RESTORATION OF THE
KISSIMMEE-OKEECHOBEE-EVERGLADES
ECOSYSTEM

The South Florida Water Management District is the
local sponsor for one of the
world’s largest public works
projects (the Central and
Southern Florida, or C&S, Project). We are mandated to
operate the federal system for
flood control and water supply.
Over the years, however, a
greater appreciation of the
value of natural ecosystems has
evolved, adding another dimen-
sion to our management and
operating criteria – environ-
mental benefits. Today, our
goal is sustainability – to bal-
ance the needs of both people
and nature, while continuing
to meet federal and state man-
dates.

The vast expanse of lands
and water stretching from the
headwaters of the Kissimmee
River to Florida Bay make up
the Kissimmee-Okeechobee-
Everglades (K-O-E) ecosystem. Since the late 1800s, people
have sought to tame and use the
K-O-E system. They have
drained floodplains and swamps and have deepened or changed
the course of waterways. The
system is suffering from loss of
wetlands and uplands, from pol-
lution and contamination, from
interruption of nature’s hydro-
logic cycle and from loss of
wildlife. These and other sig-
als suggest that the rising tide
of growth could overwhelm the
natural system. The system has
its limits and no part can be
changed without impacting
other parts, as well as the whole.

To reverse some of these loss-
es, in 1983 the state initiated the
“Save Our Everglades” program
which continues today and includes
the entire ecosystem. Striking a
balance between man and nature
and reversing the trend of environ-
mental degradation throughout the
system is a huge, daunting task to
which the state and the District are
committed.

Kissimmee River
The Kissimmee River, at one
time a meandering 103-mile long
natural river with wide floodplains,
was channelized in the 1960s into a
56-mile long canal to provide flood
protection for the growing central
Florida region. However, these
improvements led to drastic declines
in wintering waterfowl, wading bird
and game fish populations, as well
as loss of ecosystem functions.

The U.S. Army Corps of Engi-
neers and the District have agreed
to a restoration plan that includes
refilling 22 miles of channel. The
federal government has agreed to
share the cost equally with the state
of Florida. Congress has approved
the project under the 1992 Water
Resource Development Act. The
District must purchase needed lands
before work can begin.

The restoration project will
restore an estimated 40 square miles
of river/floodplain ecosystem
including 26,500 acres of wetlands,
43 continuous miles of meandering
river and will provide habitat for
over 300 species, including the
derelaxed bald eagle, snail kite,
and wood stork.

Project construction will be
phased over 15 years. Initial work
will begin in the headwater lakes in
the summer of 1997 to reestablish
historical inflows to the river. The
remaining phases involve
backfilling the canal and will begin
in 1998 with construction anticipat-
ed to be completed by 2010.

Lake Okeechobee
Lake Okeechobee is the liquid
heart of south Florida. Water from
the lake is delivered via the Central
& Southern Florida Flood Control
Project to the heavily populated
lower east coast to recharge wells
and prevent saltwater intrusion. Water is sent to the Ever-
glades Agricultural Area (EAA),
700,000 acres of rich farm land im-
mediately south of the lake, which
provides much of the nation’s win-
ter vegetables and sugar. Lake
Okeechobee also provides water to
the Everglades—the Water Conser-
vation Areas and Everglades
National Park.

Conflicting demands on the lake
threatened its viability and the vi-
ability of coastal estuaries as well.
The District and the state are
working with dairies and other land
owners located north of the lake to
help reduce the flow of nutrients to
the lake. Water managers are also
emphasizing the need for coastal
areas to reduce their dependence on
the lake during water shortages. In
addition, the way water is released
from the lake when the water level
is too high is being changed to help
protect receiving coastal estuaries.

We are also working to control
a dense population of melaleuca in
the western marsh of the lake. This exotic tree is crowding out native vegetation and disrupting the ecosystem in this part of the lake.

Everglades

Almost half of the original Everglades has been drained or otherwise changed by man. The remaining Everglades are severely threatened by nutrient-rich water, interrupted hydrology, decreased water supply, exotic plants, and mercury contamination. Both the Florida Legislature and South Florida Water Management District have identified Everglades restoration as a top priority. Efforts have been under way for a number of years to develop and implement a program toward this goal. In 1994, the State Legislature passed the Everglades Forever Act outlining a long-term restoration and cleanup program that addresses the Everglades in a more comprehensive manner than any previous effort.

The Act outlines programs to reduce nutrients in agricultural stormwater runoff before it enters the Everglades; improve the timing and flow of freshwater to the ecosystem; continue efforts to remove unwanted exotic plants; identify the source of mercury contamination; and improve freshwater flows to Florida Bay at the southernmost tip of the ecosystem.

The Act's cornerstone is the development of approximately 40,000 acres of manmade wetlands strategically placed between agricultural fields and the Everglades to clean stormwater runoff. It also sets deadlines for meeting water quality standards in the Everglades and requires annual reports to the Florida Legislature on the progress of meeting these goals.

Estuaries

The Indian River Lagoon, Caloosahatchee estuary, Biscayne Bay and Florida Bay are the estuaries which serve as the tranquil interface between the Everglades water system and the sea. The estuaries are rich in biological diversity and provide nursery grounds for fisheries and waterfowl habitat. The estuaries are under stress from nutrients, urban runoff and from either too much or too little fresh water.

District projects to reduce threats to the estuaries include filtering runoff, developing and implementing better ways to release water from Lake Okeechobee, restoring shorelines, and improving overland flow of water.

Special provisions to protect and restore Florida Bay were included in the 1994 Everglades Forever Act.

Corps of Engineers "Re-study"

The reconnaissance phase of a multi-year restudy of south Florida's massive C&SF "plumbing system" has been completed by the Corps of Engineers. While the system fulfills the flood control and water supply services for which it was designed, it has also been blamed for causing negative impacts on the region's natural ecosystem.

The purpose of this initial study was to generate a wide range of modification options – ranging from minimal changes to complete revamping of the south Florida landscape. The next step is to examine the feasibility of the various proposed alternatives and to recommend the most appropriate options for improving the C&SF Project for environmental purposes. A feasibility phase is expected to take another two to four years to complete. As local sponsor for the C&SF Project, the SFWMD is an active participant in the study.

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