STATEMENT FOR THE RECORD OF
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COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
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I am Chuck Fox, Assistant Administrator for the Office of Water at the U.S. Environmental Protection Agency (EPA). Thank you for your invitation to offer a statement about something of great importance to the people of this nation: the Administration's unprecedented efforts to ensure that the Florida Everglades has clean, abundant water and EPA's role in ensuring that water quality is fully addressed in the restoration efforts.

The efforts to protect the Everglades are a part of Florida's history. Marjorie Stoneman Douglas, in her autobiography, *Voice of the River*, describes the efforts of Congresswoman Ruth Bryan Owen, who gamely argued at committee hearings against the notion then held by many that the Everglades was just a swamp filled with snakes and mosquitoes. She argued that Congress should create the Everglades National Park. The Everglades is more than a source of fresh water for South Florida, the largest wetland east of the Mississippi River, and an economic boon to a State that depends on tourism. It is a historical treasure that is only venerated through its preservation.

During the second half of the last century, the existing Central and Southern Florida Project was built to help meet the needs for flood control and water supply at

that time. But the explosive growth since then has far exceeded the capacity of the current system, and has contributed to the decline in the Everglades ecosystem. The design and operation of the current system, while very efficient at draining excess water, severely limits our capability to store excess water when it becomes available (wet season) so we will have it when it is needed (dry season). Moreover, it is important to remember that the system was designed for flood control and for water supply purposes. Water quality was not a consideration at the time.

The Comprehensive Everglades Restoration Plan, which was carefully developed with substantial public involvement over the last several years, was submitted to the Congress by the U.S. Army Corps of Engineers in July 1999. It lays out an ambitious Federal/State joint venture to restore water flows to the Everglades ecosystem while providing flood protection and adequate freshwater supplies to the agricultural industry and to the growing population of South Florida. The Comprehensive Everglades Restoration Plan represents a fundamental change in philosophy – a commitment to a sustainable future in which we learn to balance the water supply needs of the natural systems -- both freshwater and marine, with the needs of the urban and agricultural components of the Everglades systems.

When completed, we believe the Comprehensive Everglades Restoration Plan -- in concert with other proposed and ongoing restoration efforts -- will result in the delivery of fresh water in the right quantity, of the right quality, and with our best estimate of the right timing and the right distribution to achieve the desired results to the Everglades ecosystem, including downstream coastal communities all the way to the

living coral reefs of Florida. I believe that the demonstrated commitment to adaptive assessment that this program has shown will incorporate future adjustments, as needed.

EPA strongly supports the Comprehensive Everglades Restoration Plan the Administration provided to Congress for authorization. We believe the Comprehensive Everglades Restoration Plan -- in concert with other proposed and ongoing restoration efforts -- represents the best way to both restore the ecological integrity of the Everglades ecosystem *and* to enhance water quality for future generations in South Florida. EPA recommends authorization of the Comprehensive Everglades Restoration Plan in the Water Resources Development Act (WRDA) 2000, and also recommends that WRDA 2000 contain language that specifically identifies improvement of water quality for ecosystem restoration, protection, and preservation as a Central and Southern Florida Project purpose. EPA supports the Army Corps of Engineers' request that project features needed to provide water of adequate quality be included to help in restoring, protecting, and preserving the South Florida ecosystem. EPA recommends that in doing this, applicable federal water quality standards, and applicable federally approved water quality standards developed by the state or Indian tribes and the plans to implement the standards should be taken into account.

I am pleased to report that we are beginning to see some encouraging results from our earlier efforts. We have completed the Administration's important acquisition of the Talisman Sugar Plantation in the Everglades Agricultural Area, which involves more than 51,000 acres, critical new restoration lands in the heart of the system. In

addition, as a result of changes in agricultural practices, we have achieved a 54 percent reduction in phosphorus discharged from the Everglades Agricultural Area to the Everglades Water Conservation Areas over the past four years. And 44,000 acres of Stormwater Treatment Areas are either completed, or underway and due to be completed by 2003, which will greatly enhance our abilities to remove additional phosphorus.

