

Salinity, effluent, water conserving golf course design—only three of a myriad of factors affecting a shrinking, and often-times mismanaged, resource—water.

For the multi-billion dollar Green Industry, water use, quality, quantity and conservation is the lifeblood coursing through its veins.

Golf course superintendents, landscape contractors, landscape architects, irrigation contractors and companies, seed growers, arborists, equipment manufacturers, turf associations and landscape managers are all inextricably bound together by water—and we are using it up and polluting it faster than nature can replenish and purify it.

Couple this with the ominous threat of water rates tripling, quadrupling or going even higher in the next five years and the urgency presents itself loud and clear at our doorstep.

But are we listening?

Slaking the thirst of urban as well as agricultural customers is becoming an increasingly important priority.

A resource that has always been available at the flick of a faucet, that has flowed with unbridled force down the nation's riverbeds and that filled the cavernous underground aquifers, is diminishing—the end result of waste, burgeoning populations and a sometimes uncooperative Mother Nature.

Aurora, Colorado, for a few years has had not only local ordinances restricting water use for lawns, but also the size of the area that can be planted in grass. Five years ago Arizona's golf courses were sucking up more than 160 million gallons of water a year.

Enough water, but ...

The United States as a whole has adequate supplies of water. Regional and local shortages, though, are an imminent possibility.

No one can guarantee where rain will fall. No one can predict how large the snowpack will be. Nature holds all the cards and trying to predict good weather is like trying to draw to an inside straight.

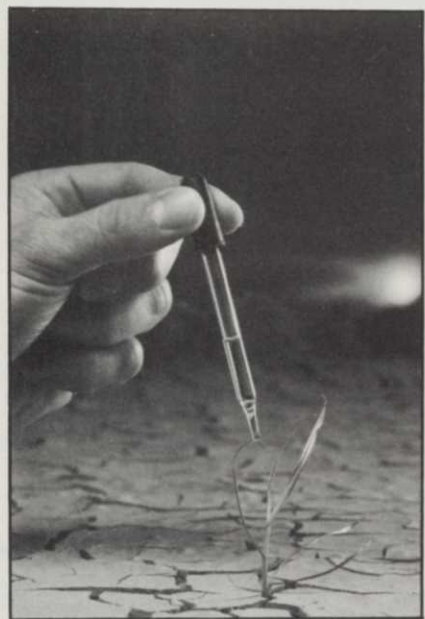
The problem, while more severe in certain areas, is by no means limited to one part of the country.

In this issue, WEEDS TREES & TURF will take a look at a few of the facets of this multi-faceted problem—salinity, use of reclaimed water, use of effluent, and golf course and landscape design in three key geographical areas where water is critical—Texas, Florida and California. (These three states alone, and Idaho, account for 25 percent of the water used nationally.)

Next month, we will look at some solutions to the water crunch through turfgrass research, concern by irrigation companies and involvement by Green Industry associations.

The overall picture, while serious, looks hopeful, mainly because of the far-sightedness of Green Industry individuals and associations. The problem, however, is by no means solved.

The greatest challenge, that of implementation and additional research, yet remains. If not met, the future of many businesses, livelihoods, recreational areas and our standard of living itself, could, literally, be slipping down the drain.



Thirsting For Answers

The flood of statistics is staggering. Human consumption of water is a drop in the bucket compared to the whopping 80 percent swallowed up by agriculture in the United States; that translates into 210 of the 450 billion gallons a day used. That 80 percent figure includes much of the water consumption needed by the Green Industry.

You've heard the figures before, but the numbers speak for themselves: It takes 3,000 gallons to irrigate a 5,000-square-foot lawn to one inch, 120 gallons to produce an egg, 300 gallons to produce a loaf of bread, 4,000 gallons to produce a pound of beef.

On the average, it takes about 1,000 gallons to produce each pound of food we eat. Even before packaging, a McDonald's Quarter Pounder takes up 1,427 gallons.

Personal activities, such as flushing the toilet, taking a bath or doing the wash accounts for about 100 gallons a day per person.

Water makes up only 1/10th of 1 percent of the earth's mass. Of that amount, less than 1/2 of 1 percent can be used for human consumption. Most of the world's water supply is locked in oceans (97 percent), polar ice caps (2.2 percent) and under-

ground water reserves too deep to tap (.3 percent).

Nationwide, we are drawing on groundwater resources at a rate of more than 30 trillion gallons every year for agricultural, industrial, municipal and domestic uses.

The Ogallala aquifer is the largest in the world, 800 miles long, 400 miles wide and is located below eight mid-western states. Its peak 650 trillion gallons of water continues to be depleted.

Largest user

Irrigation is the largest consumptive user of water. Per day, 73 billion gallons is taken up by vegetation and transpired as vapor into the atmosphere.

The U.S. Department of the Interior reports the waste and loss of water from public and irrigation supplies is large. About 20 percent of the water withdrawn from public supplies and about 17 percent of that withdrawn for irrigation use is lost before being used, mainly through leaking pipes, mains and irrigation ditches. Altogether, such water losses in just these two categories account for an average of almost 30 billion gallons per day.

continued on page 22