

TEAM LAS VEGAS

PRESENTS

Sinatra
LIVING

JURY NARRATIVES

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UNIVERSITY OF NEVADA LAS VEGAS

U.S. Department of Energy Solar Decathlon 2017
Jury Deliverables

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FOREWARD

Life begins when you start living passionately.

We designed a home that helps you live passionately by embracing every moment, simplifying your life, and giving you freedom. Sinatra Living is an energy-efficient and health-conscious home for active aging citizens of Las Vegas and beyond.

U.S. Department of Energy Solar Decathlon 2017 — Team Las Vegas

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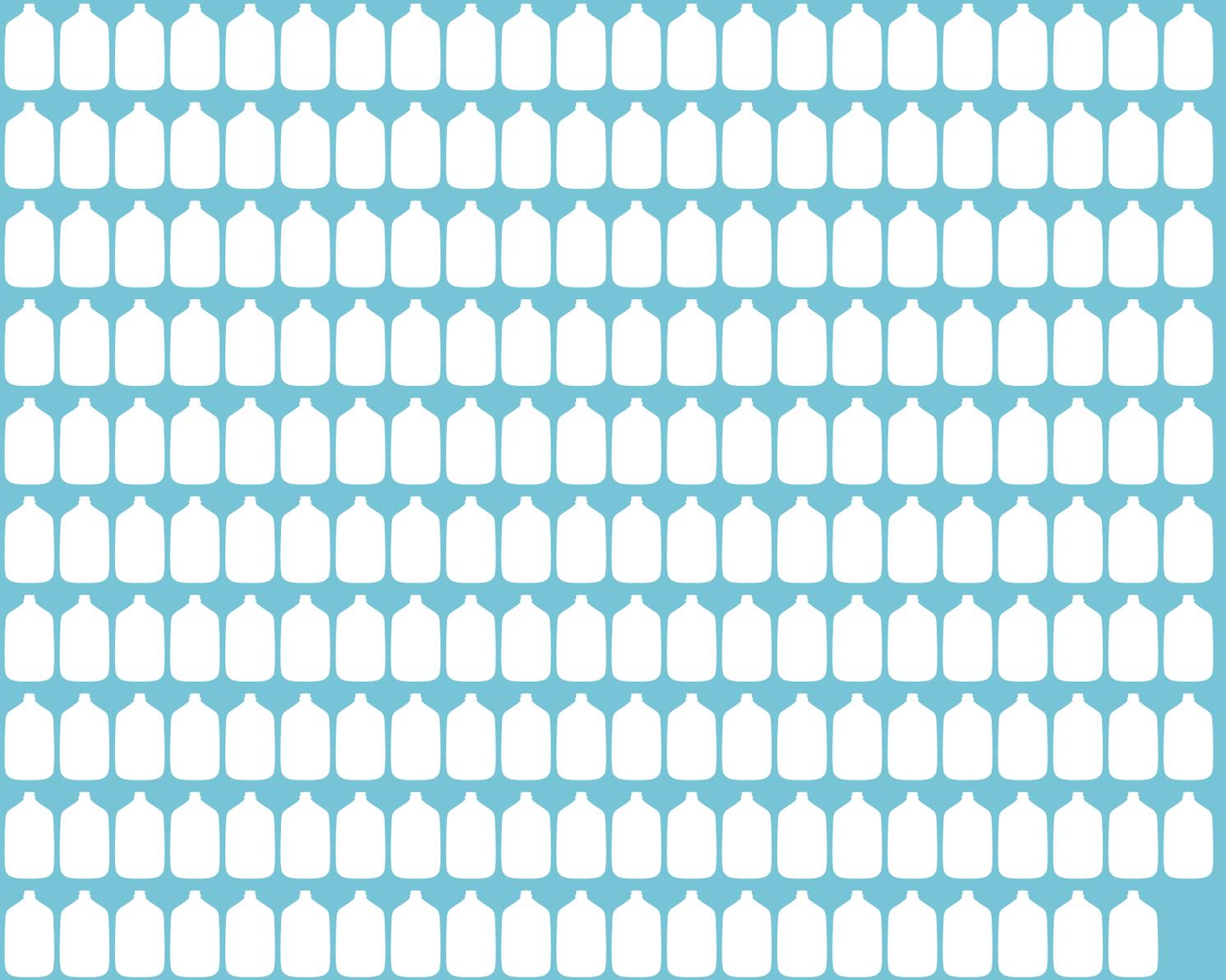
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WATER

Through water conservation and appropriate reuse, Sinatra Living makes sure that desert living is sustainable living.

Sinatra Living's plumbing systems are designed to conserve resources, reuse waste, and simplify landscaping.