REMAINING CHALLENGES AND FUTURE DIRECTIONS

Despite this progress, we still have a long way to go. The Everglades ecosystem may never be what it once was. But we can -- and we must -- continue to take action to protect the remaining ecosystem and to restore the critical natural functions and structures of the region and its natural community, which are so vital to preserving the quality of life in South Florida. EPA is actively engaged in a broad array of activities and projects aimed at restoring and protecting water quality, and I'd like to now mention just a few of these for the Committee.

Activities Associated with the Comprehensive Everglades Restoration Plan

The Administration's Comprehensive Everglades Restoration Plan offers a broad, farsighted approach, which is designed to increase water supplies for the region and to restore *and* improve the condition of water quality throughout the Everglades ecosystem. Throughout the design, construction, and operation phases of the project,

EPA will focus its efforts on ensuring that features of the plan will fully comply with all Federal, State, and Tribal water quality standards, as well as all other applicable provisions of the Clean Water Act. I'd like to now highlight how EPA's involvement in certain features of the plan will help promote water quality and contribute to restoration of the overall integrity of the Everglades ecosystem.

Stormwater Treatment Areas (STAs) and Water Storage Areas (WSAs)

The Comprehensive Everglades Restoration Plan includes proposals to construct 36,000 acres of wetlands to treat polluted runoff from urban and agricultural lands. These Stormwater Treatment Areas (STAs) will be located throughout South Florida, and will enable us to use the natural filtering capability offered by wetlands to treat and improve both water quality *and*, at the same time, contribute to the restoration of the health of the Everglades ecosystem.

The Comprehensive Everglades Restoration Plan also calls for construction of 181,000 acres of Water Storage Areas (WSAs), 171,000 of which will allow us to capture excess fresh water flows that now are drained rapidly to the Atlantic Ocean and the Gulf of Mexico. This valuable water, which currently is being "lost to tide," will be captured and used to provide much-needed water for restoration of the Everglades ecosystem and to enhance potable water supplies for the people of South Florida. As with the STAs, the WSAs will render major water quality benefits to both inland and coastal waters *and* benefits to the wetland habitat of the Everglades ecosystem. In addition to the STAs and WSAs, it also will be critical to ensure the acquisition of the

East Coast Buffer Area because of the continued threat of development that can affect the Everglades.

Aquifer Storage and Recovery (ASR) Facilities

Construction of extensive regional Aquifer Storage and Recovery (ASR) facilities is an essential component of the Comprehensive Everglades Restoration Plan. When completed, the ASR facilities are intended to also store water during the wet season -- freshwater flows that are currently lost to tide. ASR facilities will store these waters in the upper Floridan Aquifer for recovery in dry seasons -- for use both to restore the ecological integrity of the Everglades ecosystem *and* to enhance future water supplies for urban and agricultural purposes in South Florida.

EPA supports this approach in concept, but is continuing to work with the other State and Federal partners to demonstrate the efficacy of ASRs. WRDA 1999 authorized two large-scale pilot projects at Lake Okeechobee and Palm Beach County, and EPA is now involved with these pilot efforts in the start-up phase. EPA recognizes that the ASR approach is bold and entails some technical and regulatory uncertainties, however we are fully committed to ensuring that these facilities will function in ways that are fully protective of South Florida's drinking water supplies and surface water quality. Regardless of the ultimate feasibility of ASR facilities, the Administration remains committed to finding the same amount of water storage through other means, if necessary. Again, I believe that the demonstrated commitment to adaptive assessment that this program has displayed will incorporate future adjustments, as needed.

Comprehensive Integrated Water Quality Plan

Under the Comprehensive Everglades Restoration Plan, EPA and Florida Department of Environmental Protection (FDEP) will share the lead on behalf of the U.S. Army Corps of Engineers (COE) in developing a Comprehensive Integrated Water Quality Plan. This plan will evaluate water quality standards and criteria from an ecosystem restoration perspective. It will also make recommendations for integrating existing and future water quality restoration targets for South Florida waterbodies into future planning, design, construction, and operation activities in ways that optimize water quality in inland areas, estuaries, and nearshore coastal waters. The plan also will lead to recommendations regarding water quality programs, including setting priorities for developing both water quality standards and pollution load reduction goals.

