

Golf courses slice water use to cope with ongoing drought

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Golf courses across the central San Joaquin Valley — [like courses and country clubs throughout the state](#) — are throttling back on irrigation and reducing the acreage of grass that they must water as they cope with California's drought.

Since Gov. Jerry Brown announced mandatory targets for water-use reductions earlier this year, course operators are facing many of the same restrictions as residents and businesses in the parched Valley: find ways to make do with less water. And many course managers say they're going to be able to do it without affecting the quality of play for golfers.

1,140

Golf courses in California, according to www.golflink.com

"We're hearing a lot in the golf industry that 'brown is the new green,'" said Jeff Christensen, president of Sierra Golf Management, which operates [Madera Golf Course](#) and [Pheasant Run Golf Club](#) in Chowchilla. "We didn't need to be told by the governor that we're in a new drought. We knew it a long time ago."

At Madera's municipal course, Sierra Golf has reduced the amount of turf being irrigated by almost 30% in the last 16 months, "mostly from exteriors and nonessential areas, and we've got more room to take out more if necessary," Christensen said. "For us, it's really more of an economic mandate. It's a matter of whether you even have water available."

Christensen said the Madera course hasn't received any canal water for three years and has been forced to rely on pumping from wells — just as neighboring farms are doing.

"And the water table is going down," he said. "The almond farmers around us are drilling for water, we're looking for water. We're all searching for the same aquifer right now."

At the Chowchilla course, a three-year turf-reduction program has taken out almost 40% of the grass.

Fresno's private [Sunnyside Country Club](#), which contracts with Sierra Golf for maintenance, has also worked hard to get ahead of the water-reduction curve. "We kind of saw this coming years ago," head golf pro Steve Pellegrine said.

The club installed a new water-saving irrigation system last year at a cost of about \$2 million, and is undertaking its own turf-reduction program this year. "We feel like we're going to be able, out of 110 acres, to take about 20 to 25 acres out of irrigation," Pellegrine said. "We're going to get that 25% that Gov. Brown is asking for with no problem."

Sunnyside's turf reduction is coming largely from areas that are typically out of play, Pellegrine said. Even if a golfer hits a wayward hook or slice, however, golfers shouldn't expect to recover from a thick patch of dry weeds. "Our plan is to not leave brown grass," he said. "We plan to turn that into more of a landscaped, desert area. We want to make it more aesthetically pleasing."

In California, an average 18-hole golf course sprawls over 110 to 115 acres and by conservative estimates uses almost 90 million gallons of water a year — or enough to fill 136 Olympic-sized swimming pools.

Source: Mike Huck, water management consultant who works with golf courses statewide (via The AP)

In some parts of the state, especially in Southern California, water agencies are serving up turf-reduction rebate programs offering \$2 to \$3 per square foot of grass that is removed. That has prompted a stampede of interest from golf courses in those areas. A golf course can easily tear out up to 25 acres of grass next to fairways and around the clubhouse without affecting play, said David Fleming, a golf course architect in El Cajon.

Peter Brostrom, water use efficiency program manager for the state Department of Water Resources, said his agency is not aware of any turf-removal rebates being offered in the Valley for golf courses.

The state is preparing to conduct a comprehensive survey of water services across California to create an inventory of rebate programs en route to implementing part of Gov. Brown's executive order to promote turf removal for residential and large-landscape users in the Valley and statewide.

Brown's goal is for the DWR to "lead a statewide initiative, in partnership with local agencies, to collectively replace 50 million square feet of lawns and ornamental turf with drought-tolerant landscapes." That amounts to about 1,148 acres of grass across the state.

Other Valley courses are taking different steps to pare their irrigation.

Bill Finn, a longtime Fresno golfer who compiles a weekly golf-events column for The Bee, said he has taken notice of the measures in recent years. "What a lot of people don't realize is that the irrigation systems at most of these courses are very sophisticated now," Finn said. "They can set their timers so they can water at night, so they don't have all the evaporation. They can take out the irrigation on superfluous areas that are not part of the course. ... They're probably more conscious about it than most homeowners."

