

Reducing Water Needs At A Desert Property

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In Arizona, a program to replace the green grass turf with native desert landscape around Phoenix Sky Harbor International Airport is anticipated to save \$400,000 annually in labor and materials as well as millions of gallons of water. The airport has embraced the xeriscape approach—a landscaping method developed for arid and semi-arid climates that utilizes water conserving techniques (such as the use of drought tolerant plants, mulch, and efficient irrigation).



(Photos: Phoenix Sky Harbor International Airport)

This turf replacement and landscaping project, completed in June 2019, is a step toward a more sustainable future for the airport—and the city. This region is known for its dryness and [intense summer heat](#), which puts a premium on water. This means water conservation is essential for the Phoenix metropolitan area's long-term sustainability.

Water consumption at Sky Harbor airport averages 30 million gallons per month, necessitating such conservation efforts like the use of low-irrigation xeriscape. Removing all grass turf (that demands high water consumption) from

airport grounds is expected to dramatically reduce water usage, by 5.375 million gallons per year.

Replacing the grass (that also required high maintenance as well as water) is suitable desert scenery that includes the following:

- 435 new low-water-use trees
- 75 saguaros (type of cactus), 61 of which were salvaged from the areas where turf was removed
- 275 large signature cacti (ocotillo, senita, totem pole, Mexican fence post, organ pipe, and Argentine toothpick);
- About 2,900 accent plants and shrubs

These succulents and drought tolerant plants are hallmarks of the desert. But, meanwhile another new landscape feature created as part of this project is meant to evoke aviation imagery from an unexpected source: rock-filled gabion baskets.



Gabion baskets are typically used near slopes and banks to combat water erosion.

Gabion baskets are typically used near slopes and banks to combat water erosion, as well as to offer a visually-pleasing element. At Sky Harbor, there are now 8,950 linear feet (or 1.7 miles) of gabions in areas where turf used to grow, and these are designed to mimic the swirling wingtip vortex created by high-speed jets.

“This union of primitive landscaping and high-tech, airborne jets is the perfect celebration of the job we do and the place where we work,” said James E. Bennett, director of aviation services at Sky Harbor. “Visitors arriving from around the world are now welcomed by the sight of terrain that reflects our natural Sonoran Desert habitat and commitment to [environmental sustainability](#).”

The Aviation Department created a Sustainability Management Plan with the goal of reducing water consumption by 10% by 2020. The Aviation Department worked with the Phoenix Water Services Department by performing water audits at its three airports, and developed a Water Conservation Plan outlining best opportunities for water conservation.

Phoenix Mayor, Kate Gallego, echoes the call for sustainable resource use. "Phoenix is deeply committed to sustainability and has pledged a thirty percent reduction in greenhouse gases community-wide by 2025. A vital part of these conservation efforts is keeping water top of mind in every decision we make," she said. "Steps, such as those taken by Sky Harbor, to reduce water use ensures our beautiful city will continue to thrive for generations to come. N

[Phoenix Sky Harbor International Airport](#) is part of the Phoenix Airport System, which is owned and operated by The City of Phoenix.

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