

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

The Florida legislature created the Southwest Florida Water Management District (SWFWMD) in 1961 to be the local sponsor of the Four River Basins, Florida Project. The U.S. Army Corps of Engineers initiated this major flood control project after Hurricane Donna severely damaged southwest Florida in 1960. The project includes flood control structures and 6,000 square miles of water detention areas. SWFWMD continues to cooperate with the corps in maintaining and operating portions of this flood control system.

The district's responsibilities expanded in the mid to late 1960s when regulatory programs for regional wellfields serving the Tampa Bay metropolitan area were initiated, and again in 1972 when the Florida legislature passed the Water Resources Act. This act significantly furthered the transition from strictly flood control to a more broad-based policy of resource management and service to the public.

SWFWMD is governed by an 11-member board appointed by the governor and confirmed by the senate. Board members, who must live in the district, serve staggered four-year terms. The district's primary funding source is ad valorem taxes, although revenues are also derived from state and federal appropriations, permit fees, interest earnings, and other sources. The taxing capabilities of the district are established by the legislature within the limits set by the Florida Constitution. The limit for SWFWMD is one mill, or one dollar per thousand dollars of assessed value.

SWFWMD is further divided into nine hydrologic subdistricts, or basins, eight of which have separate basin boards. Activities within the Green Swamp Basin are the responsibility of the governing board. Members of the basin boards are also appointed by the governor, confirmed by the senate, and serve three-year terms. These boards identify water-related issues and problems in their basins, and provide programs and budgets to address these concerns. At present, SWFWMD is the only water management district with this form of basin system.

The one-mill taxing capability of the district is divided evenly between the governing board (0.5 mill) and the district's eight basin boards (0.5 mill).

SWFWMD includes all or part of 16 counties on the west-central coast of Florida, from Charlotte County on the south to Levy County on the north. It extends from the Gulf of Mexico east to Polk and Highlands counties. Several major and rapidly growing urban areas lie within this area, as does much of Florida's most productive agricultural lands (especially for citrus) and major phosphate areas. The region also contains the Green Swamp, headwaters for the Peace, Hillsborough, Withlacoochee, and Ocklawaha rivers, and many lakes, springs, and streams.

The significance of Tampa Bay, Sarasota Bay, and Charlotte Harbor estuaries has been recognized through the National Estuary Programs. These vital estuarine systems have also been designated as state priorities through the Surface Water Improvement and Management Program (SWIM). It is often along, and in, these very sensitive ecosystems that development pressure and

population growth have been most demanding and have had adverse environmental impacts.

Physiography and Topography

Land in the region ranges in elevation from sea level along the Gulf coast to more than 290 feet above mean sea level at several places along the Lake Wales Ridge. Higher elevations are associated in particular with three ridges, the Brooksville, Lakeland, and Lake Wales ridges, aligned with the Florida peninsula. The Polk Upland region has gently rolling, sometimes hilly, terrain. The Tsala-Apopka Plain is part of the Withlacoochee River valley. The Withlacoochee River originates in the Green Swamp and flows northward before turning west through the Dunnellon Gap.

The high sandy ridges are remnants of ancient sand dunes, the only portion of peninsular Florida not inundated in a series of advancing and receding ocean levels. This unique isolation created and supports ecosystems not found anywhere else in the world. The high sandy soils are also a high recharge area for the Floridan aquifer. In the northern part of the region, the Floridan rises close to, and is often exposed at, the surface. This exposed aquifer is the source of the several first-magnitude springs in Hernando and Citrus counties.

The Gulf Coastal Lowlands and the DeSoto Plain are flat areas with wetlands interspersed with pine-palmetto flatwoods. In the southern part of Southwest Florida, soils in these flat areas are typically acidic because of the dominant types of vegetation and the lack of underground drainage. Rivers in this area are characterized as “black water,” so called because the acidic soil causes a high tannic content (tea-colored water) in the surface water runoff.

The northern part of Southwest Florida has karst geology. In karst areas, water-soluble limestone below the earth’s surface may dissolve, causing the land surface to sink or collapse, and often, to fill with water. This condition, most common in the northern and eastern regions of the district, produces sinkholes. They can range from 20 feet in diameter to half a square mile or more.

Under karst conditions, surface water and groundwater are closely interrelated. Lake levels are often a direct reflection of groundwater levels; spring flow and seepage constitute the base flow of many streams; freshwater wetlands slow and store floodwaters and enhance infiltration to groundwater; and stream discharges to estuaries are critical for maintenance of salinity regimes. As development increases on the sandy ridges and karst areas of this region, so to has nutrient loading to the groundwater. This nutrient loading is thought to be a factor in increased algal blooms occurring in the northern coastal springs.

