

CHAPTER EIGHT

“That Damn Sewer Ditch”: Kissimmee River Restoration Efforts, 1978-1988

Facing a federal government largely at odds with environmental concerns in the 1980s, Governor D. Robert “Bob” Graham initiated what was essentially an ecosystem restoration plan for South Florida known as “Save Our Everglades.” Developed through discussions with prominent environmentalists, including Marjory Stoneman Douglas, Johnny Jones, and Arthur Marshall, the plan acknowledged the interconnectedness of the Kissimmee-Okeechobee-Everglades ecosystems and outlined ways to restore the water health of the region. An integral part of that plan was dechannelizing the Kissimmee River in accordance with the 1976 state law requiring the restoration of water quality in the Kissimmee River Basin. Efforts in the 1980s to remove C-38 – called “that damn sewer ditch” by some environmentalists¹ – were promoted most vigorously by Graham and the South Florida Water Management District. Although the Corps seemingly dragged its feet for most of the 1980s on Kissimmee restoration, either by design or because of a lack of authorization to do much more than study the issue, it received an appropriation from Congress under Section 1135 of the Water Resources Development Act of 1986 to begin restoration efforts. By 1988, then, several significant steps had been taken toward dechannelization, setting a foundation for actual restoration in the 1990s.

In September 1978, Congress, responding to the state of Florida’s initiative, provided appropriations to the Corps for a restudy of the Kissimmee River, and the Corps began its work in 1979. According to a 1980 publication, the purpose of the study was “to determine the feasibility” of altering the Kissimmee River flood control system in order to enhance water quality and improve “environmental amenities” and “fish and wildlife resources,” among other things.² In October 1979, the Corps completed its reconnaissance report (Stage I) and began Stage II of the restudy, which would develop numerous alternatives that the Corps could take. Thereafter, Phase III would examine the feasibility of those plans and recommend one as the course to follow. Because the Corps had a large amount of data to analyze, it decided to use a data management system known as SAM (Spatial Analysis Methodology) for the study. SAM, which had been developed by the Corps’ Hydrologic Engineering Center in Davis, California, could evaluate all study aspects, including economic, environmental, and hydraulic conditions. The Corps pledged to obtain as much public input as possible in its examinations by conducting public meetings and workshops, thereby allowing for comments from a broad constituency. Corps officials estimated that all three phases of the examination could be completed by August 1982, with a draft Stage III report issued by January 1982.³

For those who believed that the 1976 Florida law mandated dechannelization of the Kissimmee River, this timetable was too long. Likewise, Marshall and others felt that there was an urgency to the issue. “The effectiveness of all the elements” of the Marshall Plan, Marshall explained, were “totally dependent on filling the Kissimmee ditch.” In fact, he continued, “dechannelization [was] the answer and the hope for repairing the Everglades system.”⁴ To

pressure the Corps to expedite its study and to champion Kissimmee restoration, new environmental organizations appeared, including the Kissimmee Restoration Coalition and Marshall's Coalition to Repair the Everglades.⁵ Meanwhile, the Friends of the Everglades, holding that "the opportunity for the State of Florida to dechannelize the lower Kissimmee will not remain long," prepared a petition requesting that the state disallow further floodplain development, that it purchase floodplain lands, and that Congress and the President of the United States order the Corps to restore the river.⁶

As the first years of the 1980s passed, the Corps increasingly fell behind schedule on its feasibility study, frustrating many state officials. Victoria Tschinkel, secretary of the Florida Department of Environmental Regulation, for example, told newspapers that "the Corps was very behind schedule and above budget on its plans to restore the Kissimmee River."⁷ She and Governor Graham called on the Corps to accelerate its work, and Jacksonville District Engineer Colonel Alfred Devereaux responded by pledging to have a decision by the end of 1982 as to how restoration could occur.

