

**Pierce County Stormwater Management and Site Development Manual – 2008  
Revision Update for Planning and Land Services**

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Background – Timeline

1986 First SWM Manual Adopted (Ord. 86-60)  
1995 Department of Ecology – DOE requires NPDES Phase I permit (5 Year permit)  
1997 DOE equivalent SWM Manual Adopted (Ord. 96-46s - Title 18C)  
1999 Major revision to SWM Manual (Ord. 99-24s -Title 17A, chapters 9 & 10 removed)  
2004 Began update process in earnest  
2005 Minor revision to SWM Manual (Directions Package)  
Feb 17, 2007 DOE issues NPDES Phase I permit –requires adopting the DOE manual or equivalent within 18 month.

September 23, 2008 Council adopts 2008-59s with an effective date of March 1, 2009  
(combines Title 11.05 and 17A)

On the web at: [www.piercecountywa.org/manual](http://www.piercecountywa.org/manual)

Technical Equivalency – In March 2009 DOE modified the NPDES permit for public input including DOE’s determination that PCSWMM is technically equivalent. June 17<sup>th</sup> the Permit Mod will be final and effective July 17<sup>th</sup> the PCSWMM will be officially equivalent with DOE.

Pollution Control Hearing Board ruled in August 2008 that DOE Permit must be changed to require Low Impact Development techniques where feasible.

Currently working on checklist, errata issues and changes including Soil Specifications for BioInfiltration BMPs.

**What Changed?**

Format in 6 Volumes with Appendices associated with each Volume and Attachments at end. (2005 Manual subject in parenthesis)

- Volume I - Minimum Technical Requirements and Site Planning  
(Chapter 1, 2, 3, 4, 5, appdx. D, J, S)
- Volume II - Construction Stormwater Pollution Prevention  
(Chapter 8, appdx. G)
- Volume III - Hydrologic Analysis and Flow Control Design/BMPs  
(Chapter 6, appdx. E, M)
- Volume IV - Source Control BMPs  
(BMP Manual)
- Volume V - Runoff Treatment BMPs  
(Chapter 7, appdx. I)
- Volume VI – Low Impact Development BMPs  
(Chapter 10)
- Attachments A thru K  
(Appendix A, B, C, F, H, L, N, O, P, Q, R)

**Minimum Requirements – 1 thru 5 only required on smaller sites**

- |  |                                  |
|--|----------------------------------|
| 1) Preparation of Stormwater Site Plans                  | 5) On-site Stormwater Management |
| 2) Construction Stormwater Pollution Prevention          | 6) Runoff Treatment              |
| 3) Source Control of Pollution                           | 7) Flow Control                  |
| 4) Preservation of Natural Drainage Systems and Outfalls | 8) Wetlands Protection           |
|  | 9) Basin/Watershed Planning      |
|  | 10) Operation and Maintenance    |
|  | 11) Financial Liability          |

See attached Volume I flow charts for applicable Minimum Requirement and read text of Minimum Requirement for implementation.

Thresholds:

<i>Permit-Action Required when placing New Impervious Surface</i>	<i>Units in square feet</i>	
	Old threshold	Current threshold
Erosion Control Plan (SWPPP)	5,000	2,000
Water Quality BMPs	5,000	5,000
Flow Control BMPs	5,000	10,000

TESC/SWPPP also land disturbance on 7,000 s.f. -this includes a site specific drawing.

Flow Control BMPs also adding 0.1 cfs

Enhanced Treatment 7,500 Average Design Year Daily Traffic (within UGA for non-controlled access roads)

Redevelopment triggers Minimum Requirements when impervious replaced is greater than 5,000 s.f. Overlays do not count, the subgrade must be removed to trigger this.

Conversion of gravel road to paved is defined as new impervious surface.

Construction Stormwater Pollution Prevention Plans

Same 12 point requirements as DOE General Construction Permit (1 acre or larger sites)

Infiltration on-site to maximum extent feasible – Soil amendments required where native soil complex not retained.

Hydrology – Must use Continuous Simulation model (HSPF, WWHM, MGSflood)

Use Pierce County Extended Precipitation Time Series developed by Entranco/MGS in 2001.

SBUH or Rational method only allowed for conveyance design

Project measured against Pre-Existing Condition, defined as pre European settlement and most sites assumed to be forest unless historic evidence of prairies can be shown.

