

# Vegetated Roofs

## What are vegetated roofs?

Vegetated roofs, also known as green roofs, living roofs, or ecoroofs, are lightweight roof systems used in place of conventional ones. They are typically constructed with a thin layer of soil and plants over a drainage layer and waterproof membrane.

## What are the benefits of vegetated roofs?

Vegetated roofs slow and filter polluted runoff, minimize drainage problems and flooding, and insulate buildings. They may last up to twenty years longer than conventional roofs. They are also a beautiful landscape additions that attract birds, butterflies, and beneficial insects to your garden.



## Where can vegetated roofs be used in Jefferson County?

Vegetated roofs can be installed on flat or gently sloping roofs. They can be retrofitted on an existing building, or designed for a new one. Houses, garages, garden sheds, and even dog houses and chicken coops are good places for a vegetated roof.



## Helpful Resources

### Green Roofs for Healthy Cities

<http://greenroofs.org/>

### Greenroofs.com

<http://www.greenroofs.com/>

### Green Roof Plants: A Resource and Planting Guide

by Edmund C. Snodgrass and Lucie L. Snodgrass

### Planting Green Roofs and Living Walls

by Nigel Dunnett and Noel Kingsbury

### Puget Sound Partnership—Stormwater & Low Impact Development (LID)

<http://www.psp.wa.gov/stormwater.php>

### Small Green Roofs: Low-Tech Options for Greener Living

by Nigel Dunnett, Dusty Gedge, John Little, and Edmund C. Snodgrass



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Vegetated Roofs are one method of low impact development (LID) used to effectively manage stormwater runoff.

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# Basic Components of a Vegetated Roof

## Waterproof Membrane

The waterproof membrane protects the underlying roof structure from leaks. Numerous companies manufacture waterproof membranes for vegetated roofs.

## Root Barrier

The root barrier layer prevents plant roots from penetrating the waterproof membrane. It is typically composed of a dense plastic material. Some types of waterproof membrane products function as a root barrier as well.

## Drainage Layer

The drainage layer minimizes standing water. It may consist of a thin layer of gravel or a rigid plastic drainage mat.

## Filter Fabric

The filter fabric prevents the migration of the growing medium into the drainage layer.

## Growing Medium

The growing medium, or soil mix, includes both mineral and organic content, such as pumice and compost. A layer of mulch helps to minimize water evaporation.

## Plants

Plants suitable for vegetated roofs should be drought-tolerant, low growing, perennial or self-seeding, and adaptable to extremes in wind and temperature. Sedums, ground covers, and dwarf ornamental grasses are commonly planted on vegetated roofs.

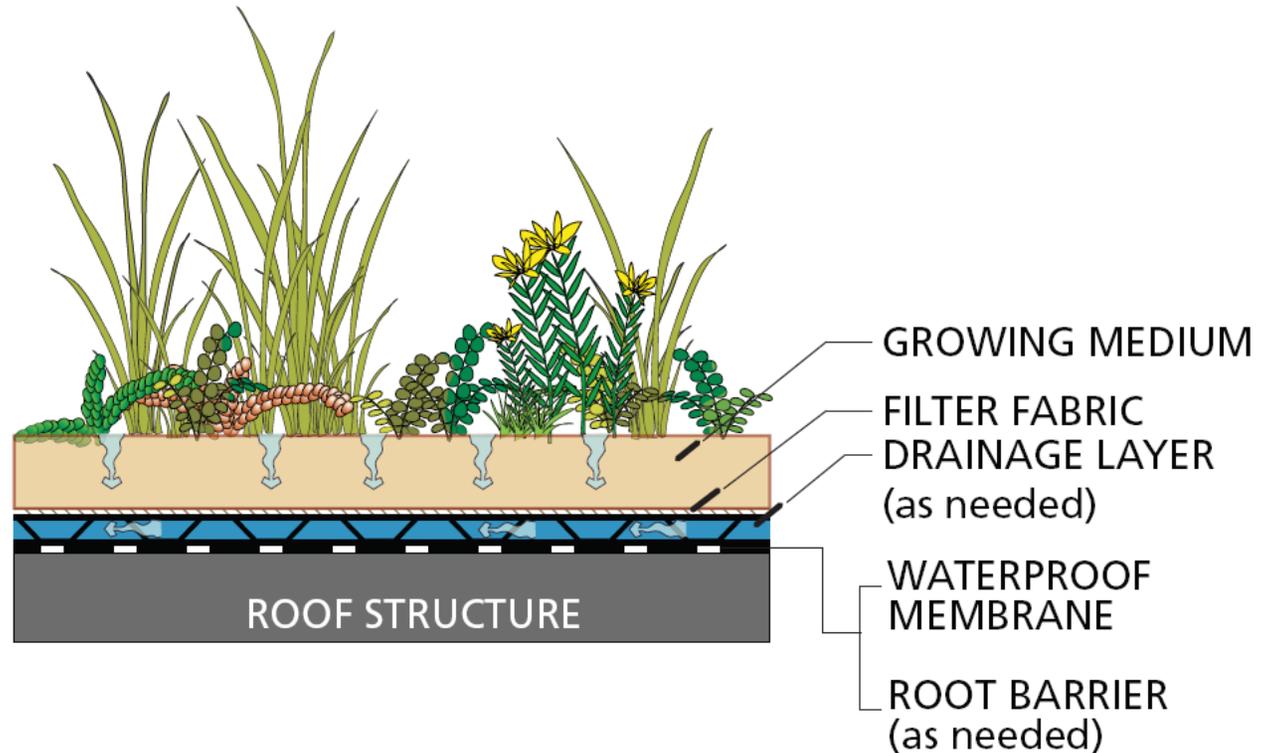


Image: Portland Bureau of Environmental Services

## How should a vegetated roof be maintained?

After installation, plants may need additional irrigation for the first growing season, especially during dry summer weather in the Pacific Northwest. Weeds should be removed twice per year. An annual top-dressing with compost is recommended. Inspect roofs regularly for leaks.

## How much does a vegetated roof cost?

A vegetated roof installation may range from \$10 to \$25 per square foot, compared to conventional roofing costs of \$3 to \$15 per square foot. While installation costs are higher, the long-term savings are valuable since a vegetated roof can last up to 40 years.