Many critics claimed that the Corps was merely dragging its feet because it did not want to dechannelize the Kissimmee, an accusation that Devereaux denied. He blamed the delays on SAM, explaining that the program had never been used on such a large study as the Kissimmee River plan, and that, therefore, establishing parameters became a long, drawn-out process. It "took a lot longer to get working than expected," he said, estimating that the program "probably



A broad leaf marsh in the vicinity of the Kissimmee River. (Source: South Florida Water Management District.)

added a couple of years” to the study’s completion time.⁸ M. Kent Loftin, an engineer in the Jacksonville District agreed, explaining that data compilation and the need to break the river into a grid of three and twelve-acre land cells caused the slowdown.⁹

But it was also clear that despite the growing power of environmental organizations in the 1970s and the Corps’ own attempts to transform itself into a more environmentally friendly organization, the agency was experiencing some setbacks. For one thing, it was difficult to shift agency culture away from engineering and towards environmental restoration. Corps leaders who actually embraced the transformation, for example, found resistance from old-time engineers who, in the words of historian Jeffrey Stine, declared that “they did not join the Corps of Engineers to come up with non-structural solutions to flood control problems.”¹⁰ Environmental organizations had helped to make the Corps more accountable in the 1970s, but, as Kissimmee River restoration efforts in the 1980s demonstrated, a long journey still lay ahead.

Regardless of the reasons for the delay, environmentalists wanted the Corps to act quickly. This feeling was heightened in 1982 when several scientists, including Arthur Marshall, claimed that the channelization of the Kissimmee River had altered the region’s normal rain cycle. Meteorologist Patrick Gannon first proposed this hypothesis in 1977 in a doctoral dissertation titled “On the Influence of Surface Thermal Properties and Clouds on the South Florida Sea Breeze,”¹¹ but the theory was not widely publicized until an article appeared in a March 1982 issue of *Sports Illustrated* titled “Anatomy of a Man-Made Drought.” This essay, written by Robert H. Boyle and Rose Mary Mechem, cited Marshall’s assertion that drought in the Kissimmee Valley – which had approximated a one-in-700 years event in 1981 – was “a predictable consequence of the land development and the drainage of wetlands in the Everglades and the Kissimmee River basin.” According to the article, Marshall explained that water that flowed from the Kissimmee River Basin to Lake Okeechobee to the Everglades was “the key to the region’s abundant rainfall” because vast amounts of it evaporated quickly in the summer and descended in the form of afternoon rain. Marshall claimed that “almost all the water that had risen from the wetlands would come down again,” replenishing water supplies. With Kissimmee River channelization and other developments, however, not enough water was available for evaporation, meaning that the “rain machine” could not function as in the past. Boyle and Mechem also quoted Gannon as saying that the “entire [weather] cycle has been altered, weakened and shifted,” and “we’re setting up a heat regime rather than a rainy regime in the summer period.”¹²

After the publication of the *Sports Illustrated* article, the Florida Water Resources Research Center of the University of Florida sponsored a conference on 14 May 1982 to discuss drought, rain, and their causes in Florida. In the course of this meeting, several scientists raised doubts about Gannon and Marshall’s theory, noting that the 1981 drought affected all of Florida, not just the Kissimmee River Basin, and that more studies were necessary before anyone could definitively say that channelization provoked drought. Gerald Parker, a former hydrologist with the U.S. Geological Survey, who had been quoted by *Sports Illustrated* as supporting Marshall’s position, distanced himself from the rain-machine theory, insisting that claims of channelization’s effects on climate were “not supported by anything more than a superficial look at hydrology. . . . We know there’s a whole lot more work to be done.”¹³ Gannon himself backed off slightly from his previous position, claiming that his research had focused only on

urbanization's effects on Florida's coastal areas and that he had no expertise in Kissimmee River matters. However, discounting any human manipulation of nature, Gannon also noted that "if the entire 3,300 square mile basin was once shallow wetlands and is now no longer so," climate changes "had to have occurred."¹⁴

For the most part, the rainfall debate diminished after this May 1982 conference, but efforts to dechannelize the Kissimmee River did not. Johnny Jones of the Florida Wildlife Federation continued his lobbying efforts for restoration, telling Senator John Vogt, chairman of the state senate's Natural Resources Committee that the Corps was deliberately delaying its studies. According to Boyle and Mechem's article, Jones then asked Vogt to propose a bill in the state legislature to use funds under Florida's Conservation and Recreation Lands Act and the Save Our Rivers Act to "start filling that ditch . . . if the feds don't get off their butts." Vogt agreed, concerned that Florida would "become a desert" if "unlimited development and drainage of wetlands" continued.¹⁵

