



The
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DOWNSPOUT DISCONNECTION

(splashblock disconnection)

In conventional construction, roof runoff flows through gutters and downspouts to a drywell, storm sewer or combined sewer. Disconnecting downspouts helps keep clean roof runoff from overloading the sewer system when it rains. Roof runoff can be redirected to a yard, garden, swale, or stormwater planter, or to a rain barrel or cistern for storage.

Downspouts can be disconnected on residential, commercial and industrial properties. The system you choose can be as simple or complex as your goals and site requirements allow.

Benefits

Downspout disconnection reduces stormwater in the sewer system. Storing roof runoff for irrigation or gray water systems conserves potable water and can reduce water bills. Disconnection is simple, inexpensive, effective, and easily integrated into the landscape design. In Portland, over 47,000 residential properties have disconnected downspouts, removing more than one billion gallons of roof water every year from the combined sewer system.

Maintenance

Maintenance is minimal. Check periodically to ensure the discharge location has proper erosion control and drainage. Check materials for leaks or defects, and remove accumulated leaves or debris, especially from gutters. Most materials can last for about ten years, and can easily be replaced.

Cost

Downspout disconnection is inexpensive. In targeted neighborhoods, the City pays homeowners \$53 for each downspout they

disconnect themselves, or will do the work for free. Materials such as elbows and extensions are readily available at hardware, building supply, and home improvement stores.

Safety and Siting Requirements

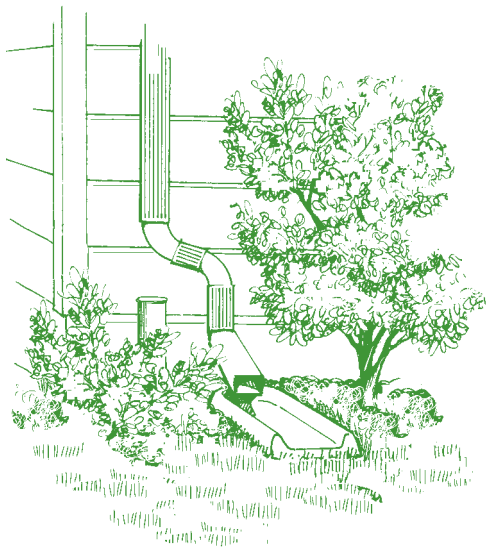
- A common method of residential disconnection is to cut the downspout above the sewer standpipe, plug the standpipe and attach an elbow and extension piece that directs runoff to the discharge point. In many cases, a splash block at the end of the extension conveys water away from foundations and prevents erosion.
- Roof runoff must be discharged at least five feet away from any property lines.
- Make sure the discharge from the pipe does not flow toward the building or neighboring property.
- In east Portland, the discharge point should be at least six feet away from basements and two feet away from crawl spaces and porches.



- For systems that free-fall to the air away from the building, the collection area below the concentrated discharge must have a minimum of 2 inches of gravel per story of free-fall or other protective material rated to withstand flows and be spaced away from the building foundation according to the standards above.
- Refer to Portland's Stormwater Management Manual for detailed information on sizing, placement, and design.

You can also replace downspouts with other structures that convey roof runoff to the discharge point, such as:

- Drip chains, usually made of steel, with a minimum three-inch diameter;
- Scuppers, which collect and concentrate the runoff and allow it to free-fall; and
- Decorative gargoyles that concentrate the runoff and allow it to free-fall.



Permits

- The City requires a permit to disconnect a residential downspout, unless working with the Environmental Services Downspout Disconnection Program. The City requires a plumbing permit if the downspout is directed to an onsite stormwater management facility such as a cistern.

Examples

Bureau of Environmental Services Water Pollution Control Laboratory,
6543 N Burlington Avenue,
under the St. Johns Bridge.

Oregon Convention Center,
NE 1st Avenue and Lloyd Blvd.

Friends of Trees,
3117 NE ML King Jr. Blvd.

Liberty Centre Parking Garage,
NE Oregon between 6th and 7th

George Middle School,
10000 N Burr



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www.cleanriverspdx.org or 503-823-7740

For Clean River Rewards information www.CleanRiverRewards.com or 503-823-1371

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