CHAPTER SEVEN
"Save Our Everglades": Reagan's New Federalism and Governor Bob Graham in the 1980s

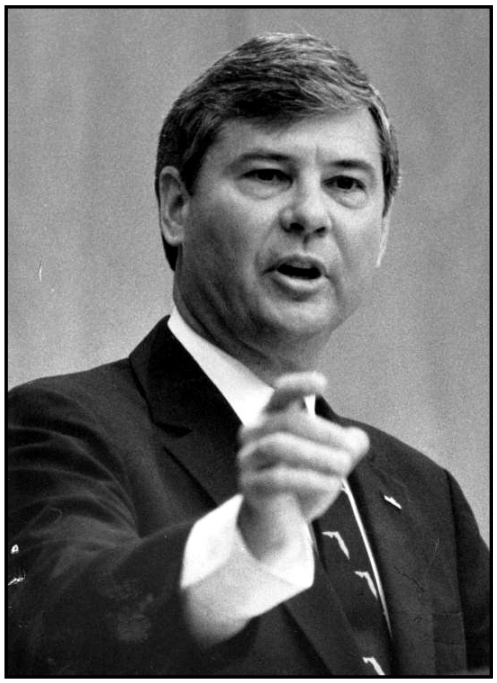
In the early 1980s, two political leaders brought strikingly different agendas to bear on Florida's water management problems. Daniel Robert "Bob" Graham, a Florida Democrat with a strong record on the environment in the state senate, was elected governor of the state in 1978. Ronald Reagan, the former governor of California who blamed many of the nation's economic woes on "environmental extremists," was elected president of the United States two years later. The two politicians moved forward with their respective agendas at different speeds but with telling synchrony. Upon taking office in 1981, President Reagan began an immediate overhaul of environmental regulations that had developed over the past decade, and he reduced federal funding across a broad range of environmental agencies and programs. Reagan's environmental policy provoked strong reaction in Congress and among the general public, forcing the president (along with some other factors) to dismiss the two cabinet members who were the most identified with his environmental agenda, EPA Administrator Ann Gorsuch and Secretary of the Interior James G. Watt. Governor Graham treaded cautiously in the environmental arena in his first two years in the state house, but began wading into environmental issues shortly after Reagan became president. In 1983 – the high water mark of public consternation with Reagan's environmental policy – Graham made "Save Our Everglades" a major element in his political program for Florida, continuing and strengthening the environmental concern first demonstrated by Reubin Askew's administration.

The thrust of Reagan's environmental agenda was to shift responsibility from the federal government to the states. Graham's environmental program revolved around central planning and public land acquisition. In the face of Reagan's electoral triumph and the contraction of federal leadership in environmental affairs, Graham marshaled the state's resources to undertake the mammoth task of restoring the Everglades ecosystem. Together, the policies of these two contrasting leaders – building on the foundation constructed by Askew's administration – rearranged the political landscape of South Florida water management.

In February 1981, *Sports Illustrated* published a hard-hitting article about environmental degradation in Florida. Authors Robert H. Boyle and Rose Mary Mechem described the state's rampant population growth and frenetic new construction and noted that Governor Bob Graham had declared his administration in full support of bringing in more industry. "The sad fact is that Florida is going down the tube," the authors wrote. "Indeed, in no state is the environment being wrecked faster and on a larger scale." The authors went on to cite dire warnings of ecological collapse by such prominent Florida environmentalists as Marjory Stoneman Douglas, Charles Lee, John "Johnny" Jones, Arthur R. Marshall, and Nathaniel P. Reed.[1] What set this article apart from a dozen other contemporary essays about Florida's ailing environment was its prominent placement in a magazine with a broad readership. This was *Sports Illustrated's* hot-selling annual swimsuit issue, and the 10-page article on Florida's environment dovetailed with a 14-page spread of bathing beauties on Florida beaches.

The instigator of the *Sports Illustrated* article was none other than the brash and effective political lobbyist Johnny Jones, executive director of the Florida Wildlife Federation and an instrumental player in Kissimmee and Okeechobee issues in the 1970s. Negative publicity was just what Jones was seeking. In 1980, he began calling newspaper editors and outdoors writers around the state, feeding them information for stories on the environment. After some success at the state level, he approached *Sports Illustrated*. Jones' idea at that point was to challenge the governor by making caustic remarks about Bob Graham's commitment to the environment in the national magazine.[2] "There never was a better environmental senator than Bob Graham," Jones was quoted as saying in the article, referring to Graham's legislative achievements in the state senate. "But as governor he has wandered away from us. I can't even get in to talk with him, and I run the biggest conservation organization in Florida. As a governor, he ain't got it." Jones went on to charge Graham with forsaking environmentalists, reaching out to sugarcane growers and agribusiness, and generally moving to the political center because he had presidential ambitions.[3] Jones' words were harsh but measured; privately he held the governor in high esteem. Yet he knew from experience, he told an interviewer many years later, "that if you want somebody to move in government . . . you have to pick up a two-by-four and hit him upside the head."[4]

Graham's commitment to the environment was both personal and complex. Born in the Miami suburb of Coral Gables in 1936, he was no stranger to South Florida's growth issues. His father, Ernest Graham, had moved to Florida from Chicago and, in the words of Marjory Stoneman Douglas, "turned a Miami dairy farm into a real estate fortune."[5] As a young man, Bob Graham took a turn with cattle raising and home construction, before venturing into politics. He served in the Florida House of Representatives from 1967 to 1970, and in the Florida Senate from 1971 to 1978, where he got several important environmental laws enacted. In 1978, he was elected governor. One of his first acts was to create the Office of Planning and Budgeting, which was aimed at giving state planners more influence in shaping the state budget.[6] In this regard, Graham's approach to governance contrasted with that of President Ronald Reagan, who made masterly use of the federal budget as a tool for shaping federal policy. While both Graham and Reagan appreciated the nexus of budget and policy, Reagan approached it from the opposite direction, using the Office of Management and Budget (OMB) to degrade federal programs he did not like – including many environmental programs affecting South Florida.



Governor Bob Graham. (Source: The Florida Memory Project, State Library and Archives of Florida.)

When Graham took office, one of the key planners in Florida state government was Estus Whitfield. Whitfield was the principal author of the state's first land development plan. In 1979,

Governor Graham asked Whitfield to join his staff, requesting that Whitfield attend some cabinet briefings. According to Whitfield, "the environmental stuff was always the most significant part of the Cabinet meetings. It did not necessarily take the most time, but it was always difficult, controversial, because you had the issues of the use of state-sovereign lands."[7] Consistent with the acts he had sponsored in the state legislature in the early 1970s, Governor Graham wanted to facilitate dialogue between advocates of growth and environmental protection. Not surprisingly, the criticism of the governor in the *Sports Illustrated* piece found its mark.

