

## Summary Fact Sheet

**Category:** 7.0 Water Conservation/Reuse  
**Practice:** 7.2 Pollution Prevention

### General Description:

Pollution Prevention (P2) is a general term for any activity or management action that reduces or eliminates pollutants before they are propagated downstream. The goal of P2 is to incorporate programs and techniques to keep nonpoint source (NPS) pollutants out of runoff. This helps to reduce pollutant loads entering BMPs, which enhances their performance and improves their longevity. Reduction of fertilizer, pesticide, and herbicide use and the implementation of regular street sweeping (see fact sheet 2.5) are some common P2 activities. P2 may also involve behavioral changes, such as keeping dumpster lids closed.

### Water Quantity Controls

P2 has no effect on the runoff volume or peak discharge rate.

### Water Quality Controls

Water quality benefits are highly variable. Some P2 measures may allow pollutant mass reductions to be determined from a simple mass balance. For instance, reductions in pollutant mass loadings resulting from decreased fertilizer and pesticide use can be determined by comparing the annual mass of pollutants released before and after reduction measures were instituted.

**Location:** P2 can be applied any place where a one-time or recurring pollutant loading can potentially be conveyed by stormwater runoff to downstream conveyances, receiving waters, or BMPs.

### Design Construction and Materials:

As defined in the *Nonstructural Urban BMP Handbook*, P2 measures consist of land use management and improvement measures, and public education and volunteer measures.

Land use management and improvement measures consist of:

- Land use controls: promote development that reduces or better controls NPS pollution
- Watershed protection during site design: reduce imperviousness and promote infiltration
- Urban reforestation and riparian buffer restoration
- Landscaping strategies: preserve infiltration capacity and conserve and retain water

Public education and volunteer measures consist of:

- Public education: aim to change behaviors to reduce a pollution problem
- Storm drain stenciling: educate the public that storm drains empty into local waters
- Animal waste controls: increase public education and also enforcement measures
- Lawn and garden care education: reduce fertilizer and pesticide use
- Reduction of automotive-generated pollutants: includes car pools and oil recycling

P2 measures may be specific to a certain activity, such as effluent capture techniques for car washing. Inflatable mats or adsorbent booms can be used to capture pollutants from vehicle maintenance or washing.

**Cost:** The cost to implement a P2 program over a ½ acre drainage area is comprised of both the cost for initial establishment and annualized costs. The costs given here are guidelines. This cost estimate assumes the program will be re-evaluated and overhauled after 25 years.

Item	Required Cost per Year (2005 Dollars)													
	0	1	2	3	4	5	6	7	8	9	10	...	25	
Initial establishment <sup>1</sup>	5,000													
Maintenance		250	250	250	250	250	250	250	250	250	250			
Reassess program						1000						1000		
Overhaul program														5,000
<b>Total Cost</b>	<b>5,000</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>1250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>1250</b>			<b>5,000</b>
Annualized Cost	\$600 / year (includes program overhaul in year 25)													

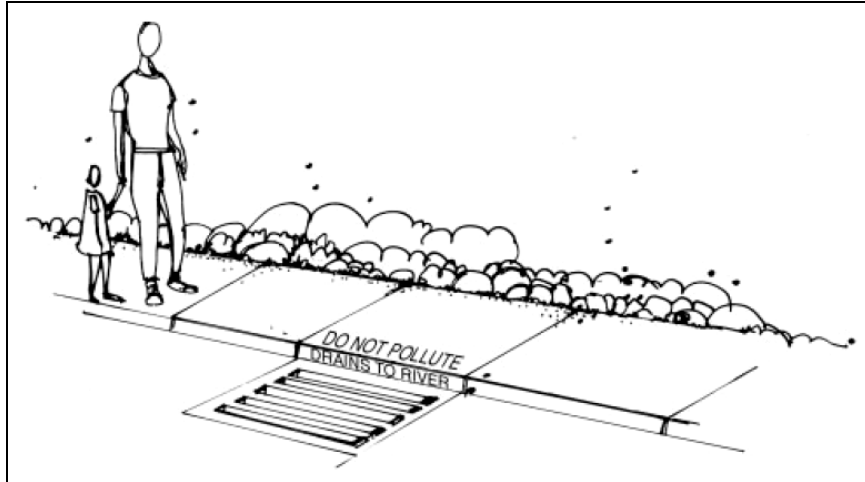
<sup>1</sup>Developer Cost. Not included in annualized cost.

**Maintenance:** For nonstructural controls, maintenance consists of perpetuating public education and enforcement actions. Reassess program effectiveness every five (5) years.

**Performance and Inspection:** Areas in which P2 programs have been implemented should be visually inspected several times annually for signs of non-compliance. Storm drain outfalls can also be monitored for evidence of acute pollutant releases (e.g. motor oil). Regular BMP inspection can also be used to determine if violations have occurred.



**Example of a vehicle washing containment pad**  
 Source: Chappell Supply and Equipment PERMISSION PENDING



**Example of storm drain stenciling**

Source: Natural Resources Conservation Service  
[http://www.abe.msstate.edu/Tools/csd/NRCS-BMPs/pdf/water/source/prot\\_sd\\_hazwaste.pdf](http://www.abe.msstate.edu/Tools/csd/NRCS-BMPs/pdf/water/source/prot_sd_hazwaste.pdf)  
PERMISSION PENDING

**Potential LEED Credits:**

Primary: N/A

Other: Innovation & Design Process (1-4 Points)

**Links to Additional Information:**

Northern Virginia Planning District Commission. 1996. *Nonstructural Urban BMP Handbook: A Guide to Nonpoint Source Pollution Prevention and Control Through Nonstructural Measures*. Available at <http://www.novaregion.org/pdf/NSBMP1.pdf>

United States Environmental Protection Agency Office of Water. 1999. "Combined Sewer Overflow Management Fact Sheet: Pollution Prevention." Available at <http://www.epa.gov/owm/mtb/pollutna.pdf>