Flow control must match the pre-existing flow and duration up to the 50 year event

Threshold Drainage Areas allows for split basin analysis if flow doesn't combine within ¼ mile.

Maximum infiltration rate for field percolation test is 30"/hour this is reduced if using sieve test or soil triangle analysis.

Wetland protection includes maintaining hydro periods and function – potential conflict with flow control rules.

Amended Soils required when planting on disturbed/non-native ground

Infiltration testing has simple (type A soils no groundwater issues) and detailed approach (could include one or more years of groundwater monitoring)

Bioswales have a maximum water velocity of 3ft/sec

Water Quality BMP added Bio-infiltration option

Some Water Quality treatment facilities require prior approval by County/maintenance manager (see Volume V Figure 2.1)

Crest gages in all ponds

Operation and Maintenance Plans – include stage storage design to monitor performance

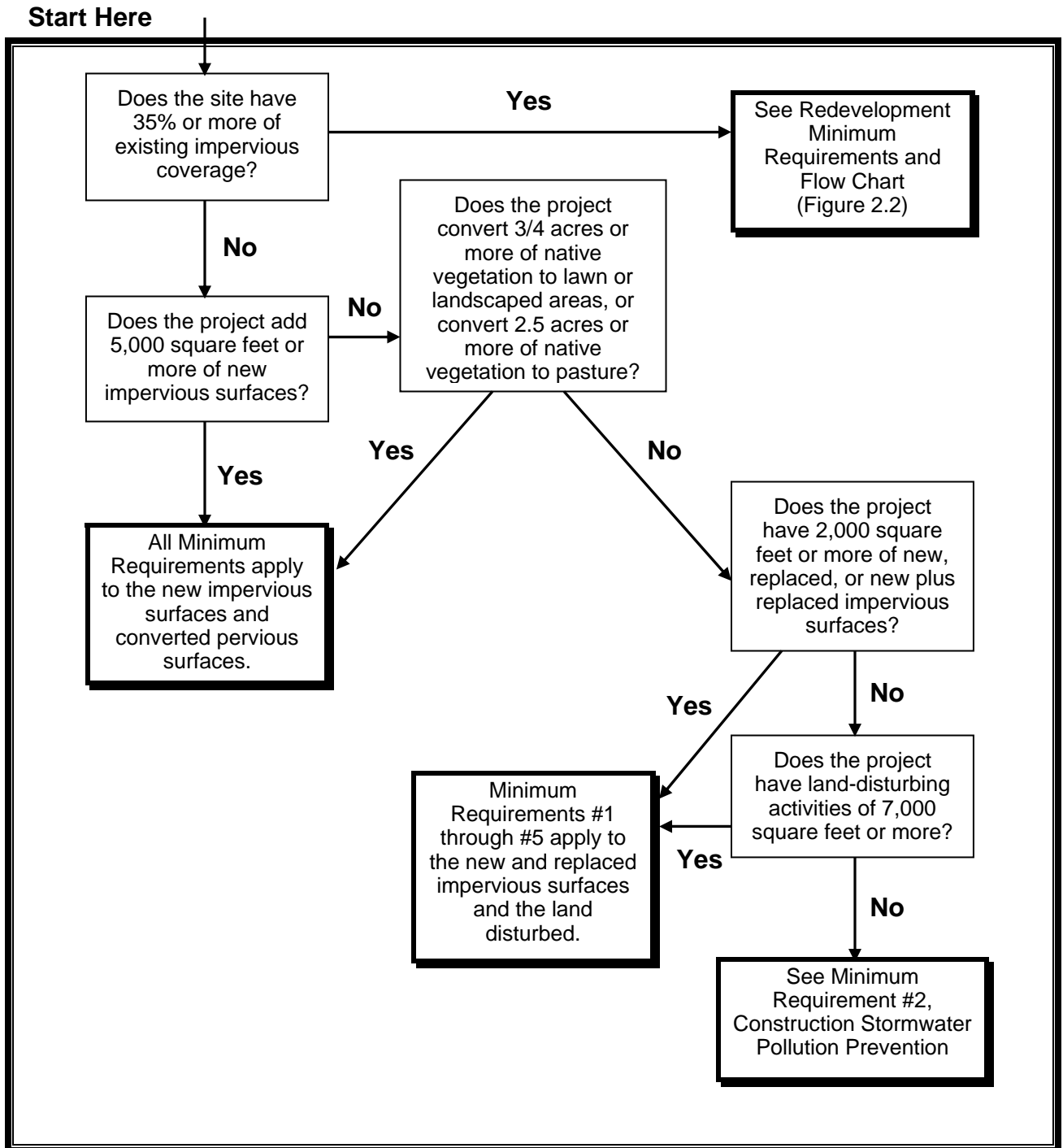
Defect and Maintenance Guarantee (formerly 18 month bond) now 42 month process with set inspections.

