

# Water Conservation



Grey Crawford

Less than one-fifth of one percent of our planet's water is accessible fresh water, and only about 30 percent of that is potable. Over 80 percent of municipally supplied water is used in buildings. Our building achieves a 60 percent water savings compared to a conventional building of the same size, resulting in an annual water savings of over 60,000 gallons. This is accomplished through an advanced water treatment and recycling system and the use of low-flow plumbing and high efficiency fixtures.

In addition to reducing our potable water needs, our building's water systems protect Santa Monica Bay by treating our building's runoff, which would otherwise pollute the bay. One aspect of the system works by funneling rainwater to our treatment facility in the building's basement. This treated water exceeds state-of-the-art water quality standards devised by NRDC experts that now apply in major urban centers throughout California. Rainwater that is not captured for our treatment system irrigates our plantings or percolates through porous paving materials to recharge underground water supplies.

### Water Treatment and Recycling System

A hallmark of The Robert Redford building is a sophisticated water recycling system that captures gray water collected from our showers and sinks, and rainwater. This combination of water is run through our Equaris Infinity disinfection and filtration network, then used for irrigation and flushing toilets. The system has a processing capacity of 800 gallons per day and reduces our water consumption by 50 percent. It incorporates two custom-built, 40-foot-long cisterns hidden beneath large planters that store a total of roughly 3,000 gallons of rainwater. For rain not captured by our cisterns, our building's porous paving system and landscaping planters allow water to be filtered, then percolate into the ground to recharge the groundwater, instead of contributing to urban runoff.

Environmental Planning and Design, LLC, facilitated the design and permitting of the integrated rainwater/gray water recycling system. Santa Monica, California: 310-451-2935; [www.epd-net.com](http://www.epd-net.com). The Equaris Corporation develops, manufactures, installs, and monitors water recycling and wastewater treatment systems. Afton, Minnesota: 651-337-0261; [www.equaris.com](http://www.equaris.com).



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## Dual-Flush Toilets

All the toilets in the building are dual-flush, using either 0.6 or 1.2 gallons per flush as needed. Conventional toilets use 1.6 gallons per flush. Caroma USA, Inc., Toronto, Canada: 416-925-5556; [www.caromausa.com](http://www.caromausa.com).

## Waterless Urinal

Two waterless, odor-free urinals contribute to the building's water efficiency and are more hygienic than standard models. Falcon Waterfree Technologies, Grand Rapids, Michigan: 616-954-3570; [www.falconwaterfree.com](http://www.falconwaterfree.com).

## Low-Flow Plumbing

All the sinks and showers in the building are equipped with low-flow aerators to reduce water consumption. Zurn, [www.zurn.com](http://www.zurn.com). Symmons, Inc., Braintree, Maryland: 781-848-2250; [www.symmons.com](http://www.symmons.com). Delta Faucet Company: [www.deltafaucet.com](http://www.deltafaucet.com).

## Piping

Much of our piping is a Kitec brand composite made of aluminum and non-polyvinylchloride plastic. It emits no harmful gasses. IPEX, based in Toronto and Ontario, Canada: 800-463-9572; [www.ipexinc.com](http://www.ipexinc.com).



Gary Leonard

## Landscaping and Irrigation

The building's landscaping includes drought-tolerant plants. This Xeriscape is watered with a drip system that emits measured amounts of water through small tubes to each plant's root ball. The system is far more efficient than sprinkler use, which typically causes up to 60 percent of water sprayed to evaporate without ever reaching roots. Bamboo plants on both sides of the building are watered with a high efficiency subterranean system. The system allows the plants to absorb water only when needed through capillary action. It dramatically reduces evaporation and is 30 percent more efficient than a drip system.

All of the building's plants are irrigated with recycled water from NRDC's on-site water treatment system. The irrigation system was designed by Environmental Planning and Design, LLC, Santa Monica, California: 310-451-2935; [www.epd-net.com](http://www.epd-net.com).

### Porous Paving

The white gravel around the building's exterior is GravelPave2 Porous Paving, made of 100 percent recycled materials. The gravel filters pollutants and lets rainwater enter the groundwater. Typical hard-surface paving causes polluted water to run off into storm drains and waterways. Invisible Structures, Inc., Denver, Colorado: 800-233-1510; [www.invisiblestructures.com](http://www.invisiblestructures.com).

### Rooftop Terrace Flooring

Unlike solid, continuous flooring, the concrete squares or pavers on the rooftop terrace allow rainwater to drain to the cisterns and enter the building's water recycling system. Wausau Tile Inc., Wausau, Wisconsin: 800-388-8728; [www.wausautile.com](http://www.wausautile.com).



Tim Street-Porter