Others had similar ideas. In February 1982, Nathaniel Reed, former assistant secretary of the interior for fish, wildlife, and parks, requested that state officials designate the Kissimmee River floodplain as an area of critical state concern under the Florida Environmental Land and Water Management Act of 1972. Likewise, Vince Williams, a fishery biologist with the Florida Game and Fresh Water Fish Commission, advocated the designation of the entire Upper Kissimmee River Basin (Lake Kissimmee northward) as an area of critical state concern, in part because the region suffered from significant fish and wildlife decline due to "deteriorating water quality and unregulated residential encroachment."¹⁶

In the meantime, the SFWMD decided to take matters into its own hands. In May 1982, its governing board approved a plan to install a two-foot-high metal extension on the lift gates of five water control structures separating the Kissimmee River into five pools. In the rainy season, the SFWMD would raise water levels in the pools by two feet, allowing drained marshes to reflood. During the dry season, the SFWMD would reduce each pool's level by one foot below its normal elevation so that the marshes could dry. In part, the SFWMD wanted to see the effects of such reflooding, but its scientists and engineers also believed that the program could "dramatically enhance fish and wildlife habitat."¹⁷ The district noted that its plan, which it hoped to begin in the fall, would cost only \$22,000, and it submitted an application for approval to the Coordinating Council for the Restoration of the Kissimmee River. According to John "Jack" Maloy, executive director of the SFWMD, the plan was "a way in which we can easily and inexpensively almost double the river's marshlands without jeopardizing flood control objectives."¹⁸

Although Graham and other state officials enthusiastically endorsed the SFWMD's plan, not all Florida residents were pleased. Kissimmee Valley ranchers appeared before the SFWMD's board in August and expressed concern with the reflooding. "The plan you are proposing is going to cripple every cattleman on this river-marsh," said Perry Smith, who owned a farm in Okeechobee County.¹⁹ Others agreed; proprietors of McArthur Farms asked for a state administrative hearing because, they claimed, the SFWMD's plan would unconstitutionally prevent them from using their land. Because of these protests, the governing board voted to stop its reflooding plans until, according to one newspaper account, "staff members have the opportunity to further assess what the impact will be on the lands of ranchers on the river."²⁰

Agriculturists continued to fight against Kissimmee River restoration in general. “The people we are facing are the environmentalists who want to increase the bird and fish population,” said Mike Palmer, who owned a dairy in the Kissimmee Basin. “They want to help ducks and fish and forsake the land animals who have had 10 years to adapt to habitats created” by channelization.²¹ Likewise, Paul Wilson, a rancher from Frostproof, insisted that he preferred the straightened river because “it handles the flow of water more efficiently,” while Allen Whitston, director of the Upper Chain of Lakes Property Owners Association, claimed that the state’s Kissimmee plans used too much “scientific theory” and ignored “historical documented fact.”²²

Despite ranchers’ concerns, the move to do something on the Kissimmee River accelerated in 1983, a benchmark year in the push for dechannelization. For one thing, as we have already seen, Governor Graham instituted his “Save Our Everglades” program in August, in part from frustration with the lack of progress on the Kissimmee River. Indeed, one of the major components of the first phase of his program was to revitalize the river, and he called on both the state and the federal government to “recognize the problem and correct the wrong done to the Kissimmee and the people of Florida.” Specifically, Graham asked the Coordinating Council on the Restoration of the Kissimmee River Valley to make a firm recommendation as to how “the natural values of the Kissimmee River” could be restored, and he called on President Ronald Reagan to facilitate federal cooperation with the state.²³ “The governor is not going to wait forever for a resolution to these problems,” Estus Whitfield, environmental aide to Graham, said. “He wants to start doing something now.”²⁴

Under this pressure, the Coordinating Council asked the Corps, in the words of Colonel Devereaux, to interrupt its feasibility study and “pull together some options” about how



Cattle wading through the Kissimmee River. (Source: South Florida Water Management District.)