Whitfield remembers bringing the governor a copy of the magazine. "There is some good news and some bad news here," Whitfield said, "and the good news is on the front, Christie Brinkley in her swimsuit." The bad news was inside. To see such a popular national magazine lambasting Florida's mismanagement of the Everglades, and to read the criticism by Jones – a political friend and supporter who had a big following in the state – made a powerful impression on Graham. "I do not ever remember a time thereafter," Whitfield remarked, "that the environment was not on the top of the agenda."[8]

The environmental problems that the governor faced were tied inextricably to Florida's continuing rampant growth. By the 1980 census, the state had nearly 10 million people and had risen to the rank of seventh largest state in the union. Two cities, Miami and Orlando, were growing apace. Miami, long established as the nation's gateway to Latin America, had become, like New York and Los Angeles, one of the nation's great immigrant cities. Its population contained not only Cuban exiles, but also large numbers of non-Cuban Hispanics, Caribbeans, and Asians. In the early 1980s, Miami captured national headlines as it coped with a floodtide of refugee "boat people" and rising ethnic violence. Orlando, meanwhile, continued to grow as a destination resort and service center for Disneyworld's Magic Kingdom. Sprawling across four counties, this metropolitan area was attracting some 150 new residents daily by the 1980s.[9] The phenomenal growth of Miami and Orlando, together with the development of other cities and innumerable retirement communities, placed increasing demands on the water supply of South Florida.

Agriculture, too, continued to grow, imposing its own set of water demands. Sugar cane, in particular, consumed a huge quantity of water. While dairy farms and citrus groves north of Lake Kissimmee disappeared into subdivisions on the expanding fringes of Orlando, sugar cane interests further south increased their stake in the lands served by the C&SF Project. In the EAA, the farm crop amounted to $700 million in 1981, of which $600 million was in sugar cane. That year, Florida surpassed Hawaii as the nation's top producer of sugar. Ornamental tree farms were another significant agricultural interest. In Dade County's agricultural areas, intensive fruit and vegetable farming yielded 75 percent of the winter vegetables and 95 percent of the limes consumed in the entire country.[10]

One concern for many people was the water supply for Dade County. Three million people in South Florida depended on the Biscayne aquifer for their sole source of drinking water. As demands on the aquifer mounted, so did longstanding concerns about seawater infiltrating into the groundwater. Another concern was contamination of the water supply by chemicals and sewage. There were known hazardous waste sites all over South Florida where no barrier existed to stop potentially hazardous wastes from leeching into the groundwater. People, too, worried

Miami, 1985. (Source: The Florida Memory Project, State Library and Archives of Florida.)

about contamination of shore waters. Pollution in Tampa Bay was so bad that parts of the bay were off-limits to swimmers.[11]

But the most pressing issue was the decline of the Everglades. By the early 1980s, experts were agreeing that the health of the Everglades ecosystem was deteriorating at an accelerating rate. The signs of ecological imbalance were many: soil subsidence; water scarcity and pollution; alteration and elimination of vegetation, wildlife, and fisheries; and intrusion of exotic species. If there was one ray of hope, it was in the growing recognition that water management was the key to saving the Everglades. It was not just a matter of protecting the quantity and quality of water in the natural system; it was imperative that resource managers discover how to distribute the water so that it closely paralleled the historic sheet flow and the region's annual rainfall cycle.[12]

These ideas crystallized in 1982 when another deer crisis occurred in Water Conservation Area No. 3. From 1980 to 1981, South Florida had experienced a drought, and the low water, coupled with fewer hunting opportunities, had caused the deer population to expand. Then, in the spring of 1982, heavy rains began falling, raising water levels in Conservation Area No. 3 to 11 feet, significantly above the regulation schedule of 9.5 to 10.5 feet. The heavy rains also

forced the Corps to pump water from the EAA to the water conservation areas, exacerbating the condition. With deer unable to find forage due to the high water, the Florida Game and Fresh Water Fish Commission called for an out-of-season hunt to reduce the deer population and enable more of the animals to survive. On 18 and 19 July 1982, hunters killed 722 deer. But animal-rights activists protested strongly against the hunt, vilifying both the Corps and the Game and Fresh Water Fish Commission, and the plight of the deer became nightly fodder on the national evening news. This negative publicity prompted Graham to create the Everglades Wildlife Management Committee, composed of representatives from state and federal agencies and headed by Estus Whitfield. Graham asked the committee to develop a wildlife management plan in harmony with water management goals.[13]

The Everglades Wildlife Management Committee held public hearings to gauge what could be done about the deer. Numerous animal-rights activists came, as did many environmentalists. According to Whitfield, "the common theme, which was repeated over and over and over again," was that "poor water management" was the problem. Therefore, when the committee issued its report, it stated, in Whitfield's words, that the deer should not only be managed at lower levels, but that "the water-management system is flawed and . . . needs to be altered."[14]

One of the ways to change water management was by implementing steps that Arthur Marshall had been promoting for years – something that Johnny Jones referred to as the "Marshall Plan." Jones gave the program this designation both to honor his friend and for rhetorical effect, as it echoed the economic rebuilding program developed by Secretary of State George C. Marshall after the Second World War and the plan promulgated by U.S. Geological Survey employee Robert Marshall to solve the water woes of the San Joaquin Valley in the 1920s (which eventually became the Central Valley Reclamation Project). The Arthur Marshall Plan was essentially what Marshall had advocated since the early 1970s – a restoration of natural sheet flow to the entire ecosystem, from the headwaters of the Kissimmee River to Florida Bay. It was then a prototype for the comprehensive plan for ecosystem restoration that would emerge in the 1990s. Marshall's ideas, however, focused on the problems of the upper basin, particularly along the Kissimmee River, and referred to the plan as a way to "repair" the Everglades, not "restore" it.[15] Regardless, the program provided a blueprint for ecological restoration – albeit encompassing a limited area of the Kissimmee-Okeechobee-Everglades ecosystem – and it assumed a large commitment of funding by the state government.

Ironically, Florida's latter-day Marshall Plan did not have any federal funding behind it even though the enormity of the proposal and the fact that it would affect Everglades National Park seemed to warrant it. Some even believed that the U.S. Army Corps of Engineers would oppose the plan, given the extensive modifications of the C&SF Project it would require. Nor was it clear whether Florida would get much support for its environmental initiatives from agencies such as the EPA, the FWS, and the NPS, even though all of these entities had supported environmental initiatives in the 1960s and 1970s. The reason was simple: about the same time that environmentalists succeeded in reawakening Graham to environmental issues in Florida, they lost whatever influence they had had in the executive branch of the federal government under Ronald Reagan. The newly elected president was avowedly pro-business, strenuously opposed to "big government," and hostile to most of the environmentalists' agenda. His election in 1980 created a new political context for environmental restoration initiatives in South Florida.

Reagan campaigned for the presidency on a theme of cutting taxes and government "red tape" in order to revitalize the economy. His vision of economic growth contrasted with President Jimmy Carter's message of sacrifice. Reagan's conviction that the United States could achieve energy independence by unlocking its own domestic resources contradicted Carter's emphasis on conservation and limits to growth. Reagan also presented "simple" alternatives to Carter's complicated analyses. Although environmental issues were not at the center of debate in the presidential campaign, the two candidates presented a stark difference on environmental policy.[16]

When Reagan won the election, environmentalists feared that the new president would undo many of the movement's accomplishments of the previous decade. Reagan, for his part, claimed that his landslide victory at the polls (he had defeated Carter by 489 to 49 electoral votes and garnered a plurality of popular votes in a three-way race with Independent John Anderson) gave him a popular mandate to reform the nation's economic and regulatory policies, including those shaping the environment. Reagan's environmental agenda was deregulation, reduction of programs, and the opening of public lands for energy development and other uses. But in spite of Reagan's decisive victory, it was questionable whether his environmental policy was in sync with majority opinion. Because most people based their votes on multiple issues, no one could be sure that voters had given Reagan a mandate to reform environmental policy. Indeed, one strong indication that the public remained committed to environmental reforms of the 1970s was the fact that environmental organizations dramatically increased in membership during the Reagan administration. Analysts came to believe that the public consensus that had formed behind the environmental movement in the 1970s held together in the 1980s. As the Reagan administration moved ahead on its agenda, environmentalists sought to protect the status quo through Congress and the courts.[17]

Ronald Reagan at a press conference in Florida. (Source: The Florida Memory Project, State Library and Archives of Florida.)

