FACT SHEET- IMPERVIOUS AREA DISCONNECTION

Runoff Reduction Measure

IMPERVIOUS AREA DISCONNECTION

Including: splash blocks, rain chains, bubble up emitters, and pavement disconnection.

OVERVIEW

Impervious area disconnection allows storm water from impervious areas, such as rooftops and pavement, to be directed to pervious natural or landscaped areas and infiltrate into the soil. Impervious surfaces that drain directly to catch basins or storm drains are a directly connected impervious area. These areas prevent storm water infiltration into the soil or filtering through vegetation and soil. Impervious areas also increase the speed and amount of runoff from a site, which may contribute to peak flows and scour in downstream creeks and waterways.

This BMP addresses these issues by disconnecting direct discharges by using: splash blocks, bubble-up emitter, and paved area disconnection.

DOWNSPOUT DISCONNECTION- DESCRIPTION

Disconnecting downspouts and using splash blocks or rain chains is a low tech option to hard piped downspout systems. Existing downspouts can be retrofitted.

ADVANTAGES

- Reduces the size of downstream storm water BMPs.
- Can be used on sloped sites.
- Increases infiltration potential.
- Increases time of concentration.

- Can be used as a retrofit BMP.

LIMITATIONS

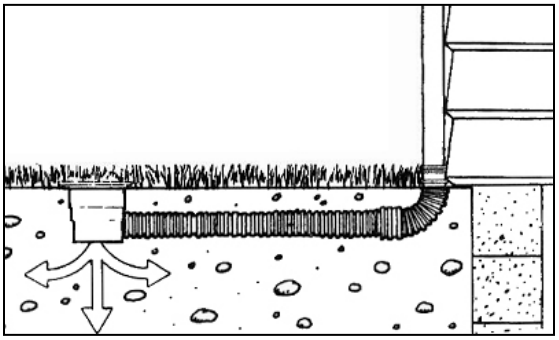
- Adjacent buildings need to be considered in design.
- Ultimate storm water collection needs to be considered in design.
- May not be appropriate on all sites due to space constraints.

KEY DESIGN FEATURES

- Sites should be evaluated to ensure disconnecting downspouts won't have negative impacts.
- Rain water must be directed away from foundations and footings.
- Downspouts should not be directed to paved areas or across sidewalks.
- Landscaped areas receiving roof water should be adequately sized to prevent runoff or erosion and to allow for infiltration.
- All calculations shall be completed using the "Storm Water Calculator" available at www.srcity.org/stormwaterLID.

BUBBLE-UP EMITTER-DESCRIPTION

Bubble-up emitters work very much like disconnected downspouts with splash blocks, but allow for storm water to be released further from the building or into landscape areas that are not directly adjacent to the building.



ADVANTAGES

- Reduces the size of downstream storm water BMPs.
- Takes water away from buildings.
- Increases infiltration potential.
- Increases time of concentration.
- Can be used as a retrofit BMP.

LIMITATIONS

- Adjacent buildings need to be considered in design.
- Ultimate storm water collection needs to be considered in design.
- May not be appropriate on all sites due to space constraints.

KEY DESIGN FEATURES

- Rain water must be directed away from foundations and footings.
- Downspouts should not be directed to paved areas or across sidewalks.
- 4" diameter SDR-35 pipe required as a minimum.

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- Distance and location of emitter relative to the building must be approved by a Licensed Geotechnical Engineer.
- Landscaped areas receiving roof water should be adequately sized to prevent runoff or erosion and allow for infiltration.
- Landscaped areas receiving roof water need to be designed to ensure proper drainage and to prevent ponding water.
- May be installed with a bottomless emitter to allow for infiltration. Bottom of emitter should be placed over drain rock to prevent sedimentation of pipe.
- Emitter should be equipped with "pop up" cover to prevent mosquito breeding.
- All calculations shall be completed using the "Storm Water Calculator" available at www.srcity.org/stormwaterLID.

PAVED AREA DISCONNECTION-DESCRIPTION

Paved areas that can be graded so that they drain onto pervious area, such as landscape or natural area can increase the opportunity for infiltration and minimize the size of downstream treatment.

ADVANTAGES

- Reduces the size of downstream storm water BMPs.
- Increases infiltration potential.
- Increases time of concentration.

LIMITATIONS

- Areas receiving flow need to be adequately sized and stabilized.
- Ultimate storm water collection needs to be considered in design.
- May not be appropriate on all sites due to space constraints.
- May be limited by site slopes.

KEY DESIGN FEATURES

- Rain water must be directed away from foundations and footings.
- Downspouts should not be directed to paved areas or across sidewalks.
- Landscaped areas receiving roof water should be adequately sized to prevent runoff or erosion and to allow for infiltration.
- All calculations shall be completed using the "Storm Water Calculator" available at www.srcity.org/stormwaterLID.