restoration could proceed. According to Devereaux, the council then would study these choices and “decide where they wanted to go.”²⁵ To fulfill the council’s needs, the Corps presented it with three options: the do-nothing alternative, where the river would be left alone; the partial backfilling alternative, consisting of refilling a large part of the river with dredged spoil material to allow for marshland reformation; and the combined wetlands alternative, which would leave the channelized river in place, but would develop pockets of wetlands along the watercourse.²⁶

Before making its final decision, the Coordinating Council held a series of public meetings in August.²⁷ Environmentalists championed the partial backfilling plan, asking the state to move forward with it even if the Corps refused to provide aid, and they disparaged the combined wetlands alternative as “highly structural” and “worse than what’s out there now.”²⁸ Driving these statements was an implicit distrust of the Corps’ focus on structural solutions for water problems. As reported in an article in *Oceans*, Marshall and others believed that the Corps had “engineered” the state of Florida “nearly to death”; manipulating the system even more through the creation of artificial impoundments was not the answer.²⁹

But ranchers and agriculturists in the Kissimmee River Basin expressed their opposition to backfilling, fearing that it would flood their lands. “We were told we would have flood control and our operation is based on that,” cattle rancher Pat Wilson said. “With restoration, you want to bring that water right back to our fro[n]t door.” Kent Bowen, manager of McArthur Farms, agreed. “We could lose up to 3,000 acres,” he protested, and “that would make our ranching operation economically unviable.”³⁰ At the very least, ranchers called on the state to do nothing until the Corps had completed its feasibility study (now estimated to be finished in the spring of 1984).

The Coordinating Council did not take agriculturists’ advice; instead, on 19 August, it declared that, “after careful consideration” of the Corps’ preliminary findings, it supported the partial backfilling alternative. “As much of the original channel of the Kissimmee River should be restored as possible,” the council stated, and “any alternative which continues the existence and function of the C-38 Canal” should be shelved. The council tempered its decision by saying that it wanted more information about whether or not backfilling would “materially affect existing levels of flood protection in the Upper Kissimmee Basin,” but as long as flood control could continue, backfilling was the preferred option. The council also recommended that the state “assume primacy” in restoration efforts even though many state officials believed that the federal government had a “moral obligation” to participate since a federal project had caused the damage in the first place.³¹ Unfortunately, “it seems unlikely that the Corps could participate in restoration under the current Administration’s policies and guidelines,” the council explained, “unless there are quantifiable economic benefits.”³²

Acting on the council’s recommendations, the SFWMD took the lead in conducting state efforts. One reason for this, according to Stanley Hole, who was elected chairman of the SFWMD’s governing board in 1985, was that Graham had replaced members of the board “who [did] not share his environmental commitment to broad restoration.” This move, Hole continued, effectively “changed the character of the board,” making the SFWMD a “natural resources” district interested in environmental quality. “The most recognizable change,” Hole related, “is that we used to say, ‘Just tell me where you want the water put,’ and then we’d manage it.

Now,” Hole concluded, “we have to be concerned with the overall effects of everything we do.”³³

The SFWMD was not alone in making such an attitude adjustment. Other flood control districts in the United States, such as the Los Angeles County Flood Control District, also began exhibiting an increased awareness of environmental values in their water management efforts. The Los Angeles County Flood Control District, which had been formed primarily to operate Corps flood control operations on the Los Angeles River, stated as early as 1971 that it wanted “to make our engineers sensitive to possible social and environmental problems of each project.”³⁴ It pledged to consider cultural values, recreation, aesthetics, and the environment in its operations, much like new SFWMD members promised to explore environmental quality measures in South Florida.

But even long-term SFWMD officials, such as Executive Director Jack Maloy, supported the restoration effort. Maloy initially proposed that the district fill in a ten-mile stretch of the river, at a cost of between \$400,000 and \$700,000, to observe whether positive ecological conditions would return.³⁵ On 9 September 1983, the governing board of the SFWMD met to discuss Maloy’s plans, eventually adopting it as the best method to follow. Graham concurred on 11 September after meeting with Florida’s congressional delegation and with authorities in the Reagan administration. Under Maloy’s plan, the SFWMD would place a weir at the south end of Pool B of C-38, effectively “plugging” the pool, and then refill approximately four to eight miles of the river between S-65A and S-65B. The SFWMD proposed to begin constructing the weir on



Weirs placed in the Kissimmee as part of the Demonstration Project. (Source: South Florida Water Management District.)