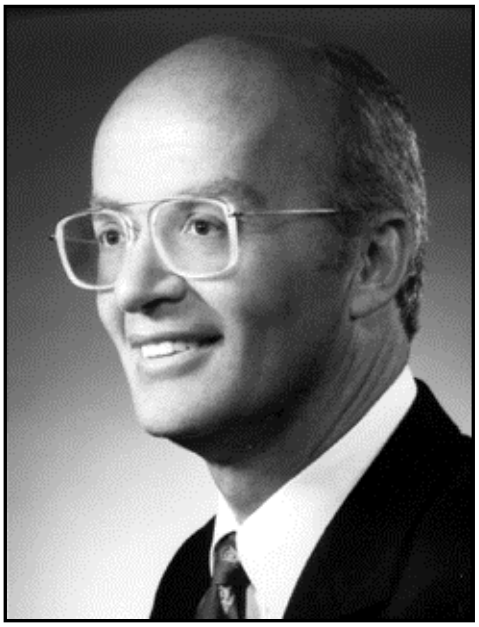
Reagan pursued his environmental policies through three principal strategies. First, he appointed administrators who shared his conservative ideology and who were willing to undertake an extensive rewrite of federal regulations. Whereas Carter had appointed many administrators from the environmental community, Reagan recruited largely from the business arena and his appointees to environmental agencies typically had cut their teeth opposing government regulators. While some of Reagan's top appointments provoked congressional opposition, his lower level designees were too numerous for Congress, environmental groups, or the media to monitor. The Reagan administration's political appointments reached farther down in the ranks of the executive branch than in any previous modern presidency, and the President

accomplished his goals in part through a systematic weakening of federal environmental regulations and policies at the hands of these administrators.[18]

Reagan's second principal strategy was to use the budget process to implement policy. He began his first term by pushing a package of massive tax and budget cuts through Congress. "No previous administration ever came into power more determined or better prepared to achieve substantial domestic policy change through the budgetary process," political scientist Robert V. Bartlett argued. In each ensuing budgetary cycle following the 1981 tax cut, Reagan directed the inevitable reductions in federal appropriations toward those environmental programs he favored least. "Few environmental programs," Bartlett wrote, "escaped the Reagan budgetary scalpel."[19] While Congress began to restore some environmental program budgets to former levels in Reagan's second term, many programs – such as funding for research and development – bore lasting scars from this budget slashing approach to policymaking.

Reagan's third principal strategy was to avoid battles with Congress. He sought to weaken environmental laws not through legislative amendment but through selective non-enforcement of the laws based on regulatory revision and budget cuts. The Reagan administration made few legislative proposals in the environmental arena. Although Congress opposed the Reagan environmental policy agenda in many particulars, it went along with the president's tax and budget cuts in 1981. As a result, Congress's opposition to the president on environmental issues during the 1980s was largely confined to budget battles.[20]

The poster child for Reagan's environmental agenda was Secretary of the Interior James G. Watt, the most flamboyant and controversial of Reagan's appointees. A Wyoming lawyer who had spent years lobbying for and battling against Interior Department policies, most recently as a member of the conservative Mountain States Legal Foundation, Watt was a self-proclaimed leader in the "Sagebrush Rebellion." Centered in the West, the Sagebrush Rebellion was fueled by frustration over declining energy prices and protective land policies that were allegedly harming western rural communities. Its principal goal was to privatize certain public lands administered by federal agencies. Although the Sagebrush Rebellion focused most intently on federal wilderness areas and minerals administered by the U.S. Forest Service and the Bureau of Land Management – western issues that were seemingly remote from Florida – its attack on public land ownership was significant. One of Secretary Watt's first initiatives was to freeze expenditures by the Land and Water Conservation Fund.[21] This fund was used primarily for purchasing land in authorized additions to the national park system, and from 1965 to 1981, it had enabled the NPS to acquire 1.4 million acres – including land in Florida's Big Cypress National Preserve and Biscayne National Monument. As proposals for ecosystem restoration in South Florida increasingly pointed to the need for more



Secretary of the Interior James G. Watt. (Source: U.S. Department of the Interior.)

publicly owned conservation lands, the Reagan administration did nothing to encourage a vigorous federal or state land acquisition program.

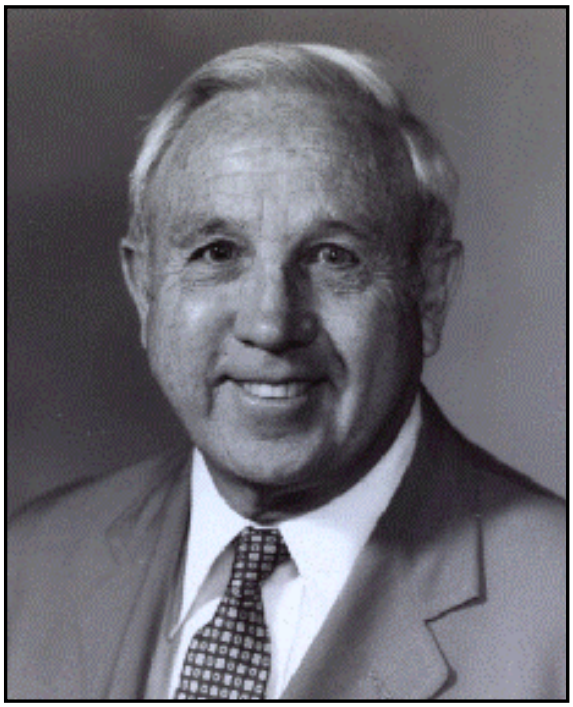
The operating budget of Everglades National Park took some direct hits in Secretary Watt's drive to reduce expenditures by the NPS. In 1982, the park was denied funding for restoration of natural drainage to the Turner River watershed in Big Cypress National Preserve and the western edge of Everglades National Park, a project that the Izaak Walton League claimed "would be truly a precedent setting action."[22] In 1983, the park lost funding of its exotic plant control program.