ON AVERAGE, **219** GALLONS OF WATER PER CAPITA
ARE CONSUMED IN LAS VEGAS – EVERYDAY.

Southern Nevada Water Authority



RAPID POPULATION GROWTH
HAD BEEN BOTH THE CAUSE
OF AND THE SOLUTION
TO LAS VEGAS' WATER
CHALLENGES.

Patricia Mulroy —

Retired general manager of both the Southern Nevada Water Authority
and the Las Vegas Valley Water District.

The Colorado River system supplies water to 36+ million people in California, Arizona, Nevada, Wyoming, Utah, Colorado and New Mexico. It is being threatened by overuse, long-term drought, and climate change.

**We believe Sinatra Living is one agent of
change for residential water usage in Las
Vegas.**

CONSERVE

Introduction

Sinatra Living's plumbing systems are designed to conserve resources, reuse waste, and simplify landscaping. Low flow fixtures and appliances A watering schedule can be created with collected weather data. Water appliances in the home are specifically chosen to outperform the average water appliance. Plants were also picked out on a very specific criteria to outlast adverse temperatures and droughts.

Low-flow fixtures & Appliances

Compared to the average home in America, Team Las Vegas' water fixtures outperform others by 65 percent. The sinks, shower head, and toilet have all been chosen for a quick and easy way to conserve water and save money.

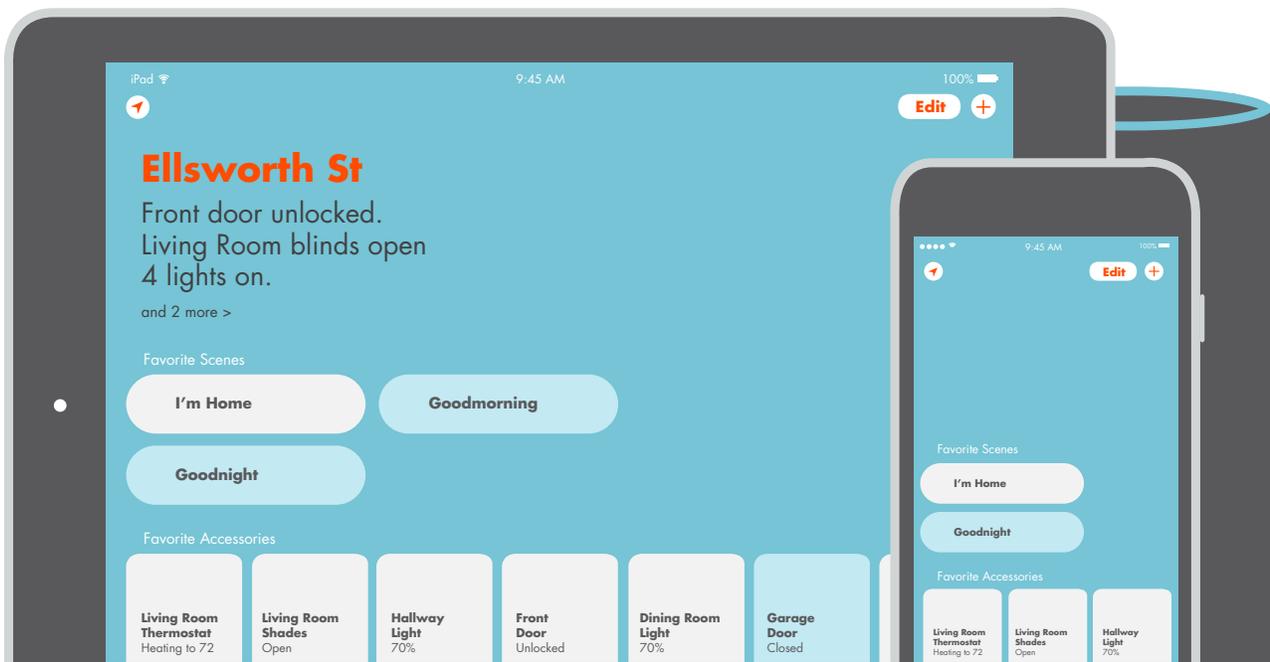
Team Las Vegas has picked out appliances that far outperform the common household. Vastly reducing the water bill use for the home. These items include the washer, dishwasher, and the refrigerator.

Water Monitoring Systems

A smart water monitoring system can observe and flag any excessive water use or possible leakage in the house. If showers are too long or suboptimal dishwashing by hand is taking place, data will be logged and can be accessed for analyzation and planning of future use. This interface is available on any mobile device.

Conservation

Team Las Vegas has many strategies to reduce their water footprint. There are three concepts that Team Las Vegas will use to excel in the water competition: Water conservation, reusable water sources, and landscaping. With an automatic home system taking care of your needs, the water bill will be that much cheaper.



