

# Statement To Governor Reubin O'D. Askew

## From The Governor's Conference On Water Management In South Florida

There is a water crisis in South Florida today. This crisis has long-range and short-range aspects. Every major water area in the South Florida basin, Everglades National Park, the conservation areas, Lake Okeechobee and the Kissimmee Valley is steadily deteriorating in quality from a variety of polluting sources that are detailed below. The quantity of water, though potentially adequate for today's demand, cannot now be managed effectively over wet/dry cycles to assure a minimum adequate water supply in extended drought periods.

### WATER SUPPLY – QUANTITY

To initiate an action program to solve problems in the area of water quantity, a careful assessment must be made of water demands linked to projected growth. For an adequate long-range water supply, the State must have an enforceable comprehensive land and water use plan. This plan must be developed immediately. It must be designed to limit increases in population and machines, with their attendant demands on the water supply, to a level that will insure a quality environment. Such a management plan would include, as its first objective, a complete inventory and assessment of long-range water resources. The controlling factor in this water resource assessment should be the water supply that can be anticipated in times of shortest supply. A result of this planning effort would be a water budget system based on available resources. This system would serve as a limitation on allowable population increases.

### WATER SUPPLY – QUALITY

Water quality is a far graver problem in the long run than is water quantity. The quality of the water in the South Florida water basin is deteriorating. This deterioration stems from the introduction into the basin of pesticides, herbicides, animal and industrial wastes, heavy metals, salt water, sewage and heated waters. Channelization has contributed substantially to the process of deterioration. Water quality in the basin may be restored and maintained by:

1. Zoning or acquiring the flood plains in the basin.
2. Reflooding the Kissimmee marshes.
3. Initiating a comprehensive treatment program to treat pollutants at the source before they enter the water system. (This would necessitate initiation of treatment procedures in agricultural areas and up-grading existing procedures in urban areas.)
4. Phasing out back pumping into Lake Okeechobee or requiring effective treatment at the source before back pumping.

5. Research and funding which should begin immediately to study what to do about recycling water and sewage effluents and solid waste disposal.

### LAND RECLAMATION

There should be no further draining of wetlands<sup>1</sup> for any purpose. As an initial step in controlling the drainage of wetlands, it is recommended that Chapter 298 of the Florida Statutes (Soil drainage district law - 1913) be repealed. Wetlands are the most biologically productive of all lands. The need to preserve them stems from their value for recreation, water storage, aquatic productivity, nutrient removal and for aquifer recharge. A program should be initiated to reflood the marshes of the Kissimmee Valley. Agricultural lands and marshes not presently in production below Lake Okeechobee should also be reflooded. The initial efforts should be pilot projects that can provide a clearer assessment of the benefits and techniques of reflooding. It is crucial to reverse the process of the steady loss of organic soils.<sup>2</sup> Reflooding is the primary method for accomplishing this objective. This program should include the acquisition and consolidation of lands by the State in selected areas north of Conservation Area Three and/or near Conservation Area Two as a major pilot program. Its purpose shall be to determine the effect of controlling water levels, filtering pollutants and recycling wastes to build up organic soils. Muck conservation programs should be coordinated and pursued immediately by the Central and Southern Florida Flood Control District and Trustees of the Internal Improvement Trust Fund. Even if mucklands are not used for agriculture, their preservation and restoration are necessary to maintain the ecological balance of the South Florida basin. Reestablishment of sawgrass may be the best solution to replenishment of the mucklands. However, other approaches should be considered on an experimental basis, including the use of organic material such as sewage sludge.

(A minority position held that limited drainage of wetlands to serve a clear public interest, under strict controls, may be justified.)

### POPULATION

There is a limit to the number of people which the South Florida basin can support and at the same time maintain a

<sup>1</sup>Wetlands, swamps, marshes, bogs, etc.

