



## Water Quality Interpretation for Impervious Area (IA) Stormwater Credit

IA Credit is based on the Water Quality Requirement of the Philadelphia Stormwater Regulations. Water quality treatment is defined as management of the first one inch of runoff from Directly Connected Impervious Area (DCIA). DCIA is practically synonymous with Impervious Area (IA) but differs in that DCIA may be less than total IA if some of the IA is disconnected. This concept is explained more below.

### How is my property eligible to receive IA Credit?

IA Credit can be obtained using two general practices: 1) management via a PWD-approved stormwater management practice (SMP); or 2) disconnection or reduction of DCIA. IA that is either managed or disconnected is eligible to receive credit on a directly proportional basis, i.e. managed or disconnected IA is subtracted from the calculated IA to give a new billable IA. Impervious area is considered disconnected when the runoff is directed towards a pervious area which allows for infiltration, filtration, and increased time of concentration.

$$\text{PWD Calculated IA} - \text{Credited IA} = \text{Billed IA}$$

### Management Options

1. Infiltration of the Water Quality Volume (WQv). The SMP must be designed to manage the first one inch of runoff from all DCIA routed to it.
2. If the SMP does not infiltrate all or a portion of the WQv, then the remaining volume must be treated according to the requirements specific to the sewer shed.

#### FOR SEPARATE SEWER AND DIRECT DISCHARGE AREAS

The WQv must be routed through a SMP that provides volume reduction, flow attenuation, and water quality treatment. This is described more in Section 4.3 of the *Stormwater Management Guidance Manual*.

#### FOR COMBINED SEWER AREAS

The WQv must be detained and released at a rate not exceeding 0.24 cfs per acre of DCIA, and the volume must drain down within 72 hours. In addition, runoff from a minimum of 20% of the DCIA must be routed through a PWD-approved volume reducing SMP. This can be a separate SMP from the detention/slow-release facility, or both requirements can be achieved in the same SMP.

3. Disconnection of Impervious Area

IA that is considered disconnected is also eligible to receive credit. The requirements for the two types of disconnections are summarized below, and calculations justifying that these requirements are being met must be submitted as part of FORM B - Stormwater Credits Application.

◆ **Rooftop Disconnection**

1. The overland flow path has a positive slope of 5% or less
2. There are no inlets/drains in the general area downstream of the disconnected roof leader

◆ **Pavement Disconnection**

1. The contributing flow path over impervious cover is no more than 75 feet
2. The length of overland flow over pervious area is greater than or equal to the contributing length
3. The slope of the contributing impervious area is 5% or less
4. The slope of the overland flow path is 5% or less
5. There are no inlets/drains in both the impervious and receiving pervious areas

4. Tree Credits

Trees whose canopies are close to ground level impervious area may be eligible for credit. The credit is equal to the area of canopy overlap with the impervious area.