Stormwater Management

Capturing and Storing an Important Natural Resource



CASE STUDY FACTS

Year: 2010 Type: Semi-intensive Size: 9,500 sq. ft. Access: By appointment Greenroof System: Tray-based Cost: \$400,000 Designed by: Rana Creek



PROJECT BACKGROUND

The 1 South Van Ness green roof percolates stormwater, reduces peak runoff, and reduces cooling loads. The roof's top story collects rainwater in a 6,500 gallon tank and pump system. Rainwater is then used for irrigating the roof, which provides a suitable habitat for butterflies, honeybees, and hummingbirds. The cistern sits on an existing megacolumn that was placed on the interior of the building for a seismic upgrade.

During construction, the project team prioritized the reuse of roofing and insulation materials, River rock ballasts were reused around the edges of the living roof, provided by the Parks and Recreation Department, and pathways were made out of existing concrete roof pavers.

As climate change worsens, larger storms will occur more frequently. This makes the issue of stormwater management more prevalent in the city. Reducing stormwater runoff so that there is less water directed into storm drains is one way to help solve the issue of overflowing storm drains. 1 South Van Ness can then reuse the stormwater collected in the cistern to irrigate the native plants and reduce the need for potable water.

ROOF SECTION



ROOF SECTION LAYERS

- NATIVE PLANT SPECIES
- 2 SOIL & ORGANIC MATTER
- FILTER FABRIC
- 4 DRAINAGE ROCKS
- 5 FOAM INSULATION
- DRAINAGE LAYER/WATER-PROOFING
- BUILDING CONCRETE