Other Activities Related to Water Quality

In addition to the activities associated with the Comprehensive Everglades Restoration Plan, EPA is involved in a number of other important activities and projects that are also aimed at protecting and restoring water quality and ecosystem integrity. I'd like to bring several of these to the attention of this Committee.

Florida Keys Water Quality Protection Program

Since the early 1990s, EPA has been actively working with the State of Florida in conjunction with the National Oceanic and Atmospheric Administration (NOAA) to

plan and implement a water quality protection program for the Florida Keys National Marine Sanctuary. Located downstream of coastal South Florida, the Sanctuary composes the southernmost portion of the South Florida Ecosystem. The Sanctuary was established to protect the living coral reefs, seagrass communities, mangrove fringed shorelines, and other significant resources of the area from such threats as degrading water quality.

The purpose of the Water Quality Protection Program is to recommend priority corrective actions and compliance schedules to address both point and non-point sources of pollution in order to restore and maintain the chemical, physical, and biological integrity of the Sanctuary. Two major components of the program are: a Wastewater Master Plan, which addresses sewage collection, treatment, and disposal throughout the Keys; and a Stormwater Master Plan, which addresses stormwater runoff to coastal waters throughout the Keys. This work focuses on restoring and maintaining a balanced, indigenous population of corals, shellfish, fish, and wildlife, while providing recreational activities.

Improving the Wetlands Regulatory Process in Southwest Florida

In recent years, Southwest Florida has experienced the same kind of rapid growth that took place earlier in Southeast Florida. As a result of this fast-paced development, the COE has issued permits to drain and fill 5000 acres of wetlands –with even more requests expected in the next few years. The rate of permit issuance has raised concerns over whether the Corps' review of individual permit requests can

adequately address the secondary and cumulative impacts from these many incremental decisions. These events have caused us to think about steps that need to be taken now in Southwest Florida in order to avoid repeating the mistakes made in the last century in Southeast Florida -- mistakes we now are trying to remedy through the Comprehensive Everglades Restoration Plan and other parallel efforts to restore the Everglades ecosystem.

EPA has been actively involved in assisting the COE in preparing a Draft Programmatic Environmental Impact Statement (DPEIS), which is designed to improve the section 404 regulatory decision-making process in Southwest Florida (Lee and Collier Counties). EPA prepared two components of this DPEIS: a description of historic water quality in the ten watersheds in the study area; and a comparative analysis of future water quality for two of the COE's alternatives. The model output indicated that, in 2020, the two alternatives show an overall degradation of water quality in the two county area, as well as in most of the individual watersheds.

The comment period for the DPEIS ended January 15, 2000, and EPA is now working with the COE to improve the document as it relates to water quality and wetlands protection. We expect release of the Final PEIS in Spring/Summer 2000, and will focus our efforts on developing NEPA tools that will result in improved wetlands and water quality protection in Southwest Florida under the section 404 regulatory program and other applicable Clean Water Act programs.

WATER QUALITY ISSUES OF SPECIAL INTEREST

I'd like to focus the remainder of my comments today on just a few of the most difficult water quality issues we face today in the Everglades: mercury contamination and phosphorus enrichment in the Everglades ecosystem, and restoration of Lake Okeechobee.

Mercury

Mercury levels in fish in the Everglades ecosystem are very high -- so high that State health officials have issued fish consumption advisories warning people either to limit consumption of, or to not eat gamefish from Everglades National Park, Loxahatchee National Wildlife Refuge, Big Cypress National Preserve, and the Miccosukee Tribe of Indians Federal Reservation. In addition, there may be some adverse effects on wildlife: wading birds, racoons, and alligators have been found to have very high concentrations of mercury -- higher than other areas in the U.S. with known mercury contamination. Clearly, much of the energy and resources we are directing to restoration of the Everglades ecosystem will be compromised if, at the end of the day, the water is fixed but people still cannot eat the fish and the wading bird and other wildlife populations continue to show high concentrations of mercury.