At [Ridge Creek Golf Course](#), a municipal course owned by the city of Dinuba in Tulare County, all of the water used to irrigate the 18-hole course comes from the city's nearby wastewater treatment plant. "We use 100% recycled water," general manager Joe Wisocki said. "We are no strain on the natural resources."

But the golf course is doing what it can to cut back on its water use, mindful that residents and businesses are required to reduce their demand.

Ridge Creek, like some other courses, has installed soil sensors to monitor moisture conditions on the course and a weather station that calculates evapotranspiration — the rate at which water is lost to the atmosphere through both evaporation from the soil and what plants and grasses take up through their roots and transfer into the air. Those calculations are used to set shorter sprinkler run times when water is most needed by the course, rather than by a rote schedule, Wisocki said.

"We've reduced or eliminated irrigation in nonplay areas. We've worked to reduce runoff, and we're doing a lot more hand-watering of the greens when necessary," he added. "If you have the right grass types, you still can have a great playing surface." Ridge Creek and plenty of other Valley courses have fairways that are Bermuda, a heat-loving grass. "Our greens are extreme bent grass, which also enjoys the heat, but it's cut so tight, you still need to baby it and hand-watering helps that," Wisocki said. The roughs are a drought-tolerant variety of fescue, and it requires less irrigation because it is allowed to grow tall.

Crews have also cut back on watering fairways and greens at [Sherwood Forest Golf Club](#) near Sanger, said director of golf Frank Piccolo. Within days of Brown announcing his call for mandatory water-use reductions, representatives of the Kings River Water District visited the Sherwood Forest course to discuss irrigation reductions.

"We're not watering nearly as much, and we're not watering at all in between the fairways," Piccolo said. "We were already probably 10% to 15% below our normal water use before, and now we've cut back 30%."

Sherwood Forest has rights to water from a slough of the Kings River and pumps no groundwater to irrigate the course, he said. "We're in a position where any water we put on the course goes right back into the water table"

because the course is near the river.

From a playability standpoint, drier is definitely better.

Steve Pellegrine, Sunnyside Country Club head golf pro

Course managers say less irrigation and browner grass should not cause the quality of play to suffer for golfers. “The [U.S. Open \(at Pinehurst in North Carolina\)](#) showed us that last year,” Ridge Creek’s Wisocki said. The Open was played on a course that had drier-than-usual conditions for a major tournament.

“It’s really the best thing that’s happened to this course because a lot of the time it was too wet,” Piccolo said of his Sherwood Forest course. “It actually plays better now.”

It will help, of course, if one can hit the ball straight and keep it on the fairway. “If you hit it really sideways, you’re going to find the dirt at places like Pheasant Run; you’re going to get a bare lie,” said Sierra Golf’s Christensen. “Overall, I’d rather have a strong golf course with less turf than a lesser course with more turf.”

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How golf courses are dealing with drought

Turf removal: Some water agencies are offering turf removal rebate programs to residential and commercial customers. Many are replanting with drought-tolerant species for a desert garden look.

Smart irrigation: Newer technologies such as wireless moisture sensors, evaporation monitors and on-site weather stations allow groundskeepers to irrigate where it is needed, instead of drenching large areas with sprinklers. Golf courses are also converting to drip irrigation systems and high-tech sprinkler heads.

Watering less: Small changes, such as watering less in areas that don’t get a lot of foot traffic, can help cut back on waste. Many golf courses are now letting the turf turn yellow in hard-to-maintain areas. They are also spreading the word among golfers that the greens might look a little less vivid this summer.

And if it doesn’t rain? Some are looking to Australia and desert golf havens like Las Vegas for ideas. In Australia, which just emerged from a decade-long drought, some golf courses hooked up to sewer lines and built mini-treatment plants to produce irrigation water. That could make financial sense in California if the dry spell continues and water rates soar. In Las Vegas, a pioneering water agency used satellite-positioning systems attached to golf carts to track exactly which areas of the course got the most foot traffic. The data allowed courses to determine which areas were best for turf removal.

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