Permanent erosion control establishment before Defect and Maintenance Guarantee release.

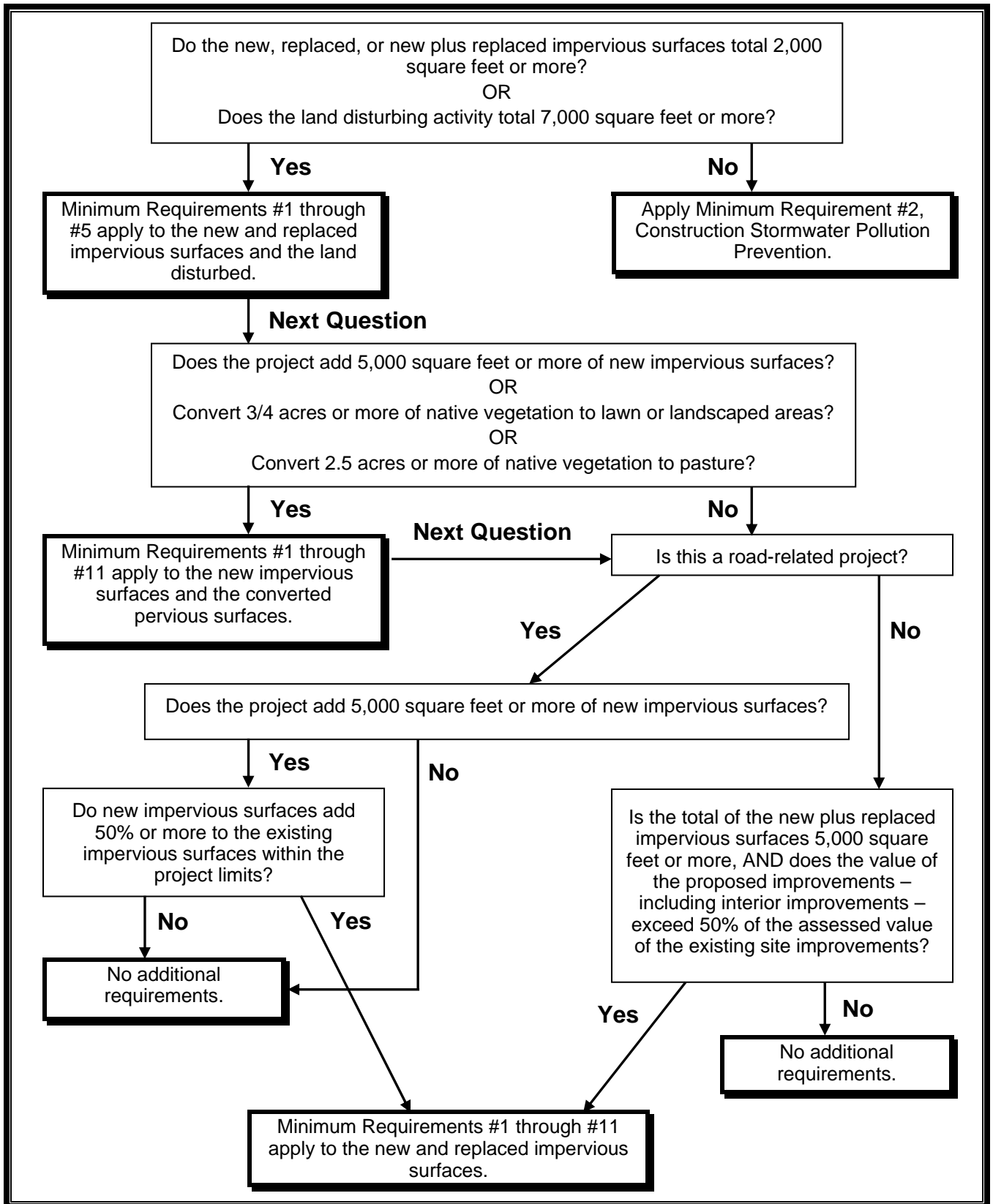
Pond Access roads – paved to all structures, paved, gravel or grid around pond

Fencing of all public sites – new county Type I fence detail with top rail on all but arterial roads where a WSDOT Type 3 fence is allowed.