<sup>2</sup>Organic soils in the South Florida-Everglades area are commonly referred to as muck or muckland.

quality environment. The State and appropriate regional agencies must develop a comprehensive land and water use plan with enforcement machinery to limit population. This is especially crucial in the South Florida region. The population level must be one that can be supported by the available natural resources, especially water, in order to sustain a quality environment. A State comprehensive land and water use plan would include an assessment of the quality and quantity of these resources. Moreover, it would set density controls on further development by regions and sub-regions.

#### GROUND WATER

Localized ground water problems are common in South Florida, but they are especially severe in South Dade County and in portions of Collier and Lee Counties. Ground water contaminations and depletion problems include salt water intrusion, uncontrolled drilling of wells, drainage well pollution, inefficient waste water disposal systems, septic tanks and sanitary land fill. Solutions to ground water problems include:

1. A State Drilling Code requiring licensing of all wells and well drillers.
2. Purchase or zoning of lands to protect recharge areas.
3. Plugging of abandoned artesian wells.
4. Installation of secondary controls in major canals to hold higher heads of water.
5. Construction of additional salt water intrusion control facilities, except on natural rivers, according to a salinity control line established along the entire South Florida coast.
6. Elimination of the disposal of improperly treated waste waters.
7. Consideration of all artificial recharge methods which do not impair the quality of the ground water.
8. Consideration, after study, of filling in certain canals in the South Dade County area to improve ground water quality.
9. Prohibition of deep cuts made into the aquifer at the salt water line which cannot be adequately controlled by salinity barriers to prevent salt water intrusion.

Water quality, quantity and development controls described elsewhere in this report will also improve ground water conditions in the basin.

#### GEOGRAPHIC CONSIDERATIONS

The South Florida water resources can only be understood by considering the entire area. The area begins with the Kissimmee Valley chain of lakes in the north, extends southward through Lake Okeechobee, the Everglades (including the Big Cypress) and encompasses all coastal and estuarine areas. Any significant change in water quality or quantity in one part of the total area must be considered in light of its effects on the rest of the system.

##### (A) The Kissimmee Valley

Pollutants entering the Kissimmee Valley have cumulative adverse effects on water quality in the Kissimmee chain of lakes and in Lake Okeechobee. The Kissimmee lakes and marshes should be restored to their historic conditions and levels to the greatest extent possible in order to improve the quality of the water entering Lake Okeechobee. Action should be taken to restore fish resources and wildlife habitats. Contamination by pastured livestock must be reduced. Techniques should be investigated to increase restoration of selective areas to their natural condition by use of advance waste disposal and composting

materials.

##### (B) Lake Okeechobee

Recognizing that Lake Okeechobee is the hub of water quantity and quality in South Florida, the most important and overriding consideration should be not only to maintain the present quality of the lake but also to improve it. Specific consideration should be given to assure that all water inputs into Lake Okeechobee are of high quality. Two primary inputs which could improve the quality of water are (1) reflooding of the Kissimmee Valley flood plain and (2) assuring that only high quality water is back pumped into the lake. We should consider the following ways, in addition, to assure high quality lake water:

1. An appropriate monitoring and enforcement program.
2. Allowing a maximum high water level mark of seventeen and one-half feet. Higher controlled elevations will not be considered unless it can be clearly shown that such elevation would have no adverse effect on the environment of Lake Okeechobee, its water quality or the ecosystem of South Florida.
3. Allowing no cattle or agricultural activities inside the diked area of the lake and immediate cancellation of all agricultural and mineral leases inside the diked area.
4. Ways should be sought to replace chemical control of aquatic weeds with alternate methods which are not harmful to the Lake Okeechobee ecosystem.
5. Nutrient removal by periodic commercial harvesting of the lake's extensive fish population.
6. Nutrient removal by harvesting of aquatic weeds.

##### (C) Everglades Outside the Park

Everything possible should be done to retain and enhance those areas in their natural condition. There is a need for continuous monitoring and control of these water resources since they provide the supplies to total South Florida area, including urban areas. A specific objective should be to maintain and restore the sawgrass. Present intrusion of non-public interests should be removed from Conservation Areas 1, 2, and 3 and all privately owned lands in said areas be purchased. It is important that the Big Cypress area be purchased to the greatest extent possible and that land use controls be established immediately in the Big Cypress to control development and to preserve this area for the public benefit. Other potentially valuable areas that need protection are the Shark River Slough, its head water areas and the general area near Canal C-111.

