

# Everglades show improvement in water quality

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Researchers at the University of Florida Research and Education Centers and scientists at the South Florida Water Management District have published a report regarding the trends in water quality feeding into Everglades National Park. The report can be found in the September-October 2010 *Journal of Environmental Quality*, published by the American Society of Agronomy, the Crop Science Society of America, and the Soil Science Society of America.

The goal of the study was to provide insight regarding the variations in the quality of water from the Water Conservation Areas and the system of Storm Water Treatment Areas. These regions are used to supply water to Everglades National Park, control flooding, and repair the water quality.

The report suggests that the overall levels of both [nitrogen](#) and phosphorus have declined since the 1970s. This indicates that the water quality is improving as a result of the restoration methods completed in the areas surrounding the park.

Using data from 1977 through 2005, the researchers assessed the levels of nitrogen and phosphorus from seven inflows to the national park.

According to the report's author, Ed Hanlon, historical changes in the landscape have degraded the condition, distribution and flow of the surface water coming into the park. Expansions in agriculture and urbanization around the Kissimmee River and [Lake Okeechobee](#)

increased the run-off of waste. Canal and levee construction disrupted natural flow patterns.

While environmental concerns were raised as early as the 1960s, the effects on the ecosystem of the park were overshadowed by the benefits to the economy of the state of Florida. The canals and levees provided drainage of areas too wet for agriculture and urban development. Additionally, the damage to property and the loss of human life from flooding caused by hurricanes and heavy rains was greatly reduced.

However, best management practices and other interventions were implemented regionally in the 1990s in the Everglades Agricultural Area and various urban areas. Designed to regulate and diminish the impact of human presence and activity on the region, best management practices, the Water Conservation Areas, and the Storm Water Treatment Areas were implemented within the same decade.

After 2005, data was analyzed from five sites on the northern boundary of [Everglades National Park](#) and two on the eastern border. Despite the fact that the five northern sampling sites were statistically similar to each other, they differed in terms of water quality from the eastern sampling sites. Therefore, new strategies in [water](#) monitoring and recuperation programs could be developed to minimize the number of stations used without sacrificing the variability of the samples taken.

The variations in the levels of phosphorus and nitrogen from the samples can be attributed to the amount of precipitation in a given year. In fact, the amount of nitrogen and [phosphorus](#) exceeded [water quality](#) standards at several sites during the study period given the complex hydrology of the area.

Provided by American Society of Agronomy

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