

FLORIDA

Water, water everywhere, but quality is poor

Florida is a microcosm of different water problems.

The pounding Atlantic on the coast brings with it salt intrusion problems. In the western part of the state, where the water table is high, there is impervious rock and drying winds which cause defoliation. The rest of the state has well-drained soils, but water high in total dissolved solids.

Water is abundant in Florida. The problem is quality and a sufficient potable supply.

Because of the state's sand soil, chemical leaching into the groundwater supply has fathered such controversial issues as EDBs leaching from citrus groves into the groundwater. The nutrient-holding properties of sand are also not good, allowing nutrients to leach out. Fortunately, because of the amount of rainfall, salt build up is flushed away. In South Florida, the soil itself has some phosphorous but doesn't move in the soil. Nitrogen and potassium have to be added on a regular basis. The water table is also at four feet, which causes the soil to dry from the top down.

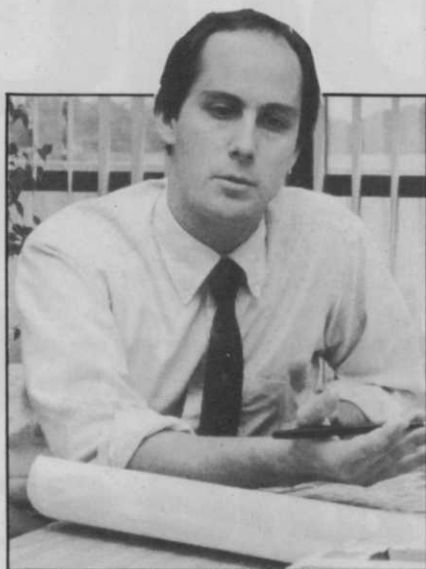
In South Florida, water for irrigation uses comes from city water supplies and pond or canal water. Its aquifer is porous and exposed to the surface.

The northern part of the state is supplied by an aquifer in another state.

Dr. Bruce Augustin of the Institute of Food and Agricultural Sciences, University of Florida, Ft. Lauderdale, says the state has great potential to use effluent, but the local health officer is the major stumbling block.

"There has been such a panic created by other incidents in the past," he says. "It's an unfortunate situation because our effluent is relatively clean. There's no heavy industry and therefore no heavy metal contamination. Effluent is also an unrestricted water supply."

Augustin said effluent use is more predominant in the Orlando and St. Petersburg areas.



Landscape architect Matt Mathes

The Palm Beach County Utilities and Engineering Dept. is currently studying effluent disposal and water reuse for eight golf courses in the south county area, as well as for lake recharge.

Changing attitudes

Matt Mathes, a landscape architect with the largest architectural, engineering and planning firm in Florida, Reynolds, Smith and Hills, agrees that effluent use still carries the albatross of "smelly sewer water."

"I think the problem with effluent use is twofold," explains Mathes. "For one thing, there is a real fear of contamination from the source. The second thing is inertia; because it's a relatively new idea, it's hard to accept. The commercial and public client should be leaders in this movement to get it to a more acceptable level."

There's also a cost factor involved. When effluent is being used, dual water mains have to be installed—one for the effluent and one for potable water—and that translates into more cost.

In Boca Raton, Florida, an affluent city in South Florida between Ft. Lauderdale and West Palm Beach, the

city's Community Appearance Committee has enacted an ordinance prohibiting staining of concrete from irrigation spray. Because South Florida water is so high in mineral content, if irrigation spray is directed toward buildings and sidewalks, an iron-colored stain is left on the cement.

Taking in the whole water picture of South Florida, Mathes commented, "Maybe our sense of aesthetics must change. Cities can demand too much. Maybe instead of putting use restrictions on certain types of water, we should make brown concrete."

Mathes' point is well-taken. Changing attitudes, whether it be concerning the social acceptability of effluents, the aesthetic appeal of buildings or water usage policies at the local, state and federal levels, seem to be another thread weaving its way through this complicated tapestry.

The competition among Florida's cities to lure prospective residents is intensifying. The general trend has been toward "good-looking" cities with many of them modeling themselves after Boca Raton.

Another water source, lakes, opens up a whole new area of problems—the biological realm. The myriad number of organisms that can spawn and infest plants once the water is applied is mind-boggling. This irrigation source, however, is prevalent among residents. In fact, according to Mathes, it's their number one choice, when available, for irrigation use.

"There's a lot of apathy to contend with out there," he says. "There have been signs of an increased awareness, though, in water conservation. People are making more intelligent decisions."

Because Mathes has felt this awareness, he, personally is in Florida and not Texas or California.

"There's an opportunity here to build patterns of living in new and better ways. All the emerging patterns are here."