Watt also had a penchant for making flip remarks (Reagan once gave Watt a sculpture of a cowboy boot with a bullet hole through the toe to symbolize this characteristic) and this tendency was evident in his response to the ecological endangerment of Everglades National Park. In June 1983, at a time when the national news media were carrying stories about manmade flood disaster in the park, Watt said in a prepared address to the American Petroleum Institute, "I'm told that Everglades National Park is being improved and is in better shape than it has ever been."[23] Park officials told the press the next day that the secretary of the interior was vastly uninformed. Watt's critics pounced on this flap as evidence that the secretary did not talk to his park superintendents and did not comprehend or care about the ecological integrity of national parks. Indeed, it seemed to be further proof that Watt was narrowly focused on infrastructure improvements in the national parks. Florida Audubon Society president Peter Mott saw it as evidence that the interior secretary was ignorant that the park had lost 90 percent of its wading bird population. "Or maybe he thinks visitor centers are more important so people can go there and see trees with no birds in them," Mott sarcastically commented.[24]

Another controversial Reagan appointee, Ann Gorsuch, presided over drastic reductions of budget, staffing, and regulatory enforcement at the EPA. Under her leadership, according to historian Edmund P. Russell, "EPA cut enforcement actions in half and morale plunged." Administration critics asserted that Gorsuch was unqualified and incompetent to lead EPA. Pressured by Congress, and with critics within the White House as well, she resigned in 1983, and Reagan brought back EPA's first administrator, William Ruckelshaus, to restore the agency's sense of mission. In one important respect EPA had been adrift since the Carter administration. Originally, the EPA had concerned itself with the total environment, but it had since moved toward a narrower focus on cancer-causing toxins.[25] In part because of this focus, EPA paid little attention to Everglades protection during the Reagan years.

Reagan's choice to oversee water resource development programs of the U.S. Army Corps of Engineers was William R. Gianelli, who became Assistant Secretary of the Army (Civil Works) in April 1981. Gianelli had served as head of California's Department of Water Resources when Reagan was governor of that state. Gianelli had two principal goals as the assistant secretary. First, as part of Reagan's effort to deregulate, he wanted to curtail the Corps' Section 404 regulatory program. This program was named for Section 404 of the Clean Water Act of 1972, which assigned the Corps responsibility for issuing permits to dredge and fill wetlands. During the Carter years, the Section 404 program evolved so that the permitting process served to protect, or at least mitigate, wetlands loss. Gianelli believed this was wrong. In his view, the intent of Section 404 was to protect water quality, not wetlands. If Congress really wanted to prevent the destruction of wetlands, Gianelli maintained, then it needed to pass another law and

assign responsibility to EPA or the FWS. So Gianelli embarked on a revision of the Section 404 regulations with the assistance of his deputy, Robert Dawson. The principal result of these efforts was to streamline the permitting process and allow more development in wetlands. Gianelli was particularly proud that the revised regulations reduced the influence of "single-purpose agencies" such as the FWS and the NPS.[26]



Assistant Secretary of the Army (Civil Works) William R. Gianelli. (Source: U.S. Army Corps of Engineers.)

Gianelli's other main goal was to reform the system of funding for water development projects. Curiously, this was one environmental policy initiative the Reagan administration shared with the Carter administration. But Reagan would not repeat the mistake that Carter had made. In 1977, Carter had gone to Congress with a "hit list" of Corps of Engineers civil works projects that he considered unnecessary and worthy of deauthorization. Carter took aim at these projects because the Corps had a longstanding reputation as an agency that lent itself to "pork barrel" politics. Members of Congress had made an industry out of obtaining civil works projects for their local districts – projects that were often paid for by taxpayers at no additional cost to the local communities that were supposed to benefit from them. Moreover, the Corps' civil works program carried a backlog of projects that, in the context of the environmental movement, appeared misguided and detrimental to the environment. Carter, however, underestimated how jealously Congress guarded its prerogative to authorize these civil works projects, and he encountered a firestorm of congressional opposition. The resulting standoff killed any new water resource development acts – the semi-annual appropriation bills of the Corps' civil works program. Carter retreated from his hardline stance in the last two years of his administration, but the damage had been done.[27]

When President Reagan came into office in 1981, he was every bit as opposed to pork barrel politics as his predecessor. Yet Reagan strongly supported water resources development. Indeed, Carter's assault on water development projects was one of the wellsprings of the Sagebrush Rebellion that had helped elect Reagan president. Therefore, Reagan's prescription for the Corps' civil works program was to get it moving again by shifting a greater proportion of project costs to the states. Carter, too, had proposed new cost sharing arrangements, but Reagan took it further.

Gianelli, again with support from his deputy, Robert Dawson, proposed substantially increased "cost-sharing" between the federal government and non-federal sponsors for construction of new projects. Historically, a study by the Water Resources Council had shown, local interests had paid an average of 19 percent for federal flood control projects, but Gianelli,

using figures developed by Robert Eiland, his special assistant, proposed that this figure be increased to 35 percent. Congress resisted this reform, and the stalemate over new project authorizations that had begun in the Carter administration continued through the first term of the Reagan administration. Finally, the Reagan administration succeeded in passing the Water Resources Development Act of 1986 (WRDA-86), which required local interests to enter into cost sharing agreements with the Corps for almost all new flood control projects. Local interests would bear at least 25 percent of the burden, instead of the federal government paying the full amount, and they would also supply 50 percent of the cost for feasibility studies. According to the Corps' chief counsel at the time, Les Edelman, it was Dawson who skillfully sold the cost-sharing idea to Congress, but congressional leaders, especially Senate Republicans such as Robert Dole, James Abdnor, and Mark Hatfield, were the ones who secured the legislation's passage.[28]

WRDA-86 was a significant achievement for an administration that put forth few legislative proposals in the environmental policy arena. The Reagan administration advanced its environmental agenda most effectively through the budget process, slashing appropriations for the Department of the Interior, EPA, and even the Corps, which lost nearly 3,000 positions in the civil works division from 1981 to 1983.[29] Therefore, as Florida positioned itself to undertake much more extensive ecosystem restoration in the early 1980s, it had little support from Washington. Reagan's new federalism would shape the direction of ecosystem restoration in South Florida for the next dozen years.

Reagan's new federalism was evident in the return of the jetport controversy. Although the first jetport proposal in the Big Cypress Swamp had been defeated, controversy swirled again over Site 14, a 26-square-mile area in northwest Dade County selected under the Everglades Jetport Pact in the 1970s. Construction had been delayed on the jetport, and by the late 1970s, environmentalists were bitterly divided over Site 14. Some environmental groups, notably the Florida Audubon Society, opposed Site 14, believing that the sacrifice of wetlands, the encroachment on critical habitat of several endangered species including the Everglades kite, and the disruption of sheet flow across Conservation Area No. 3B were unacceptable costs to accommodate further aviation needs.[30] But most of the Everglades Coalition supported the alternative site in the belief that, if it were not approved, Dade County would eventually build somewhere else in a location that would probably do more harm to Everglades National Park. Nathaniel Reed took this point of view, arguing that Conservation Area No. 3B, in which Site 14 was located, must be treated as multiple-use land in order to protect the national park and preserve land to the south and west. The dispute drove a wedge in the coalition.[31]

In October 1979, EPA raised the bar for Site 14 when it designated the Biscayne aquifer as a sole source aquifer under Section 1424(e) of the Safe Drinking Water Act. Now pollution discharged into the groundwater had to be considered in addition to the other environmental impacts of the proposed facility. EPA notified the FAA of its intent to review the project in light of its Section 1424(e) authority. By the spring of 1980, EPA officials in the Regional Administrator's office in Atlanta were warning the FAA that EPA had "several major concerns" – particularly since the Dade County Water and Sewer Authority had recently proposed to develop a major new well field for tapping the Biscayne aquifer near Site 14.[32]

