

News from the watershed: Erin McCarta

Lake Levels and Evaporation

The current status of lake levels in Highlands County was given and explained in our last article. There are many more factors that affect lake levels that were not explained, however. A major factor is the evaporation rate. Those folks that own swimming pools are very familiar with spring and summer evaporation rates. It is not uncommon to need to add a couple inches of water to the pool every week, as well as more chemicals. The same process occurs to lakes and other waterbodies, but there is no mechanism for refilling on demand.

On average, the evaporation rate from our lakes is approximately 55 inches per year. Compare that number with the average rainfall to our lakes: 55 inches per year. That is a fairly straightforward concept to grasp. So what happens when the average rainfall is only 40 inches for the year? The evaporation rate is still 55 inches per year.

It is inconvenient that there is no spigot to turn on and refill the lakes, and that we must rely on weather patterns and rainfall to do that job. With a lack of rainfall, or a shortage from the average, the water in our lakes continues to evaporate. But don't be fooled by countywide lake level numbers and staff gauge readings. The statistical data given in most reports on lake levels is based on an average of a sample set, which does not include all lakes in the county. Currently, the lake levels in the southern portions of the county, such as the Lake Placid area, have not experienced the drastic declines that many lakes have in Sebring and Avon Park. Rain gauges across the county have shown in the past couple months more rainfall in the Lake Placid area than in Sebring and Avon Park. This may account for the less drastic lake levels in the southern lakes of Highlands County.

Before water control structures were installed and canals were dredged, some lakes in the county would almost dry up. Fluctuation in lake levels during that time were huge compared to current water level changes. Also, many wetlands, swamps, and bayheads that fed water into lakes have been severely altered by development and no longer supply the same volumes of water as they once did. If comparing two common lake types in Highlands County, the Ridge lakes, which have sand dominated watersheds, tend to see more fluctuation in water levels than the Transition lakes. The Transition lakes have watersheds that are dominated by mucky soils, which usually hold, or retain, a lot of water before it gets to the lake, and therefore the lake's level fluctuation is less dramatic.

It is important to remember that fluctuation of water levels is healthy for lakes. It serves as a natural cleansing mechanism for waterbodies. Improvement in water quality is something that heavily relies on that natural cleansing to occur. Lakes that have very little fluctuation tend to have water quality issues relating to a buildup of nutrients as well as unhealthy vegetation zones. The lower water levels at this time are a welcome event for the lakes, even though not necessarily for recreationists.