##### (D) Everglades National Park

We should attempt to maintain the water quality and quantity of the Park adequate for the purpose for which the Park was created. Where it is deemed advisable, exotic plants and animals should be controlled in the Park and throughout the Everglades area.

#### SHORT TERM PROBLEMS

An inter-agency committee should be established immediately to consider short term water management problems. The purpose of this committee shall be to develop an ecologically sound body of guidelines and policy to be followed in the resolution of short term problems of the region. There should be an educational program to alert the public to the possibilities and consequences of water shortage.

##### (A) Fire Prevention and Control

Through programmed burning maintain an approximation of

fire regime of the area. There should be controlled burning to protect the natural plant and animal systems and to prevent an undesirable build-up of plant materials. Man should be excluded from critical areas in times of drought. Fire laws should be strictly enforced.

**(B) Intrusion of Salt Water**

To prevent the intrusion of salt water within the coastal areas, the fresh water head should be maintained as high as feasible. When a water shortage is anticipated, restriction of water use will be necessary in order to maintain this head of fresh water during the drought. Temporary dams should be built on canals, when necessary, with an established emergency system of permitting to allow construction of such dams. During droughts, navigation service should be restricted in order to reduce loss of fresh water. Canals should not be constructed which would allow salt water intrusion inland of the salt water line. Appropriate local laws should be established and enforced.

**(C) Establishment of Water Priorities**

Since there is competition for water by agriculture, urban areas, conservation areas, estuaries and the Everglades National Park it is recommended that the total water supply be considered a common resource. Survival of the entire South Florida ecosystem, without sacrificing any segment, should be the prime consideration. Maintaining the head of fresh water should be given first priority. The inter-agency committee should propose priorities in its over-all plan.

**(D) Regulation of Water Use**

A model water use priority ordinance should be developed for use by all affected areas, establishing a series of consumptive controls based on the degree of water shortage.

**(E) Desirability of Cloud Seeding**

Cloud seeding is not considered a short term solution. There was a division of opinions on the desirability of cloud seeding primarily due to a lack of knowledge, especially as to the possible adverse environmental effects. An opinion is that cloud seeding may be more effective in producing a water supply during the wet season to mitigate low water supplies during the dry season. However, further research is recommended.

**(F) Schedules of Water Levels in Lake Okeechobee and the Conservation Areas**

The inter-agency committee should develop and maintain close coordination between the U. S. Army Corps of Engineers, the Central and Southern Florida Flood Control District, the Florida Game and Fresh Water Fish Commission, the U. S. Department of the Interior and where appropriate, the Florida Department of Natural Resources. The purpose should be to establish water levels in Lake Okeechobee and the Conservation Areas as well as to establish flexible regulation and delivery schedules for all water needs in South Florida.

**MANAGING AGENCY FOR THE SOUTH FLORIDA REGION**

Water management should be coordinated at the federal, state and regional levels, with the leadership role clearly being taken by the State of Florida. At the state level there must be an agency or board that has all power necessary to develop and ensure implementation of a comprehensive land and water use plan for the State. The agency or board, whichever it may be, should report to the Governor.

A regional board for South Florida shall be established. The

regional board shall be composed of nine (9) members appointed by the Governor. Three year staggered terms shall be used. The board shall represent the diverse interests in the region. It should hold periodic public hearings in its region for the purpose of receiving input from the public. It shall develop and implement a regional comprehensive land and water use plan in accordance with the State plan. The development of this regional plan should commence at once with the proper funding and legislative authority, even in the absence of an adequate statewide plan. In the development of these long range plans, procedures should be adopted which allow and encourage full public participation and input.

