

Disadvantages

Green roofs have more demanding structural standards. Some existing buildings cannot be retrofitted with a green roof because of the weight load of the soil and vegetation. Depending on what kind of roof it is, the maintenance costs could be higher.



Costs

A properly designed and installed Green Roof system can cost 5 to 35 dollars per square foot. The cost depends on what kind of roof it is, the structure of the building, and what plants can grow on the material that is on top of the roof. Some cost can also be attributed to maintenance.

Extensive green roofs have low maintenance requirements but they are generally not maintenance free. Research has quantified the need to remove unwanted seedlings. Maintenance of green roofs often includes fertilization to increase flowering and succulent plant cover. If aesthetics is not an issue, fertilization and maintenance is generally not needed. Green roofs should only be fertilized with controlled release fertilizers in order to avoid pollution of the stormwater.



Mission: "The Watershed Alliance of York (WAY) is a coalition of stakeholders committed to being innovative leaders encouraging watershed-based planning, restoration and protection, through locally led conservation, education and stewardship initiatives, in York County and beyond."

Watershed Alliance of York, Inc.

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BE WATER WISE—
GREEN ROOF
YOUR HOME

*Encouraging watershed planning,
restoration and protection, in York
County and beyond*



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What is a green roof?

A green roof is a roof of a building that is partially or completely covered with vegetation and soil, or a growing medium, planted over a waterproofing membrane. This does not refer to roofs which are merely colored green, as with green roof shingles. It may also include additional layers such as a root barrier and drainage and irrigation systems. Container gardens on roofs, where plants are maintained in pots, are not generally considered to be true green roofs, although this is an area of debate. Rooftop ponds are another form of green roofs which are used to treat grey water.



Green roofs are also referred to as eco-roofs, vegetated roofs, living roofs, and greenroofs.



Benefits

Green roofs are used to:

- Provide amenity space for building users – in effect replacing a yard or patio
- Grow fruits, vegetables, and flowers
- Reduce heating (by adding mass and thermal resistance value) and cooling (by evaporative cooling) loads on a building – especially if it is glassed in so as to act as a terrarium and passive solar heat reservoir
- Reduce the urban heat island effect
- Increase roof life span
- Reduce stormwater run off
- Filter pollutants and CO₂ out of the air
- Filter pollutants and heavy metals out of rainwater
- Increase wildlife habitat in built-up areas

Types

Green roofs can be categorized as "intensive", "semi-intensive" or "extensive", depending on the depth of planting medium and the amount of maintenance they need. Traditional roof gardens, which require a reasonable depth of soil to grow large plants or conventional lawns, are considered "intensive" because they are labor-intensive, requiring irrigation, feeding and other maintenance. "Extensive" green roofs, by contrast, are designed to be virtually self-sustaining and should require only a minimum of maintenance, perhaps a once-yearly weeding or an application of slow-release fertilizer to boost growth. They can be established on a very thin layer of "soil" (most use specially formulated composts): even a thin layer of rock wool laid directly onto a water-tight roof can support a planting of Sedum species and mosses.

Another important distinction is between pitched green roofs and flat green roofs. Pitched sod roofs, a traditional feature of many Scandinavian buildings, tend to be of a simpler design than flat green roofs. This is because the pitch of the roof reduces the risk of water penetrating through the roof structure, allowing the use of fewer waterproofing and drainage layers.

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