

## Questions and Answers

# Kissimmee River Restoration Project

### **What was the condition of the Kissimmee River prior to the start of restoration efforts?**

As part of the Central and Southern Florida Flood Control Project, between 1962-71 the meandering Kissimmee River and flanking floodplain were channelized and thereby transformed into a 30 foot deep central drainage canal, compartmentalized with levees and dam-like water control structures into a series of five relatively stagnant pools. The Kissimmee River restoration initiative began as a grassroots movement during the latter stages of channelization when concerned citizens and members of the environmental community voiced concerns regarding perceived environmental impacts of the flood control project. Subsequent studies documented the nature of these impacts to the Kissimmee River and its surrounding ecosystem, including the loss of 30,000-35,000 acres of wetlands, a tremendous reduction in wading bird and waterfowl usage and a continuing long-term decline in game fish populations. These impacts provided the impetus for over 20 years of state and federally mandated restoration related studies, which culminated in the development of a restoration plan that was authorized for implementation as a state-federal partnership in the 1992 Water Resources Development Act. When complete, the restoration project will restore over 40 square miles of river and associated floodplain wetlands, and will benefit over 320 fish and wildlife species, including the endangered bald eagle, wood stork and snail kite.

### **How will the restoration be accomplished?**

The long history of restoration studies has clearly shown that restoration of the river and its associated natural resources requires dechannelization - elimination of the flood control canal and reestablishment of the flow of water through the natural river channel and over its adjacent floodplain. This will be accomplished by filling 22 contiguous miles of the 56 mile long flood control canal, and removing two of the five water control structures within this reach of backfilled canal. Spoil banks composed of excavated sand and shell from the original channelization, which occur along the canal, will provide the source of this backfill material. Another important component of the restoration project is to modify the timing of water inflows to the river from the upper Kissimmee lakes. This will be accomplished by allowing water levels in Lakes Kissimmee, Hatchineha and Cypress to rise up to 1 foot higher than is currently allowed. This additional storage will provide the ability to reestablish continuous inflows and a more natural seasonal pattern of high and low flows to the restored river.

### **Why was the river originally channelized?**

Channelization was done primarily to provide an outlet canal for draining flood waters from the developing upper Kissimmee lakes basin, but also provided flood protection for land adjacent to the river.

**If the Kissimmee River was channelized for flood control purposes how will flood protection be maintained after restoration?**

Flood protection is the primary constraint for the restoration project and the main reason why only 22 of 56 miles of flood control canal will be backfilled. Limiting the restoration project to this portion of the channelized system will constrain restoration project-related flooding primarily to non-residential areas. Lands that will be subjected to flooding are primarily used as pasture and are acquired in fee up to the five-year flood line and as flowage easements between the five and 100 year flood line. Fee acquisition of lands also will occur around the headwater lakes to accommodate the higher water levels.

**How do you know the restoration project will work?**

Since 1971, various restoration measures, including water level manipulations, floodplain impoundments, weirs and the pilot test-fill area, have been carefully studied and field-tested. These studies clearly demonstrated the feasibility of restoration and verified that dechannelization was the best means to restore the Kissimmee River and its historical wetland and fish and wildlife resources. A comprehensive restoration evaluation program has been implemented to analyze the success of the restoration and provide scientific information for fine-tuning the various phases of the reconstruction.

**When the canal is backfilled what will prevent the fill material from eroding and washing downstream into Lake Okeechobee during flood conditions? How will the disturbance associated with the canal backfilling impact the existing environmental resources?**

The backfilled canal was stabilized with rock riprap on its downstream face in Phases I, IVA, and IVB of restoration. The stability of this "hardened plug" design was extensively tested prior to Phases I-IV with physical and mathematical models and verified in the pilot test fill project. The test fill showed that the potential for environmental impacts, such as turbidity resulting from canal backfilling, would be highly localized in the flood control canal but would dissipate shortly after the reconstruction is completed.

**Why does the state have to own the land? How will state acquisition of land impact the tax base of local economies?**

Land needed to be acquired by the state to restore the hydrology of the river wetland system and to preserve and protect restored natural resources. Most of the land that was acquired for restoration has been leased back to ranchers for grazing, which keeps these lands on the county tax roles. Potential revenue associated with increased recreational usage (such as hunting and fishing) and ecotourism on the restored river could significantly enhance local and regional economies.

**How will the restoration project affect other uses such as water supply and navigation?**

Although restoration of the river's floodplain wetlands might result in higher losses of water due to evapotranspiration during wet periods, analyses indicate that the project will not affect regional water supply during dry periods or droughts. During extremely dry periods navigation potential may be impeded through some sections of the restored river; however, it is expected that navigable depths of three feet or more will be maintained at least 90% of the time.

**How will restoration of the Kissimmee River affect Lake Okeechobee and the Everglades?**

Reestablishment of floodplain wetlands and the associated nutrient filtration function is expected to result in decreased nutrient loads to Lake Okeechobee. It is possible that restoration of the Kissimmee River floodplain could benefit populations of key avian species, such as wading birds and waterfowl, throughout the south Florida landscape by providing increased feeding and breeding habitat and refuge during adverse conditions.