EPA completed its review of the final EIS for Site 14 in February 1982, nearly a year into Reagan's first term. The agency reiterated its concern that the development of a commercial airport "within the cone-of-influence" of the newly developed well field represented a "potential threat to future drinking water quality in south Florida." Yet EPA would not use its Section 1424(e) authority to prevent the project, stating that it could not "conclusively demonstrate that an airport at Site 14 will lead to contamination of the Biscayne [aquifer]."[33]

Commenting on the final EIS in January 1982, the Jacksonville District of the Corps of Engineers expressed its own reservations about Site 14. The jetport facility would render Conservation Area No. 3B "virtually useless" for its intended purpose as a floodwater storage area. Moreover, the Corps objected to a statement in the final EIS that the Corps, together with other federal agencies, had determined that the jetport development was compatible with plans for the building of a conveyance canal from Conservation Area No. 3 to Everglades National Park. "The Corps of Engineers was not a party to this determination, and in fact disagrees with this determination," the Jacksonville District stated.[34] To the contrary, there was high potential for the jetport facility to contaminate water that was to be conveyed directly to Everglades National Park through the new canal. Therefore, the District requested that the FAA address these issues in its final EIS, noting that the FAA needed to follow the procedures outlined in Section 404(r) of the Clean Water Act as well.[35]

Faced with mounting criticisms of the project, Governor Graham formed a committee to study the issue and to recommend a final decision. He selected seven individuals: five from state government, one from private industry, and one from the University of Florida. The governor charged the group with making a thorough analysis of South Florida's future aviation needs. The group considered a range of other measures to improve commercial aviation service and

Urban encroachment of Dade County. (Source: South Florida Water Management District.)

determined that existing facilities at Miami International Airport could meet the region's demands through 2000. From a state perspective, further consideration of a proposed airport at Site 14 was unwarranted, the group decided. The governor accepted the group's findings.[36]

On 11 May 1983, Graham announced that he opposed the jetport plan and would not renew the state's participation in the Everglades Jetport Pact. "Our decision to withdraw the state's support for a Jetport in Dade County will mean enhanced protection of the Everglades, the 'river of grass' unique to the world," Graham stated. "This decision to withdraw state support of the study of a major new jetport in Dade County means that such a Jetport should not be built in this century."[37] Reminding people that the jetport proposal had been under consideration for a long time, the governor explained that public attitudes about land use had changed dramatically in the intervening years. Graham might have added, although he was too politically savvy to say it, that the federal perspective on land use had changed dramatically as well. If growth pressures in Dade County threatened Everglades National Park, it was now up to the state, not the federal government, to press for action.

At the same time that debate raged over the jetport proposal, the Corps struggled with another task that, in a different political climate, might have provided valuable help for addressing South Florida's water management problems. In 1980, the Jacksonville District initiated a study of South Florida's water supply mandated by Congress to resolve the questions of water supply to Everglades National Park. As explained previously, P.L. 91-282, passed in 1970, required that the Corps conduct a study in 1980 to "determine whether further modifications of the project [were] warranted, and [to] give further assurances of maintaining the essential water supply to insure the protection of the Park's ecosystem."[38] The study was funded as a component of the C&SF Project – another in a series of restudies of the huge project to gauge its progress and prospects. But instead of focusing on whether or not Everglades National Park was receiving enough water, the Jacksonville District decided to use the restudy to assess how the C&SF Project could increase water availability for the region's agricultural, municipal, and industrial needs. The restudy of the early 1980s foreshadowed the extensive reexamination that would be undertaken in the following decade. Like the latter effort, its purpose was to identify means for expanding the water pie in South Florida so that all stakeholders in the project could get a larger piece. However, the water supply study of the early 1980s withered. It served to highlight needs and options, but did not result in any comprehensive plans or recommendations.

A drought beset South Florida at the same time that the study was commenced, heightening public interest in the water supply problem. Hardest hit by the drought was Lake Okeechobee. As the level of the lake dropped to its lowest point in history, the Corps was urged to reconsider old proposals to raise the lake level and increase its storage capacity. The problem was that the level of the lake directly affected its water quality and wildlife habitat. To resolve these conflicts, the Corps changed the lake-stage regulation schedule in 1978 in order to increase water storage, and the SFWMD curtailed backpumping of water from the EAA into Lake Okeechobee in order to improve water quality. However, due to the drought, the lake level dropped despite the new regulation schedule. In order to prevent levels from decreasing even more, the SFWMD allowed a resumption of backpumping through August 1982.[39]

As part of the water supply study, the Corps investigated options for raising the level of Lake Okeechobee. It also considered backpumping water from east coast canals into the lake. Other alternatives included the establishment of additional water conservation areas, storage of freshwater in deep aquifers so that it could be pumped to the surface in times of shortage, desalinization of seawater, and water conservation. One concerned citizen wanted to import water to Lake Okeechobee from the St. Johns River basin to the north, a proposal that U.S. Senator Lawton Chiles (D-Florida) relayed to Colonel Alfred B. Devereaux, Jr., District Engineer of the Jacksonville District. Devereaux's deputy responded to Senator Chiles that interbasin diversion was not among the alternatives under consideration.[40]

Lake Okeechobee. (Source: South Florida Water Management District.)

Governor Graham agreed with the Corps on this matter, stating that interbasin transfers of water should be considered only as a last resort, and that the state and the Corps were investigating other means of improving South Florida's water supply. Graham noted that the array of water supply concerns included the protection of water quality, coordination of water use activities in each region, and "maintaining minimum flows for natural systems."[41] This last item was of crucial importance with respect to Everglades National Park.

Governor Graham was not the only one requesting that the Corps address the needs of Everglades National Park. John M. Morehead, superintendent of the park, was interested in the ultimate effects of the Corps' study. In a letter to Colonel Devereaux, he expressed hope that the study would "examine ways to rejoin the historical hydrological equilibrium between the east Everglades, the Water Conservation areas, and Everglades National Park."[42] Environmental groups, too, wanted assurance that the water supply study would adequately address park needs.

It was not an unreasonable demand, since Congress originally authorized the study in 1970 as part of its efforts to protect water supply to the park.[43]

But in the view of the Corps, the multiple demands on South Florida's water supply by municipalities, industry, and agriculture required a broader approach. As the water supply study entered its third year, the Corps determined that the best way to complete it was to throw its effort behind an initiative of the SFWMD involving computer modeling. Thomas MacVicar, a state hydrologist in the Resource Planning Department of the SFWMD, had begun developing a computer model capable of simulating the hydrology of South Florida on a regional scale. As the model progressed, the Corps provided funding through contractual arrangements with the SFWMD. Gradually, the water supply study melded into the SFWMD's computer modeling strategy.[44] In its original published form (1984), the model was called the South Florida Water Management Model (version 1.1). It would be continually modified, upgraded, and populated with additional data over the next two decades, and in the early 1990s, it would form the basis for a Natural System Model that was crucial in developing a comprehensive plan for ecosystem restoration.[45]

MacVicar's original concept was to develop something that would simulate how water was distributed and flowed through the entire ecosystem so that managers could test how operational decisions in one locality would affect hydrologic conditions elsewhere. The hydrologic model simulated groundwater flow, surface water flow, and how hydrology would respond to hypothetical channel routings from changes in canals, levees, and other structures. Spatially, the model consisted of a grid-pattern overlay of South Florida composed of squares two miles on each side, with each point of intersection in the grid being a node in the computer model. For each node, the model was populated with data on topography, land use, and aquifer thickness and permeability. In terms of timing, the model used one-day intervals, and data were supplied for rainfall, well field withdrawal, and structure discharge for each day of simulation.[46] Because it explored the relationship of disparate regions within the entire ecosystem – showing how changes in one part of the area affected water distribution or other characteristics in another section – MacVicar's model foreshadowed the Corps' restudy of the C&SF Project in the 1990s. In many ways, it was one of the key factors allowing the concept of Everglades restoration to bloom.

