

Saltwater can be a problem in some area wells

During periods of dry weather, saltwater from the gulf and bays can move into wells. This saltwater intrusion occurs as a result of over-pumping of coastal wells, especially during periods of dry weather. This problem is complicated by an increase in population (more and more people relying on irrigation wells to water their landscapes) and from the lack of knowledge on how to design and irrigate a coastal landscape.

Basically, what happens is that freshwater is being pulled out faster than it can be recharged. Saltwater is denser than freshwater and as a result exerts a constant pressure to flow into the shallow aquifers along Florida's coasts. As long as freshwater levels in the aquifer are above sea level, the freshwater pressure limits the inland movement of seawater. But when the water level drops, saltwater moves laterally into this previously nonsaline water.

Once the saltwater intrusion begins, continued pumping of water from an aquifer will result in poorer quality water for longer periods. This is a collective problem because every well is not tapped into its own aquifer. Many wells are pulling from the water available in an aquifer. During dry weather, when many people are relying on well water for irrigation, collectively a lot of water is being removed all at the same time. In the absence of sufficient rainfall to replenish the aquifer, the salt content may progressively increase.

As the salt level increases, certain plants with low salt tolerance begin to decline. Salt injury symptoms usually progress slowly. At first, a few of the more salt sensitive plants will begin to look sickly. They may exhibit a burned, brown appearance around the margins of their leaves. Individual branches may begin to drop their leaves and die.

Some common landscape plants that would be expected to show early signs of salty irrigation water are American holly, azalea, boxwood, camellia, crape myrtle, dogwood, gardenia, red maple and spirea. There are other plants that have a high tolerance for salt. Some of these include confederate jasmine, daylily, Indian hawthorn, liriope, live oak, oleander, pittosporum, wax myrtle and yaupon holly. A person designing a coastal landscape would do well in seeking out those plants that have a high tolerance to salt and avoiding those plants that have a low tolerance to salt.

There are tests to determine the salt concentration in irrigation water if you suspect a problem. The University of Florida Extension Office in your county has forms for use in sending samples to the University for testing. Private laboratories may also provide this test. There is a charge for these tests.

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