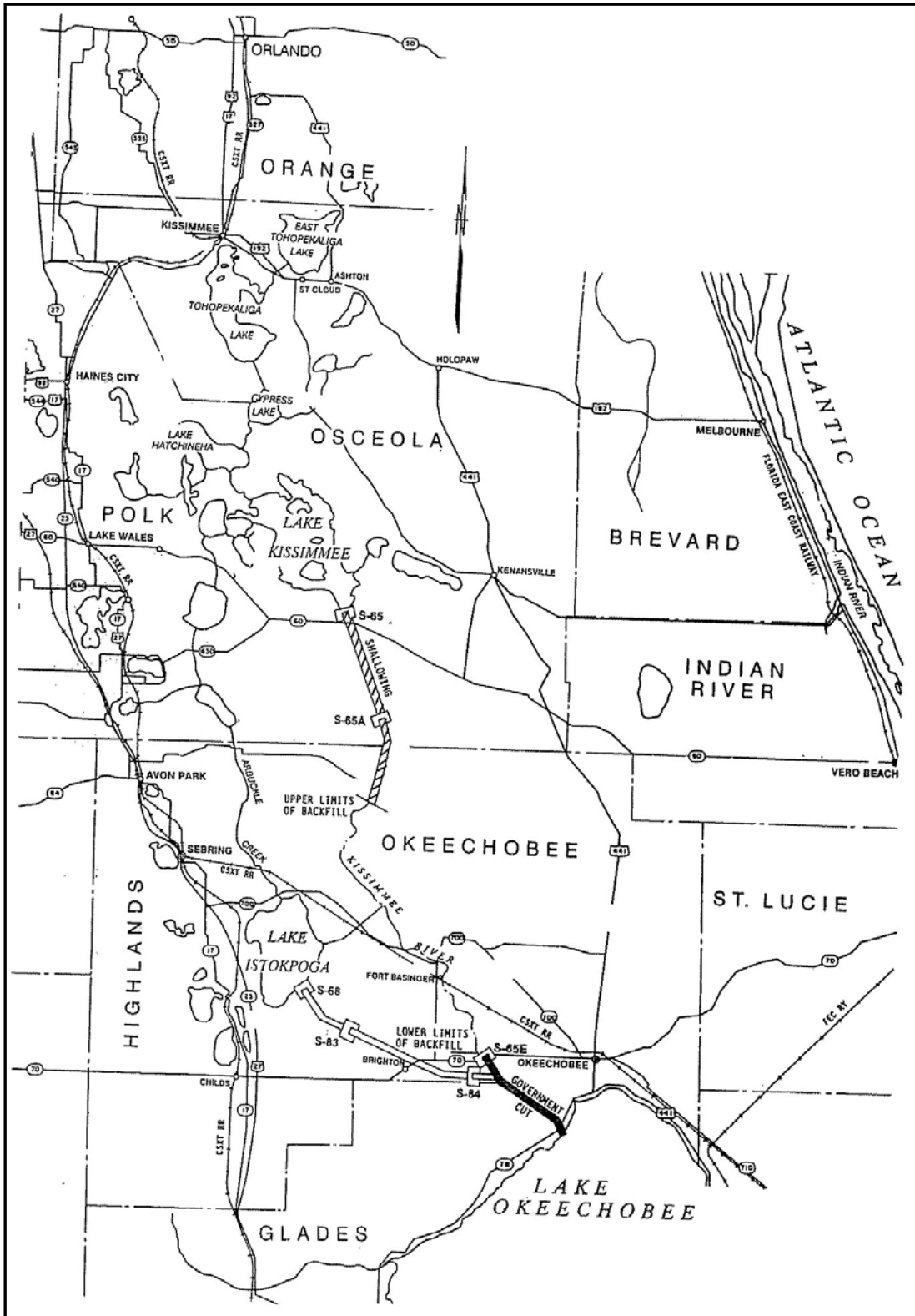
1 January 1984, estimating a completion date of two years for the entire project. After that time, the district would “monitor and evaluate” the “environmental impacts and benefits,” as well as how the reflooding affected area land use and whether it had detrimental consequences on flood control in the region north of Lake Kissimmee.³⁶