In its beginning stages, MacVicar's program was used for developing "optimization" of the C&SF Project. MacVicar encoded the model so that it would compare actual water stages throughout the system with "optimum" stages. Actual amounts were computed by entering the previous day's hydrologic data into the program. Optimums for each canal were variable depending on time of year, hydrologic conditions, and other operational considerations. The model helped managers to minimize the "absolute deviation" between the actual and optimum stages in each canal or reservoir, thereby allowing agencies "to drive the system to operate as close as feasible to the optimum."[47]

Park Superintendent Morehead saw the possibility of adapting MacVicar's hydrologic program to predict the results of different C&SF Project modifications for water deliveries to Everglades National Park. Through the Corps, he supplied MacVicar with data on mean monthly delivery volumes for the years 1969-1975.[48] MacVicar then entered operational data – the spatial arrangement of levees, canals, and other structures – for the same period. As he

explained in a meeting of Corps, SFWMD, and NPS hydrologists and engineers in May 1983, he could now run the computer model for "base" (current) or "historical" conditions. By operating the model on historical conditions, it was possible to rewind the clock on C&SF Project developments and simulate how the hydrology would respond. In this case, "historical conditions" referred only to the operational system in the years 1969-1975 – not far in the past – but the idea was to model different scenarios for filling in or degrading existing canals and levees in order to achieve a measure of ecosystem restoration. Toney Lanier, the Corps' project manager for the water supply study, assisted the development of MacVicar's program by committing project monies for it.[49]

Yet the Corps never produced a final report with an analysis of alternatives, as was conceived at the outset of the study and in the examination's congressional authorization. Yet the agency never officially abandoned it either. Strapped for funds and personnel, and distracted by project cost-sharing issues, it merely utilized the SFWMD's hydrologic model of South Florida for information.[50] After Congress passed an emergency measure for Everglades National Park in November 1983, requiring the Corps and the NPS to implement a two-year experimental program of modified water delivery for the park, the Corps became firmly wedded to the SFWMD's computer program as a means of re-evaluating water supply options not only for the park but throughout the Kissimmee River-Lake Okeechobee-Everglades ecosystem. It had used the water supply study to assess how agricultural, industrial, and municipal needs could co-exist with the park's ecological needs, much to the chagrin of the park, and it subordinated the study to the state's own water management objectives.

In 1987, seven years after the water supply study was initiated, the Corps sought comment from the FWS on another iteration of the examination, offering, for unclear reasons, only a meager $5,000 transfer of project funds for the FWS review. Field Supervisor Joseph D. Carroll of the FWS's Vero Beach office responded indignantly to Jacksonville District Engineer Colonel Charles T. Myers, III. "What is impending is a request at the 11th hour by your staff to respond in two weeks or 30 days to a ream of computer data," Carroll wrote. "As indicated in the Scope of Work, your staff will want to know detailed biological effects on Lake Okeechobee, the water conservation areas, the Holeyland and Rotenberger tracts, and Everglades National Park (millions of acres). This just cannot be done!" Carroll accepted the $5,000 transfer but warned that such a trifling sum would merely pay for "the most superficial treatment of this huge project, largely based on past studies and experience."[51]

Meanwhile, Governor Graham advanced his environmental agenda through state legislation. Graham's first significant environmental law was his "Save Our Rivers" initiative, enacted in June 1981, which provided $320 million to the state's five water management districts over the next ten years for river cleanup. In 1983, the state legislature passed the Water Quality Assurance Act, creating a $100 million trust fund to help local governments upgrade sewage treatment plants. The law also established guidelines for protection of groundwater from industrial pollution and gave the Florida Department of Environmental Regulation $3 million for enforcement. In 1984, the legislature enacted the Wetlands Protection Act, which enlarged the department's jurisdiction over swamps, marshes, and floodplains by extending the list of plants that identified an area as wetland from 67 to 266 species. The law also gave the department permitting authority for development in wetlands – a responsibility that overlapped the Corps'

Everglades National Park, 1980. (Source: The Florida Memory Project, State Library and Archives of Florida.)

regulatory program under Section 404 of the Clean Water Act. By 1985, officials in Tallahassee claimed that Florida was doing more than any other state to protect water supplies, with the possible exception of California. Despite these state efforts, Department of Environmental Regulation Secretary Victoria J. Tschinkel emphasized, Florida's water supply remained vulnerable to threats of pollution. More than nine out of ten Floridians depended on groundwater for their drinking water. "In south Florida," one environmentalist commented, "we live right on top of our water supply. It's like drinking out of the toilet." A noted expert on the state's water resources, John DeGrove, testified in hearings held by the department that "what we've seen here scares the daylights out of me."[52]

While President Reagan promised the nation regulatory relief, Governor Graham assured Floridians that they deserved more environmental safeguards – and as the governor's popularity rose, it increasingly appeared that that was what most Floridians wanted. Under the strong leadership of Secretary Tschinkel, the Department of Environmental Regulation moved ahead of both the Corps and EPA to address state water problems. Tschinkel announced a protective state water policy in 1981, followed by a coastal management plan soon after that. Impatient for EPA to mandate allowable limits for toxic chemicals in drinking water under the federal Clean Water Act, Tschinkel's agency established state standards, becoming the first state in the nation to do so.[53]

Governor Graham's enthusiasm for land-use planning to protect environmental quality culminated in Florida's Growth Management Act of 1985. Although the state had passed similar

legislation a decade earlier, it was not effective in dealing with the pressures of Florida's rapid population expansion. One of the most pressing issues for many Floridians was how to preserve the small-town character of communities that were becoming smothered by strip malls and homogenous residential subdivisions. The Growth Management Act of 1985 aimed to address numerous problems in conjunction with this development, including inadequate infrastructure to support growth, affordable housing, and urban renewal, as well as environmental degradation. In essence, the law required local governments to develop local comprehensive plans for land use.[54]

