

Orange Creek Basin

FAST FACT

With the help of the Orange Creek Basin Advisory Council, St. Johns River Water Management District scientists have developed a detailed surface water management plan for the Orange Creek Basin.

A natural treasure

The 600-square-mile Orange Creek Basin is located in the lower Ocklawaha River system in Alachua, Marion and Putnam counties. The basin is characterized by a limestone topography and by the presence of shallow lakes, level prairies, irregular drainage patterns and several large sinkholes.

Because of their exceptional richness of aquatic and wetland wildlife habitats, several water bodies, including Orange Lake, Lake Lochloosa, Lochloosa Creek, River Styx and Cross Creek, have been designated by the state as Outstanding Florida Waters. Paynes Prairie is a state preserve and a national natural landmark and wildlife sanctuary within the National Park Service system.

Many wildlife species use the aquatic, wetland and upland habitats in the basin, including bald eagles, wood storks, Florida sandhill cranes and several egret species. One of Florida's five most important bald eagle nesting sites is located in the Newnans-Orange-Lochloosa lakes area.

The marshy River Styx area is home to a wood stork rookery, which was established more than 80 years ago. Paynes Prairie harbors many species of birds, reptiles and amphibians and is home to the round-tailed muskrat. North Florida's largest concentration of nearly 1,200 sandhill cranes is found in the area surrounding Paynes Prairie, Orange Lake and Lake Lochloosa.

History of changes

Over the years, the lakes of Orange Creek Basin have experienced wide fluctuations in water levels. Paynes Prairie has switched off and on from lake to wetland prairie. The natural flow of Prairie Creek into Paynes Prairie was diverted to Orange Lake when Camps Canal was constructed in 1927 to drain the prairie for cattle grazing.

In the mid-1950s, a drought caused low water levels on Lake Lochloosa and Orange Lake



Cypress trees make their home in the wet prairies found throughout the Orange Creek Basin.

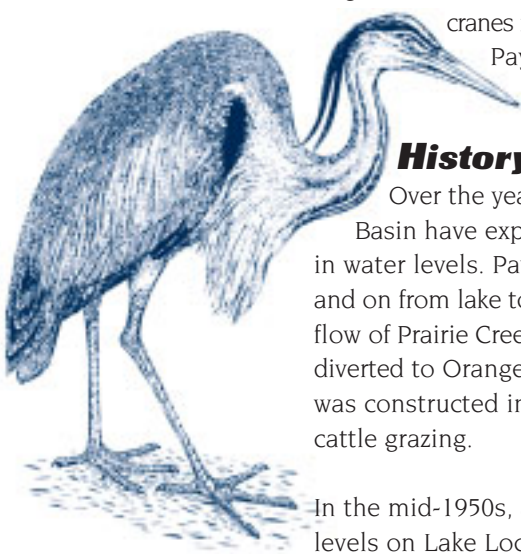
and, for a short time, dried up Cross Creek. In 1957, the sinkhole at Orange Lake was isolated by a berm in an attempt to reduce lake discharge. The berm construction was inadequate, and the berm disintegrated after two years.

In 1963, the Orange Lake dam was built at the U.S. Highway 301 bridge crossing in hopes of preventing the recurrence of low lake levels. A dam was also constructed on Prairie Creek to maintain high water levels on Newnans Lake. Further downstream, culverts were constructed on Prairie Creek to re-establish a portion of the creek's historic flow back into Paynes Prairie. Other significant changes that affected the hydrology and ecology of the lakes and wetlands include the construction of the railroad berm across Orange Lake, and highways such as U.S. 441 and Interstate 75 across Paynes Prairie and U.S. 301 across Orange Lake.

Developing a basin plan

In January 1994, the District's Governing Board established the Orange Creek Basin Advisory Council to help create a restoration and management plan for the basin. The advisory council consists of members from local governments in Alachua and Marion counties, the recreational fishing industry, lake residents, environmental organizations, Gainesville

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Regional Utilities, the District, the Florida Department of Environmental Protection, and the Florida Fish and Wildlife Conservation Commission.

Since its inception, the advisory council has taken a hands-on approach to better understand issues of concern throughout the basin. With the help of the advisory council, District scientists have developed a detailed surface water management plan for Orange Creek Basin, which was approved by the advisory council and the District Governing Board. The surface water management plan is now being implemented, with the continued guidance and input of the advisory council and its Scientific Advisory Committee.

Protection and restoration efforts

Over the past few years, the District has been implementing several major monitoring, restoration and protection efforts in the basin. Current projects include:

- Determining the causes of poor water quality in Newnans Lake
- Developing a restoration strategy for Newnans Lake
- Evaluating management options for the Orange Lake sinkhole and outlet dam
- Assessing management options for wetland communities in Orange Lake
- Analyzing the impacts of incoming water quality on the wetlands in Paynes Prairie
- Monitoring water quality and habitats in Alachua County streams
- Monitoring water quality in Bivens Arm
- Continuing a multi-agency basin partnership addressing water quality and wetland issues in the basin
- Monitoring water quality in Alachua County streams during and following rainstorms

Protection of environmentally sensitive lands in the basin is also a high priority. The District has purchased more than 16,000 acres of uplands and wetlands, and has purchased development rights on more than 19,200 acres

within two conservation easements to forever preserve the area's water quality and wildlife habitat.

A restoration project is now under way at the former Orange Creek muck farm, located just east of Orange Lake in southern Alachua County and northern Marion County. Acquired by the District in 1998, this 3,500-acre property is being restored to wetland habitat for many native aquatic, wetland and upland animal and plant species. This cost-share partnership between the District and the U.S. Department of Agriculture's Natural Resources Conservation Service was funded through the Wetland Reserve Program and two wetland mitigation projects.

The process of implementing the surface water management plan for the basin is progressing because of the concerned citizens and organizations who share a common goal with the District — the restoration and protection of the natural environment and habitats throughout Orange Creek Basin.