REUSE

Introduction

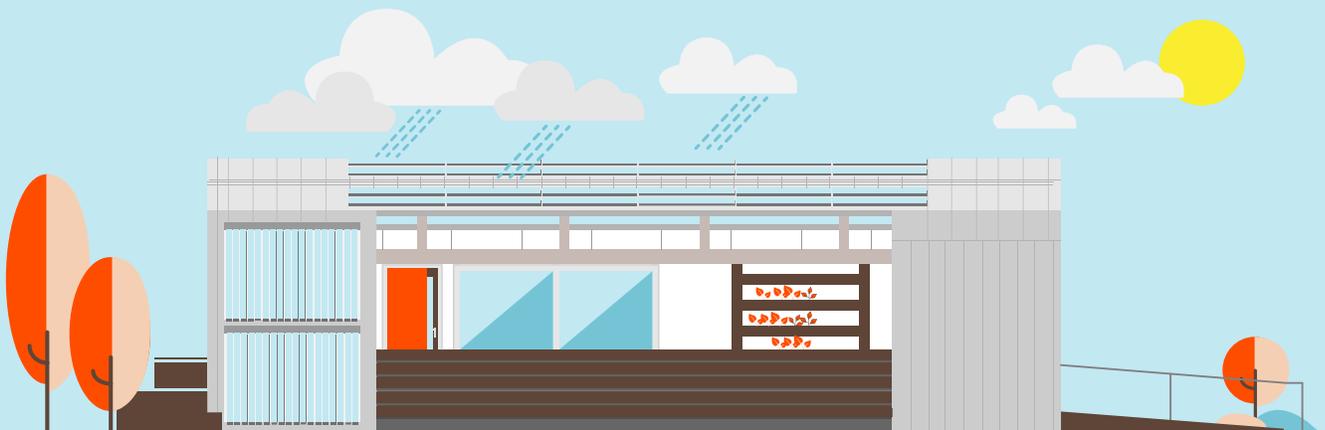
Another strategy Team Las Vegas plans to implement is reusing grey water and stormwater. Grey water is relatively clean wastewater which will be collected, pumped, and drained into the planters. In the dry desert, all water sources are welcome; the rain is an essential free source of water.

Collection

There are two different types of water sources collected: Grey water and Stormwater. The grey water is relatively clean wastewater that is harnessed from the shower and the washer. The stormwater is gathered by way of a gutter system that will guide rain into the planters. The GreenWall also is receiving water from the water condensation coming from the heat pumps inside the house.

Utilization

The team will collect from the shower, washing machine, and the heat pumps which yield an estimated reuse of 13.9 gallons per day. The water will be filtered and utilized to water plants on our GreenWall and planters.



LANDSCAPING

Introduction

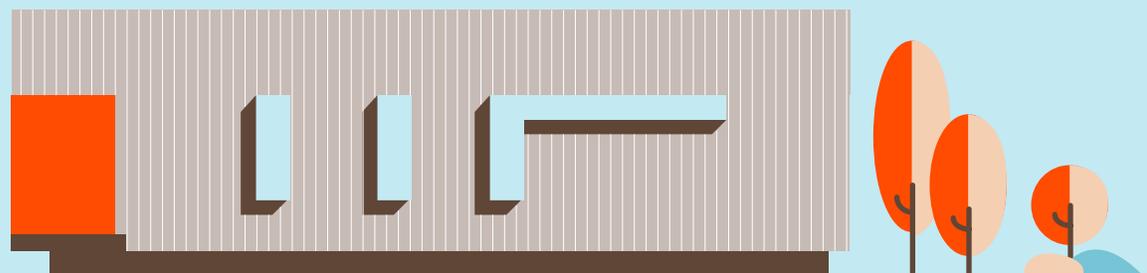
Team Las Vegas sifted through possible candidates of plants which not only adhered to strict criteria addressing the desert climate, but with the well-being of the resident as well. These plants are considered “bulletproof” which allow for the resident to have more free time away from tending their plants. Also, a GreenWall will be installed housing plants that are also “bulletproof” and are edible.

Bulletproof Plants

According to the Southern Nevada Water Authority, a bulletproof plant should be tolerant of heat, cold and wind; water efficient; low-maintenance; non-invasive; pest and disease resistant. The chosen plants that are chosen then are checked to see if they fit a certain height and width while also blooming around the same time together.

Hassle-free Landscaping

As described before, a watering schedule can be set to the user’s preference. Extremely resilient plants with low upkeep are chosen which just leaves the homeowner with the responsibility of pruning if they were inclined to do so.



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