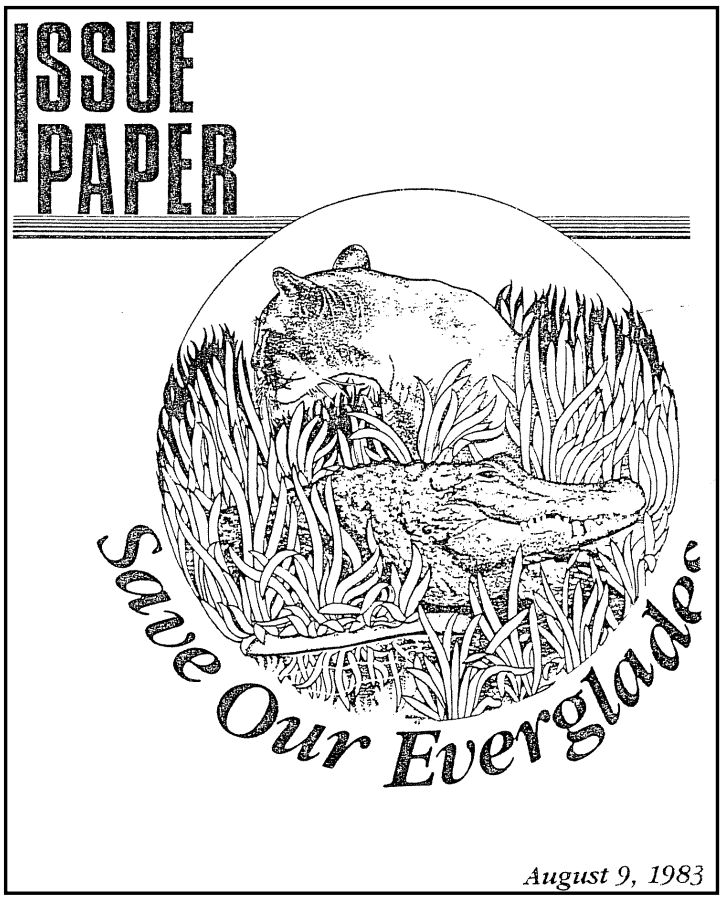
In the long run, this law failed in its objectives. The principal reason was that the legislation was not enforceable: it allowed for substantial local control, and when developers wanted to develop a particular parcel of land that was out of bounds, they lobbied the local government to have the comprehensive plan modified. The law made Florida's Department of Community Affairs responsible for enforcing the comprehensive plans, but it allowed the plans to be modified as often as twice a year. Another limitation of the Growth Management Act was that it did not attempt to coordinate land-use planning with conservation needs. Land use plans too often ran afoul of the Section 404 permitting process, for example, or of requirements under the Endangered Species Act.[55]

Growth management was fundamentally a problem for local and state governments, but clean water, protection of wetlands, and cleanup of hazardous waste sites were environmental issues that involved state and federal cooperation. While Graham was willing to put the resources of the state behind various initiatives, he was frustrated by the lack of federal support. "To date, we have sort of dragged the federal agencies with us," Graham remarked in 1986. "I'd like to see Washington move from a passive and reluctant partner to a full and enthusiastic one."[56]

Nowhere was the state in more need of federal assistance than in South Florida, where the Everglades continued to show signs of inexorable decline. Environmentalists had long insisted that the federal government was neglecting its stewardship responsibilities in South Florida. The national parks and other federal interests in South Florida ought to compel greater federal involvement in that region's ecological problems, environmentalists argued. Graham did not disagree, but he decided that the underlying problems were so broad and complex that environmental leadership had to come from the state. In particular, he was impatient with the Corps over its slow pace in studying how to repair environmental damage caused by the C-38 canal it had built down the Kissimmee River Valley. As Jones and Marshall reminded him following the exposé of Florida's environmental problems in *Sports Illustrated*, the Corps had resisted modifying the Kissimmee River project since it was first asked to reexamine it in 1976. "The governor is not going to wait forever for the Corps of Engineers to act," Graham's chief environmental aide, Estus Whitfield, informed the media.[57] Rather, the state would propose its own version of Kissimmee River restoration.

In late March 1983, Graham called a summit of his top environmental administrators. State agencies represented at the conference included the SFWMD, the DER, the DNR, the Florida Game and Fresh Water Fish Commission, and the Department of Community Affairs. He demanded interagency cooperation and gave meeting participants a 1 July deadline to develop a blueprint for saving the Everglades. Over the next three months, the governor held a series of other meetings on the Everglades with business leaders, environmentalists, and state officials. Although the governor conducted these conferences behind closed doors, word began to leak to

the press that the plan would involve restoration of sheet flow through the entire ecosystem. It would likely mean changes of land use in two bitterly contested areas: the EAA (south of Lake Okeechobee) and the section of Dade County bordering Everglades National Park known as the East Everglades Area.[58]



The cover to Governor Graham's Save Our Everglades plan.

On 9 August, Governor Graham unveiled his program of environmental initiatives for South Florida. Aimed at "rejuvenation" of the entire Kissimmee River-Lake Okeechobee-Everglades ecological system, the program took the name "Save Our Everglades" to highlight the significance of the effort for Everglades National Park. The program embraced six "Phase I" actions, presented roughly in north-south or downstream order. First, the state would seek federal cooperation in reestablishing the values of the Kissimmee River. Second, the Holey Land and Rotenberger tracts – lands within the EAA that were now mostly in state ownership – would be restored as wetlands for the benefit of water sheet flow and wildlife habitat. Third, the deer population in Conservation Area No. 3 would be managed so that high water levels would not cause massive die-offs. Fourth, the two highways traversing the Everglades east to west, Alligator Alley and the Tamiami Trail, would undergo extensive modification to reduce impoundment of sheet flow from north to south. Fifth, the state would acquire land, as well as encourage the federal government to acquire land, in the controversial East Everglades Area for the protection of Everglades National Park. In addition, the state would support the park's demands for a modified water delivery plan. Sixth and finally, state and federal land acquisition would be pushed ahead in Big Cypress National Preserve and Fakahatchee Strand for the protection of the Florida panther.[59]

Of the six actions, only the second and third were primarily achievable without federal participation. Therefore, Governor Graham informed President Reagan about the "Save Our Everglades" program in a personal letter delivered to the White House on 8 August, one day prior to the program's official disclosure. "Florida is undertaking an ambitious program to restore and preserve the Everglades, a national treasure and a key factor in the future prosperity of our State," the governor began. "We will need the assistance of federal agencies. I urge your

cooperation in revitalizing the Everglades and the environment of South Florida." Graham then cited the actions that would depend heavily on federal support: restoration of fish and wildlife values in the Kissimmee River Valley, requiring the "expedited cooperation" of the Corps of Engineers; reconstruction of Alligator Alley as an interstate freeway, which would need the assistance of the U.S. Department of Transportation; mitigation of water management impacts on Everglades National Park, necessitating Corps help; and acquisition of lands adjacent to the park and within Big Cypress National Preserve, in cooperation with the Interior Department. The governor requested that President Reagan designate a federal coordinator "who would be charged with expediting the actions of federal agencies in concert with state and local governments."[60] Although this last request did not garner any response from the Reagan administration, it foreshadowed the establishment of a federal task force on South Florida ecosystem restoration a decade later.

"Save Our Everglades" was a program more than a plan: it put forth a public goal and six distinct "actions" that would be pursued more or less independently of each other. Nevertheless, it was a huge step forward in forging public support for an ambitious program of environmental action in South Florida. And unquestionably, the program hung together around the central concept of ecosystem restoration. When Governor Graham announced "Save Our Everglades" in a press conference in Tallahassee on 9 August 1983, he defined three public purposes for the project that were "fundamental priorities" of his administration: first, to avoid any further degradation of the Everglades and related natural systems from the headwaters of the Kissimmee River to Florida Bay; second, to reestablish the "natural ecological functions" of the ecosystem; and third, to improve the overall management of recreation, water, fish and wildlife for the Everglades and surrounding areas.[61] All three purposes emphasized the connectedness of the Everglades with all of South Florida. They could be summed up in three words: preservation, restoration, and use. The concept of ecosystem restoration presented in "Save Our Everglades," then, enlarged upon the core national park mandate of preservation and use; it related Everglades National Park to the rest of South Florida, and it posited that ecological functionality was vital to both. An 11-page issue paper that accompanied the press release on "Save Our Everglades" made repeated references to "the Everglades and the environment of South Florida."[62] To save the Everglades was to save South Florida, home to six million people.

