



LANDSCAPE PERFORMANCE SERIES

Zoomazium at Woodland Park Zoo – Seattle, WA Methodology for Landscape Performance Benefits

Environmental

- ***Reduced impervious surfaces on the site by 15% by incorporating an 8,300 sf green roof and landscape areas. Replacing the roof area of the former primate exhibit with the vegetated roof of the Zoomazium also reduces the urban heat island effect.***

Before the construction of the Zoomazium, the 66,333 sf site had total of 34,215 sf of impervious surfaces (including the former primate exhibit roof). With the demolition of the primate exhibit and the construction of the Zoomazium's 8300 sf vegetated roof and other landscape additions, impervious surfaces were reduced to 24,265 sf, a 15% reduction.

Reducing Urban Heat Islands: Compendium of Strategies - Green Roofs published by the Climate Protection Partnership Division in the U.S. Environmental Protection Agency's Office of Atmospheric Programs shows that vegetated roofs play a significant role in mitigating the urban heat island effect by shading roofs and absorbing the sun's energy. Roof vegetation also absorbs energy through the process of evapotranspiration.

- ***Captures 29.9% of all rainwater that falls on the vegetated roof, according to 2 years of monitoring data from Seattle Public Utilities.***

Data collected by Taylor Associates with support from Seattle Public Utilities over a two-year monitoring period revealed that of the 148,749 gals of rainfall during an 11-month study period, 103,410 gals left the roof. This means that the vegetated roof captured (through detention and absorption) 45,339 gals or approximately 30% of all rain falling on the roof.

Social

- ***Increased zoo visitation by 15-20% with significant increases during the wetter months, according to zoo staff.***

Per attendance reports from the Woodland Park Zoo.