

## Water Wise

Texas has been battling droughts for more than a decade, according to the U.S. Drought Monitor. So when architect Amy Bramwell's parents asked her to design them a house that generates its own resources, water reuse was a priority. The house is next door to Bramwell's own, nestled among a collection of 1950s homes in central Austin. Although the extensive renovation and addition isn't officially certified—Bramwell's father built it himself and couldn't qualify for certification programs—she sees the house perform at net zero energy and water consumption. Her dad was officially recognized as a Net Zero Hero by the city, however, for being the first person in Texas to install a whole-house gray water irrigation system.

"In my professional expertise, the house is truly net zero," says Bramwell, principal at Studio Steinbomer, in Austin. "It's super-insulated, with huge overhangs shading triplepane windows. A ground source heat pump takes care of most energy needs—five geothermal wells in the front yard run the air conditioning and heat water—along with a 9.4 kilowatt solar array. Rainwater irrigates landscape beds,

tops off the solar heated pool, and flushes toilets. And gray water is collected from every fixture except toilets and the kitchen sink."

The City of Austin changed its permitting rules so Bramwell's father could install this system. It took some back-and-forth with city permitting officials and it's the one thing her father couldn't build himself. But, Bramwell adds, her father was highly involved with the plumber and engineer who worked out the complex system. The water is collected from every bathroom sink and shower, the washing machine, and the dishwasher. Her parents use specific shampoos and detergents so water can be filtered and deposited into the yard. Manual valves bypass the system as needed—if bleach is used in the wash, for example. Similar valves also switch toilets from the 6,700-gallon rainwater tanks to city water during dry summer months

Bramwell worked with her parents for two years to perfect the design and incorporate her father's extensive list of green must-haves. Honoring the neighborhood's history, the architect drew inspiration from mid-century

ABOVE The beamed ceiling continues seamlessly from the interior's open living spaces to the deep, exterior overhangs, helping blur the boundary between inside and out.

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TOP Bramwell pushed her parents' design preferences toward a more modern look, which better fit the sustainable features, such as abundant glazing for daylight.

BOTTOM The architect warmed up the building's palette with natural materials including wood accents and local limestone (top).

design icons such as Joseph Eichler. High ceilings make space for abundant glazing shaded by deep roof overhangs that protect outdoor living spaces, which flow seamlessly from inside. A single-story floor plan suits the aesthetic, while allowing for increased accessibility as Bramwell's parents age in place. Numerous built-ins keep clutter and freestanding furniture to a minimum.

"One aspect of sustainability that should be talked about more is having multigenerational families living close together," Bramwell says. "It's been wonderful for us—especially during a pandemic while my twin daughters are young and we both work. And I know that when my parents get to a certain age, I'll be able to help them, so they can remain in their home and be a daily part of our family for much longer." CB

Shelley D. Hutchins writes about residential construction, design, and sustainable building.

Project
Allandale Mid-Century
Architect
Amy Bramwell, AIA, Studio Steinbomer, Austin, Texas
Builder
Jerry Bramwell, Austin



BONUS CONTENT in the digital issue: Achieving net-zero in Colorado