The geographical boundary of the South Florida regional land and water management agency shall be the Kissimmee River Basin, the Okeechobee Basin, the Everglades and the Big Cypress Watershed, including all adjacent coastal and estuarine areas. The regional land and water management agency shall be responsible for managing water quality and quantity for the long term benefit of the environment of the region and the State. The agency shall be responsible for establishing policy and guidelines for such activities as drainage, water use, well drilling, land use, estuary protection, watershed management, flood control and soil conservation.

The regional agency shall have all powers necessary to develop and implement the regional land and water use plan including, but not limited to, taxing powers, eminent domain, police powers such as intervention to protect the environment, permits for drainage districts and canals, subpoena and investigative powers and research properly coordinated with other agencies. A law providing for public condemnation of lands for environmental protection is essential to the implementation of the objectives herein presented.

The regional agency shall be required by the State to relate to and coordinate with duly constituted State and regional organizations operating in other functional areas.

Finally, the conference recognizes that present funding for environmental protection must be greatly enlarged to accomplish the common goal of protecting the economic and environmental values of this State.

The citizens who have participated in this Governor's Conference on Water Management in South Florida in plenary session assembled acknowledge and applaud the foresight and courage demonstrated by Governor Reubin O'D. Askew in convening this meeting and offer their continuing support in accomplishing the objectives set forth in this statement.

Approved in Plenary Session  
September 24, 1971

# Panel Members Listed

Some 150 experts from the fields of science, government, agriculture, and conservation participated in the Governor's Conference on Water Management in South Florida. The panels were headed up by Professor John DeGrove of Florida Atlantic University and Professor Arthur Marshall of the University of Miami. Names of members on the panel follow:

Group 1 — Hal Scott, Audubon Society, Chairman, and Donald O. Morgan, FCD, Recorder. Panelists included: Dr. Harry A. Allison, University of Florida; B. O. Beck, Osceola County Commission; Mrs. J. W. Bernhard, Tequesta; Richard Bogosian, Indian River County Commission; Richard Brusulas, Miami; T. J. Buchanan, U.S.G.S.; Thomas E. Furman, University of Florida; Joel Gustafson, State Representative, 87th District; Fred W. John, Belle Glade Chamber of Commerce; Thamas A. Kimball, President National Wildlife Federation; Henry Kittleson, Lakeland; Richard Klukas, Everglades National Park; Harry H. Kuck, Jr., South Everglades Planning Council; Ross McCluney, University of Miami; John McCue, Dade County Public Works; Dr. Howard Odum, University of Florida; William Robertson, Everglades National Park; Dick Robinson, Bureau of Sport Fisheries and Wildlife; Dr. Robert Simpson, N.O.A.A.; Angelo Tabita, Corps of Engineers; Dr. Kenneth Tefertiller, University of Florida; John W. Wakefield, U. S. Department of Health, Education and Welfare; George V. Warren, Palm Beach County Commission; and William Zinkil, Sr., State Representative 85th District.

Group 2 — Dr. Robert Homas, Florida Atlantic University, Chairman and Dr. Manley Boss, Florida Atlantic University, Recorder. Panelists included: Durward Boggess, U.S.G.S.; Joe Brown, Everglades National Park; Dr. George Cornwell, University of Florida; Gratton W. George, Hendry County Commission; Dr. John Gerber, University of Florida; Robert Gibbs, South Florida Environmental Project; Robert Grafton, FCD; E. E. Green, St. Lucie County Commission; Theodore Haessner, Corps of Engineers;

C. Knecht, U. S. Sugar Corporation; Philip Lewis, State Senator, 33rd District; Bill Lund, Jupiter; Frank Nix, Everglades National Park; Gerald Parker, South West Florida Water Management District; Ted Randall, State Representative, 112th District; J. W. Stevens, Broward County Commission; Dr. Kerry Steward, U.S.D.A.; Robert B. Steyler, Dade County Water-Sewer Authority; Mrs. Joyce Tarnow, Coral Gables; and Dr. William Woodley, W.O.A.A.