While our research and atmospheric modeling show that atmospheric deposition is the leading source of mercury in the Everglades (more than 98%), much uncertainty remains over how much of the mercury is the result of local air emissions sources,

rereleases, and global circulation of mercury. Despite this uncertainty, however, we clearly recognize that designated uses in the Everglades ecosystem are not being met, and there is a pressing need to learn more.

To address these challenges, EPA is actively engaged in a comprehensive mercury research program, along with United States Geological Survey (USGS), the FDEP and the South Florida Water Management District, as well as NOAA's work in Florida Bay. EPA also is working with the State of Florida to develop a pilot mercury TMDL for a parcel of the Everglades ecosystem known as Water Conservation Area 3A. This effort is designed to determine the maximum amount of mercury that can enter the Area each day and still enable the waters to meet water quality standards. We expect to have technical reports on this work for internal EPA review soon, and plan to seek input from stakeholder groups and the public by Summer 2000.

Phosphorus

In 1994, Florida's Everglades Forever Act (EFA) created another ambitious ecosystem restoration plan, which EPA fully supports. The EFA set forth an iterative and adaptive approach to reduce phosphorus contamination of the Everglades ecosystem. Much progress has been made since then, including the 54 percent reduction in phosphorus discharged from the Everglades Agricultural Area and the ongoing construction of 44,000 acres of Stormwater Treatment Areas that I mentioned earlier. Despite this progress, however, phosphorus is still one of the chief pollutants

that threatens aquatic life and restoration of the Everglades ecosystem. There is much more to be done, and we need to move ahead aggressively.

In May 1999, EPA approved stringent new water quality standards for a portion of the Everglades ecosystem, which, for the first time ever under the Clean Water Act, set a specific protective numerical standard for the Everglades for phosphorus. This protective standard -- 10 parts per billion (ppb), adopted by the Miccosukee Tribe of Florida for its Tribal waters -- is supported by the best science available to EPA, and sets a benchmark for how much phosphorus the ecosystem can handle before adverse impacts to native aquatic life begin to occur.

Under the EFA, Florida is now actively engaged in developing a water quality standard for phosphorus for other portions of the Everglades ecosystem. The EFA established a December 31, 2003 deadline to adopt this standard. However, the State recently committed to accelerate this process and to adopt a scientifically defensible standard by no later than December 31, 2002. EPA is providing technical assistance to the State to help meet this ambitious schedule.

Lake Okeechobee

As the headwaters of the Everglades ecosystem and an important water supply for Southeast Florida, we have a vital interest in the activities that will lead to restoring the water quality of Lake Okeechobee. Water quality in Lake Okeechobee has been degraded by agricultural runoff and by backpumping. The rate of eutrophication is of major concern because of the impact on both the ecology of the lake and its many other

beneficial uses. Over the last 25 years, phosphorus concentrations in the lake have increased 2.5 times, and recent data suggest that the lake may be in a phase of transition from its present eutrophic condition to a higher tropic state.

Since phosphorus is considered the key element that promotes the growth of nuisance algae, I am very pleased to report to you that, earlier this year (January 3, 2000), EPA proposed a TMDL for phosphorus for Lake Okeechobee. When it became clear that, under its rulemaking procedures, the State would not be able to meet the court-ordered deadline for establishing this TMDL, EPA assumed responsibility and proposed a total annual load of 198 metric tons of phosphorus for Lake Okeechobee, including phosphorus deposited from the air (71 metric tons). This is an important step forward because this TMDL, which is the maximum amount of a pollutant that a waterbody can receive and maintain water quality standards, sets the restoration goals for Lake Okeechobee. We estimate the proposed phosphorus loading represents a 68% reduction from the 1997 load.

CLOSING

Florida's history and the history of the preservation of the Everglades are inextricably linked. Congress has played its part in the past–creating the Everglades National Park and providing funding for the previous restoration work. You can, by authorizing the Comprehensive Everglades Restoration Plan as part of WRDA 2000, again be part of that history.

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