

REPORT

MADWORKSHOP
Succulent Walls

SUCCULENT WALLS: INNOVATIVE ARCHITECTURAL IDEAS

Posted on January 3, 2022 by xavigonzalez



Categories: [Audio&visual](#), [Contributors](#), [Densities](#), [Energy and sustainability](#), [Formats](#), [MADWORKSHOP](#), [No Density](#), [PLANE—SITE](#), [Topics](#), [Urban Paradigms](#)

Tags: [Architect's role](#), [Architecture&climate](#), [Biomaterial](#), [California](#), [Citizen's role](#), [Citizens](#), [Climate change](#), [Collective development](#), [Design-based research](#), [Designer's role](#), [Drought](#), [Education](#), [Energy conservation](#), [Infrastructure](#), [Los Angeles](#), [Rain Water Harvesting](#), [Report](#), [Research](#), [Storage](#), [Sustainability](#), [Sustainable behaviors](#), [Sustainable Development](#), [USA](#), [Water infrastructure](#), [Watery Territory](#)

With its precarious relationship to water and lack of disaster preparedness, Southern California is in need of innovative architectural ideas that are simple to integrate into everyday life. In response to this real-world challenge, graduate students from a research seminar at UCLA Architecture and Urban Design, led by Chair and Associate Professor Heather Roberge, in collaboration with Mary and David Martin's MADWORKSHOP, have unveiled two prototypes that present a potential solution: Succulent Walls.

Currently, most rainwater is lost to stormwater collection rather than captured for landscape irrigation or other non-potable domestic uses. The Succulent Wall prototypes are easy-to-install water catchment systems that provide dual benefits: the storage of water, a critical and finite resource, and sustainable residential gardening. Each prototype is designed to capture rainwater from the roofs of single-family homes and channel it into dedicated storage bladders. From there, both prototypes direct the collected water to storage for emergencies and to the irrigation of a garden wall. One prototype adds a third use, directing filtered water to an interior bladder that makes visible one's water use above a basin for washing. In times of drought, the Succulent Walls' rainwater reserves may serve non-potable uses, reducing reliance on municipal water supplies. In an emergency such as a seismic event, both projects store 50 gallons of water reserve; enough to last a family 14 days in the event of an emergency.

The two prototypes are designed to function as off-the-shelf and fully-scalable solutions that anyone can install at home.