Group 3 — Dr. Carl McKenry, University of Florida, Chairman; and Colonel J. W. Sollohub, State Department of Natural Resources, Recorder. Panelists included: Lothian Ager, Game and Fresh Water Fish Commission; Dr. Taylor Alexander, University of Florida; John Bethea, Director Division of Forestry; Mrs. Jean Booker, Fort Lauderdale; Stephen P. Clark, Mayor Dade County; George Cooper, Princeton; Mrs. Marjorie Stoneman Douglas, Miami; Dr. Charles Eno, University of Florida; W. E. "Bill" Fulford, State Representative, 40th District; George Gardner, U. S. Department of the Interior; James H. Hartwell, University of Miami; K. K. Huffstutler, E.P.A.; Ray Knopke, State Senator, 23rd District; Dr. Charles M. Loveless, Denver Wildlife Research Center; Art Marshall, University of Miami; William G. Meyers, Martin County Commission; Martin Northrup, Florida Audubon Society; Dennis O'Connor, University of Miami; Vincent Patton, Air and Water Pollution Control Board; John Pennekamp, Miami Herald; Ralph Poe, Orange County Commission; A. W. Sarrinen, consulting engineer; William Schneider, U.S.G.S.; Bruce Scott, Lee County Commission; Garrett Sloan, Dade County Water-Sewer Authority; and William V. Storch, FCD.

Group 4 — Dr. Lloyd B. Stover, Florida International University, Chairman; and Bill Partington, Environmental Information Center, Recorder. Panelists included: Mrs. Jean Bellamy, Miami Chamber of Commerce; Dr. J. I. Garcia Bengochea, consulting engineer; Joe Carrol, Bureau of Sport Fisheries and Wildlife; Dr. Frank C. Craighead, South Florida Environmental

Project; Don Crane, State Representative, 52nd District; J. Walter Dineen, FCD; Robert Graham, State Senator, 48th District; Aaron Higer, U.S.G.S.; Mrs. Virginia Hine, Miami; Dr. Wayne C. Huber, University of Florida; M. J. Kolpinski, U.S.G.S.; Stanley D. Leach, U.S.G.S.; Larry Lukin, Palm Beach County Environmental Director; Riley S. Miles, Water Users Association; Dr. William Morgan, University of Florida; Dr. Oscar T. Owre, Audubon Society; Richard Pettigrew, Speaker of the House of Representatives; H. H. Raulerson, Okeechobee County Commission; James F. Redford, Miami; Larry Shanks, U. S. Department of the Interior; Cecil P. Skipper, Highlands County Commission; Dr. Sam Snedecor, University of Florida; William R. Vines, Naples; Lorenzo Walker, State Representative, 113th District; James O. Woodward, Glades County Commission.

Group 5 — Jack Shreve, State Representative, 75th District, Chairman; and Joel Kupperberg, Trustees of the Internal Improvement Fund, Recorder. Panelists included: Peter Baljet, Dade County Health Department; William Bevis, Commissioner Florida Public Service Commission; David Blumbert, Miami Chamber of Commerce; Joe Burgess, House of Representatives Committee on Natural Resources; Aldine Combee, Polk County Commission; Clyde Conover, U.S.G.S.; Hugh M. Evans, Brevard County Commission; Harry Harris, Monroe County Commission; Dr. Robert C. Harris, Florida State University; E. T. Heinen, Environmental Protective Agency; John C. Jones, Florida Wildlife Federation; Walter Kautz, Florida Farm Bureau; Dr. Ariel Lugo, University of Florida; John R. Maloy, FCD; John Opel, Palm Beach Post-Times; George Patten, Legislative Aide to U. S. Senator Lawton Chiles; Earl Rich, Highland County Commission; Lyman Rogers, Conservation 70's; Dr. Ernest T. Smerdon, University of Florida; Guy Spicola, State Representative, 75th District; Dr. Durbin C. Tabb, University of Miami; Richard Tillis, Department of Education, Tallahassee; Reggie Walters, Director of Planning for Dade County; Lester Whitaker, Sr., Collier County Commission.