

Benefits of Urban Green Roofs



New York City can have the most sustainable skyline in North America

Green roofs are roofs that have been covered with a waterproof membrane and growing medium, and planted with vegetation. Green roofs benefit building owners and tenants, but they also benefit the environment. Installing a green roof can not only change a building, it can change a city.

Improving Air Quality

Green roofs remove carbon dioxide and harmful airborne particles. Green roofs in Toronto, Canada remove nearly eight metric tons of air pollutants a year.

Lowering Temperatures

Green roofs insulate buildings, making them cooler in summer and warmer in winter. An increase of green area decreases ambient air temperature and mitigate the urban heat island effect.

Reducing Noise

Green roofs can reduce internal and external noise by nearly 40 decibels. The soil substrate and plants absorb sound, unlike a conventional roof that simply reflects it.

Educating Youth

A sustainable future starts with giving our children the tools they will need to solve the complex environmental challenges we are facing. Learning about green roof ecology gives students a better understanding of how ecosystems function.

Extending Roof Longevity

By protecting roof structures from weathering and degradation, green roofs decrease the cost of repairs and maintenance. Green roofs last up to twice as long as conventional roofs.

Conserving Global Wildlife

Amid urban infrastructure, green roofs provide much-needed habitats on otherwise unutilized space. They act as corridors allowing many species, including birds, bats, and insects, to move from one urban green space to another. Green roofs are used as foraging habitat by migratory songbirds each spring and fall. In New York City, 48 species of birds and 5 species of bats have been recorded using green roofs.

Increasing Energy Efficiency

Because of their insulating effect, green roofs can reduce energy costs year-round and prolong the life of HVAC systems.

Retaining Stormwater:

Green roofs can retain more than half of the annual precipitation that falls on them, with performance dependent on the local microclimate, precipitation characteristics, growing media depth, and vegetation type. Stormwater retained by green roofs reduces the volume of runoff discharged to separate or combined sewer systems, helping to keep our waterways clean.

Growing in Number

As of 2016, there were 60 acres of green roofs in New York City. While this may sound like a lot, **green roofs account for less than a tenth of a percent of the city's roughly 1 million rooftops**, about 40,000 acres of underutilized space. **If just 10% of the city's roofs were greened there would be 100,000 green roofs in New York City.**

To connect with experts, view citations for the facts above, and learn more about benefits, design, education, and New York City policy, visit GreenRoofsNYC.com.