow Land (top)	_____	ft
Permanent Pool		
Shallow Water (top)	_____	ft
Deep Pool (top)	_____	ft
Most shallow point of deep pool's bottom	_____	ft
Deepest point of deep pool's bottom	_____	ft
Design must meet one of the following two options:		
This design meets Option #1,	_____	(Y or N)
Deep pool is 6+ inches below SLWT, if yes:		
SLWT (Seasonally Low Water Table)	_____	ft
This design meets Option #2,	_____	(Y or N)
Has a clay liner, if yes:		
Depth of topsoil above clay liner	_____	in

Topographic Zone Depths

Temporary Pool			
Shallow Land	0.00	in	OK
Permanent Pool			
Shallow Water	0.00	in	Insufficient shallow water depth.
Deep Pool (shallowest)	0.00	in	Insufficient shallow water depth.
Deep Pool (deepest)	0.00	in	Insufficient shallow water depth.

II. DESIGN INFORMATION

Planting Plan

Are cattails included in the planting plan? (Y or N)

Number of Plants in planting plan recommended:

Herbacious (4" inch diameter) 0

Shrubs/small trees (1 gallon or larger) 0

Trees (1.5" dbh) 0

Number of Plants in planting plan provided (several species of each plant type are recommended):

Herbacious (4" inch diameter)

Shrubs/small trees (1 gallon or larger)

Trees (2.5" dbh)

Additional Information

Are calculations for supporting the temporary pool volume provided in the application? (Y or N)

Is BMP sized to handle all runoff from ultimate build-out? (Y or N)

Is the BMP located in a recorded drainage easement with a recorded access easement to a public Right of Way (ROW)? (Y or N)

Will the wetland be stabilized within 14 days of construction? (Y or N)

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"> - Design at ultimate build-out, - Off-site drainage (if applicable), - Delineated drainage basins (include Rational C coefficient per basin), - Wetland dimensions (and length to width ratio, minimum of 1.5:1), - Forebay dimensions - Pretreatment system, - Maintenance access, - Proposed drainage easement and public right of way (ROW), - Overflow device, and - Boundaries of drainage easement.
_____	_____	2. Plan details for the wetland showing: <ul style="list-style-type: none"> - Wetland dimensions (and length to width ratio), - Forebay dimensions, - Pretreatment system, - Maintenance access, - Proposed drainage easement and public right of way (ROW), - Design at ultimate build-out, - Off-site drainage (if applicable), - Overflow device, and - Boundaries of drainage easement.
_____	_____	3. Section view of the wetland showing: <ul style="list-style-type: none"> - Side slopes, 3:1 or lower - Wetland layers <ul style="list-style-type: none"> All wetlands: Shallow land depth, shallow water depth, deep pool depth Option 1, no clay liner: SLWT depth Option 2, clay liner: Depth of topsoil on top of liner, liner specifications
_____	_____	4. A detailed planting plan prepared by a qualified individual showing: <ul style="list-style-type: none"> - A variety of suitable species (not including cattails), - Sizes, spacing and locations of plantings, - Total quantity of each type of plant specified, - A planting detail, - The source nursery for the plants, and - Fertilizer and watering requirements to establish vegetation.

III. REQUIRED ITEMS CHECKLIST

- _____ 5. Details and specifications of the overflow device showing:
- Type of structure and construction material,
 - Interior & exterior dimensions of structure diameter, widths & height; wall thickness, bottom slab thickness and top slab thickness,
 - Elevations of structure invert and top of structure,
 - Sizes and invert elevations of all orifices and weirs,
 - Type of structure outlet barrel and construction material,
 - Length, diameter, invert in & out elevations and slope of structure outlet barrel,
 - Dimensions for widths and depth of antifoatation block (if applicable),
 - Method of providing watertight joints and connections of structure and outlet barrel, and
 - Type of trash rack and other debris-control structures
- _____ 6. A construction sequence that shows how the wetland will be protected from sediment until the entire drainage area is stabilized.
- _____ 7. The supporting calculations, including drainage area, runoff coefficients, time of concentration, peak flows, storage volumes, drawdown, bypass flows, and stormwater routing (if applicable).
- _____ 8. A copy of the operation and maintenance (O&M) agreement.
- _____ 9. A copy of the deed restrictions (if required).
- _____ 10. 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.
- _____ 11. Wetland temporary pool volume has a drawdown time of 2-5 days.
- _____ 12. The minimum treatment volume for a the wetland is at least 3,630 ft³.
- _____ 13. The maximum shallow land depth is no greater than 1 foot.
- _____ 14. Details and plans that show how the wetland will be stabilized within 14 days of construction.

Revision History:

R1 04/17/2009 Changed elevation units from fmsl to ft; added elevation units in Topographic Zone Elevations; added comment box; removed all references to a vegetated filter; adjusted O&E text.