

Extensive Green Roofs in Cold, Winter Climates

NEW YORK, USA, November 10, 2017 /EINPresswire.com/ -- High above ground level, invisible to many of us, green roofs are present in almost all climate zones mimicking nature, helping clean the air, cooling down temperatures, and keeping rainfall on-site, alleviating pressure on urban stormwater systems.

Green roofs, whether intensive or extensive, experience the same cycles of growth, flowering and dormancy that occur to plants on the ground level.

Vegetated roofs that are [properly designed for climates with four seasons](#), correctly installed and routinely maintained, have a greater probability of survival no matter the season.

Although extensive vegetated roofs are prevalent throughout North America questions arise as to their aesthetics, performance and survivability in winter climates. Some people question whether green roofs die in the winter or whether snow damages the vegetation. Others want to know whether the roof can be walked on in winter months or if vegetation needs to be re-seeded in the spring.

BEST PRACTICES AND SURVIVING WINTER

Extensive systems predominantly use hardy sedum species that can withstand harsh rooftop conditions year-round. Sedum are drought tolerant and thrive in harsh conditions. The best suited rooftop plants are pre-grown outdoors locally, for several months or a year ensuring they are acclimatized to the local climatic conditions. Ensuring that the vegetation is mature upon installation offers a higher probability of survival. In colder plant hardiness zones or in areas where there



Sedum species are hardy rooftop plants and that can withstand winter climates and harsh rooftop conditions year-round.



Green roof plants enter dormancy earlier than at ground level.

are extreme fluctuations in temperature, green roofs require a deeper depth of engineered growing medium to help mitigate the effects of intense temperature and moisture changes.

Additional growing medium acts as a thermal mass helping moderate the temperature and further hydrating the plants – helping reduce significant die-back in the winter or during hot summer droughts.

DORMANCY

In Autumn, as winter approaches, green roofs enter the dormancy cycle. As rooftop conditions are harsher than at the ground level, the exposed vegetation on rooftops enter into the dormancy cycle earlier than at ground level. Dormancy is a natural reaction to adverse environmental conditions. It can happen in the summer during periods of intense heat and drought, or in the fall in preparation for the coming cold winter months. During dormancy, plants simply stop further growth and development to conserve energy. Dormancy is a plant's defence mechanism to keep itself alive. The retreating plants are not dead. Dormancy synchronizes with the environment and can be triggered by a temperature drop or sudden changes in climatic conditions, such as reduction in rainfall. Green roofs lose their flowers and change colour creating a beautiful landscape of reds, bronze and browns, to deep purples. During winter dormancy, coniferous sedum plants retreat to form a dense mat of glossy and fleshy leaves, while the leaves of deciduous sedum species completely fall off.



Spent sedum flower stalks can be left as they encourage re-seeding give winter protection to bees and other fauna. Snow-covered stalks also offer a pleasing visual aesthetic.

SNOW, WIND & EXTREME TEMPERATURES

Once cold temperatures set in, the vegetated roof will go into dormancy and prepare for winter. The blanket of pre-cultivated vegetation shelters the growing medium from erosion from the strong, cold winds. Snow accumulation is ideal as it insulates the vegetation. A blanket of snow shelters the vegetated roof from strong winds and helps the plants retain moisture. If there is little or no snow accumulation, and the vegetated roof is subject to high winds, extreme fluctuations in temperature or a particularly severe ice storm, “winter burn” - when a plant dries out and dies - can occur. This may expose areas of growing medium that may be subjected to erosion by high winds. If such damage occurs to the vegetated roof, a straightforward procedure for repair can be followed the following spring.

Click here for complete article and [tips on installation, maintenance and repair](#) for long term survivability.

Copyright© 2017 Stormwater Capture Co. LLC. All rights reserved.

Cristina Senjug
Stormwater Capture Co
8557867626

email us here

This press release can be viewed online at: <http://www.einpresswire.com>

Disclaimer: If you have any questions regarding information in this press release please contact the company listed in the press release. Please do not contact EIN Presswire. We will be unable to assist you with your inquiry. EIN Presswire disclaims any content contained in these releases.

© 1995-2017 IPD Group, Inc. All Right Reserved.