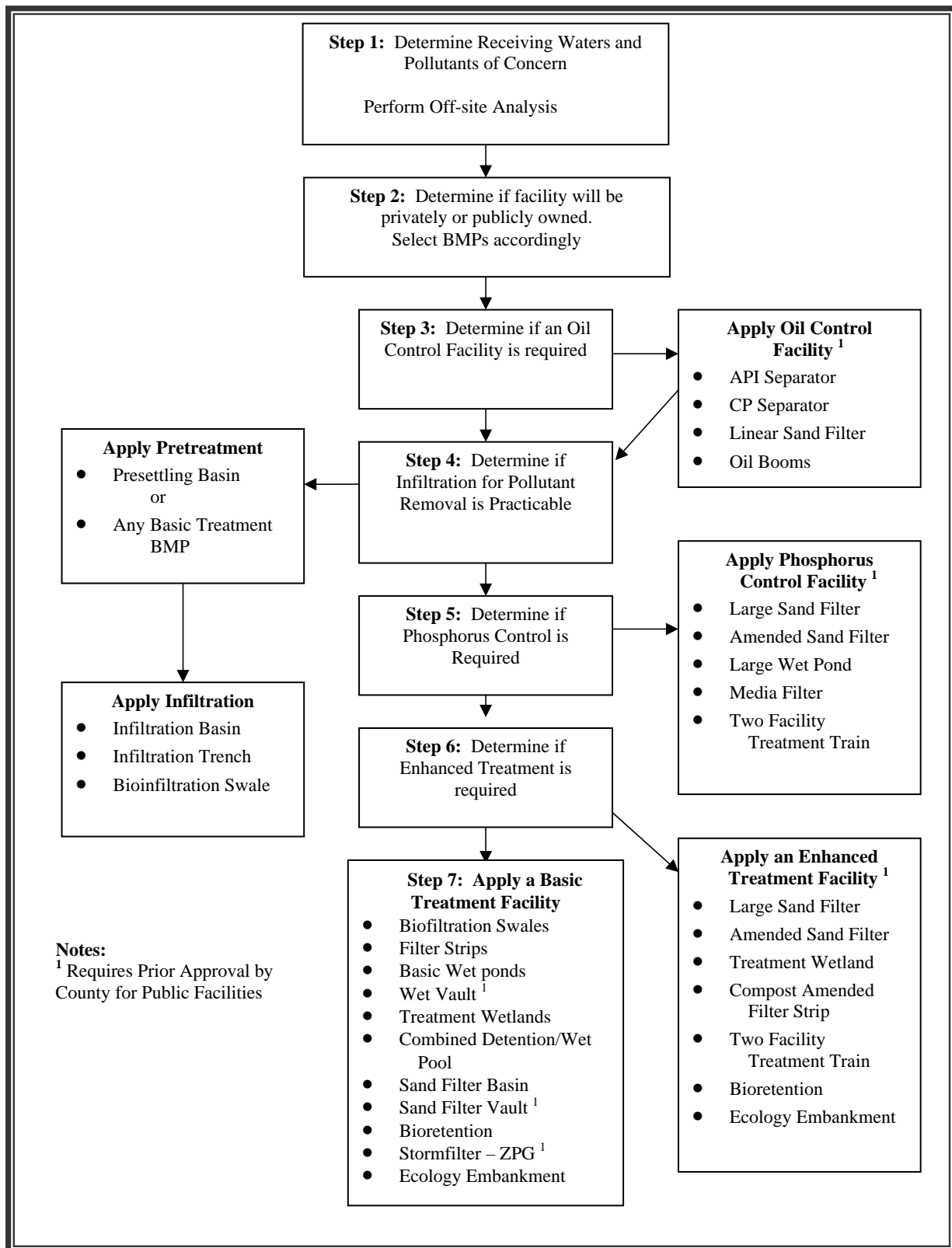
OSHA required railings above retaining walls



**Volume I Figure 2.1. Flow Chart for Determining Requirements for New Development.**



Volume I Figure 2.2. Flow Chart for Determining Requirements for Redevelopment.



Volume V Figure 2.1. Treatment Facility Selection Flow Chart.