In the "Save Our Everglades" program, Graham offered a vision, or definition, for ecosystem restoration. The program was designed to provide "that the Everglades of the year 2000 looks and functions more like it did in 1900 than it does today."[63] The issue paper carried a "background statement" that sketched some history of human-induced changes to the environment from Hamilton Disston's drainage works in the 1880s to the initiation of the C&SF Project in the late 1940s. It then declared, "Although the system can never be the same as it was before Disston began his work, many of its natural functions and values can be restored while providing water supplies and flood protection to south Florida."[64]

Graham reiterated these themes on a barnstorming tour of South Florida on 10 August 1983, accompanied by state officials, members of the press, and Colonel Alfred Devereaux, District Engineer of the Jacksonville District. The governor emphasized the interdependence between the natural environment and the nearly six million people who lived in South Florida.[65] In pledging Florida's efforts to restore the Everglades to its turn of the century condition, Graham

had in mind an idealized baseline when the environment of South Florida supported agriculture, small cities, and the natural wonders of the Everglades in more or less equilibrium. In implementing this plan, Graham was continuing a process begun by Governor Reubin Askew in the 1970s: that of state initiative in repairing and restoring the South Florida ecosystem. The irony of the situation did not escape *Audubon* magazine, however, which observed that it was the state of Florida that had requested the C&SF Project in the first place, and now that same state was providing the program to save South Florida from the environmental destruction of the "enormous surface plumbing system."[66] Yet even though the state faced a presidential administration hostile to environmental policies, officials knew that federal involvement in Save Our Everglades was crucial. Whether or not that help would be forthcoming remained to be seen.

Chapter Seven Endnotes

[1] Robert H. Boyle and Rose Mary Mechem, "There's Trouble in Paradise," *Sports Illustrated* 54 (9 February 1981): 82-93 (quotation on p. 84).

[2] Jones interview, 12.

[3] Quotations in Boyle and Mechem, "There's Trouble in Paradise," 93; see also Grunwald, *The Swamp*, 273.

[4] Jones interview, 12.

[5] Douglas, *Voice of the River*, 245.

[6] Estus Whitfield interview by Brian Gridley, 15 May 2001, 4, Everglades Interview No. 8, Samuel Proctor Oral History Program, University of Florida, Gainesville, Florida [hereafter referred to as Whitfield interview]; Grunwald, *The Swamp*, 272.

[7] Whitfield interview, 12.

[8] Quotations in Whitfield interview, 14; see also Grunwald, *The Swamp*, 271-272.

[9] Gary R. Mormino, "Sunbelt Dreams and Altered States: A Social and Cultural History of Florida, 1950-2000," *The Florida Historical Quarterly* 81 (Summer 2002): 15-17.

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[11] Boyle and Mechem, "There's Trouble in Paradise," 86.

[12] Hanson, "South Florida's Water Dilemma," 15; William J. Schneider and James H. Hartwell, "Troubled Waters of the Everglades," *Natural History* 93 (November 1984): 47.

[13] Untitled draft document, File 10-1-7a C&SF Wtr (1983), Central and Southern Florida Water Supply (January-September 1983), Box 3285, JDAR; "Everglades Deer Crisis," File Everglades Conservation Area: Correspondence & Studies, 1978-1982, Box 1, S1719, Game & Fresh Water Fish Commission Everglades Conservation Files, 1958-1982, FSA; "Everglades Hunt: The Deer Can't Win," *Newsweek* 100 (17 October 1982): 27; John Weiss, "Everglades Deer in Trouble," *Outdoor Life* 165 (April 1980): 32, 36.

[14] Whitfield interview, 14.

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[18] J. Clarence Davies, "Environmental Institutions and the Reagan Administration," in *Environmental Policy in the 1980s: Reagan's New Agenda*, 145-148.

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[20] Henry C. Kenski and Margaret Corgan Kenski, "Congress Against the President: The Struggle Over the Environment," in *Environmental Policy in the 1980s: Reagan's New Agenda*, 98-105.

[21] Paul J. Culhane, "Sagebrush Rebels in Office: Jim Watt's Land and Water Politics," in *Environmental Policy in the 1980s: Reagan's New Agenda,* 293, 308.

[22] Quotation in Franklin B. Adams, President, Florida Division of the Izaak Walton League of America to Robert Baker, Regional Director, 5 March 1982, and Baker to Adams, 8 April 1982, Folder 24, Box 3, Marshall Papers; Hansen, "South Florida's Water Dilemma: A Trickle of Hope," 20.

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[24] As quoted in *Naples Daily News*, June 16, 1983.

[25] Edmund P. Russell III, "Lost Among the Parts per Billion: Ecological Protection at the United States Environmental Protection Agency, 1970-1993," *Environmental History* 2 (January 1997): 36.

[26] U.S. Army Corps of Engineers, Office of the Chief of Engineers, *Water Resources, People and Issues: An Interview with William Gianelli*, EP 870-1-24 (Washington, D.C.: U.S. Army Corps of Engineers, 1985), 32-33, 36 [hereafter referred to as Gianelli interview].

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[28] Reuss, *Reshaping National Water Politics*, 82-83, 145-199; Gianelli interview, 16-17; Les Edelman interview by Theodore Catton, 17 November 2004, 3-4.

[29] J. Clarence Davies, "Environmental Institutions and the Reagan Administration," in *Environmental Policy in the 1980s: Reagan's New Agenda*, 147.

[30] Joseph Browder interview by Theodore Catton, 17 November 2004, 4 [hereafter cited as Browder interview].

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[34] A. J. Salem, Acting Chief, Planning Division to James E. Sheppard, Chief, Miami Airport District Office, 22 January 1982, Folder 18, Box 2, Marshall Papers.

[35] Salem to Sheppard, 22 January 1982.

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[41] Bob Graham to C. J. O'Brien, 7 July 1981, File 10-1-7a C&SF Wtr (80-81) Central and Southern Florida Water Supply (January 1980 – September 1981), Box 3285, JDAR.

[42] John M. Morehead, Superintendent, to Colonel Alfred B. Devereaux, District Engineer, 17 September 1982, File Everglades National Park 1958-88, General/Resolutions and Agreements, Box 02161, SFWMDAR.

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[45] Robert J. Fennema et al., "A Computer Model to Simulate Natural Everglades Hydrology," in *Everglades: The Ecosystem and its Restoration*, Steven M. Davis and John C. Ogden, eds. (Delray Beach, Fla.: St. Lucie Press, 1994), 250-251.

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[47] "Water Management Decision Model," no date, File 10-1-7a C&SF Wtr (1983) Central & Southern Florida Water Supply Study (January – September 1983), Box 3285, JDAR.

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[61] "Graham Announces Save Our Everglades Program," 9 August 1983, Folder 16, Box 2, Marshall Papers.

[62] "Save Our Everglades," 9 August 1983, 4, 11.

[63] "Graham Announces Save Our Everglades Program," 9 August 1983, Folder 16, Box 2, Marshall Papers.

[64] "Save Our Everglades," 9 August 1983, 4.

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