Before any construction could begin, the SFWMD had to receive both state and federal permits for the project. After the SFWMD had submitted its applications to the State Department of Environmental Regulation and the Corps, the Latt Maxcy Corporation, a large cattle company in the region, filed a protest, arguing that the Corps had not finished its studies on restoration and that the SFWMD merely wanted to “dump 4,519,898 cubic yards of silty sands” in the river “without knowing the effect, method, and cost.” The corporation also contended that the demonstration project would forestall navigation of the Kissimmee, and that it would “destroy the biota and habitat” that had developed after the Corps straightened the river. Finally, the company argued, its operations “relied on the permanence of the canal” and any restoration efforts would “adversely” affect its land rights.³⁷

It is unclear how much influence the protests of Latt Maxcy and other agriculturists had, but the Corps eventually rejected the SFWMD’s application. According to Colonel Devereaux, the denial occurred for several reasons. First, Corps officials believed that the demonstration project was large enough to require an EIS, something that would take at least a year to produce. Second, Devereaux explained, backfilling any part of the river would alter the navigability and flood control intent of the Corps’ original Kissimmee project, and that could not occur without congressional approval. Most importantly, Devereaux said, the project only “put dirt back in the ditch” and “did not generate any wetlands,” meaning that it did not fulfill “many of the State objectives.”³⁸

Environmentalists, however, saw the action as more evidence that the Corps did not want to dechannelize the Kissimmee. According to Estus Whitfield, environmental aide to Graham, Corps officials were “quite reticent and not too thrilled with the state’s and the South Florida Water Management District’s exuberance to go out and fill in C-38.” One problem, Whitfield stated, was that “some of the [engineers] who designed the Kissimmee channel were still there” and did not want to undo it.³⁹ Whitfield had a point; Devereaux himself characterized advocates for complete restoration as “starry-eyed folks” and claimed both privately and publicly that the combined wetlands alternative was the only feasible option.⁴⁰

Regardless of the reasons for the permit’s denial, Corps officials, including Devereaux, Assistant Secretary of the Army (Civil Works) William Gianelli, and Director of Civil Works Major General John Wall met with state and SFWMD authorities in January 1984 to develop an alternative plan. In February, the SFWMD proposed a new program. Under this plan, known as Kissimmee River Restoration Phase I, the SFWMD would place three metal sheet pile walls in Pool B in order to divert water into the river’s natural channels. A navigation notch would be placed in the walls so that boats could continue to navigate the river, and the Corps would construct baffle blocks on structures S-65B, C, and D so that it could manipulate the river’s water levels. If the state legislature approved the plan, the SFWMD proposed to begin work on the approximately \$1.2 million project in the spring of 1984.⁴¹



S-65 structures on C-38. (Source: U.S. Army Corps of Engineers, Jacksonville District.)

Many SFWMD officials saw the new demonstration project as a way to determine “once and for all” whether it was “realistic” to restore the Kissimmee River to its “meandering, natural” state.⁴² Jan Horvath, director of the SFWMD’s Resource Coordination Department, also thought that the project could demonstrate the best way for the state to manage the floodplain, as well as show how restoration would impact residents along the river. Yet others, including SFWMD Assistant Executive Director John Wodraska, worried that the SFWMD did not have enough information about the demonstration project’s impacts, and he wondered if it would just create another “environmental disaster.”⁴³

Meanwhile, the state took other measures to aid in Kissimmee River restoration. In November 1983, Graham issued an executive order creating the Kissimmee River-Lake Okeechobee-Everglades Coordinating Council to coordinate state and regional endeavors that would “restore and enhance the natural values and functions” of the Kissimmee-Okeechobee-Everglades ecosystem.⁴⁴ The council, which would basically have charge of Graham’s “Save Our Everglades” program, would consist solely of state officials, including the secretaries of the departments of Environmental Regulation, Community Affairs, and Transportation; the commissioner of the Department of Agriculture and Consumer Services; and the executive directors of the Department of Natural Resources, the SFWMD, and the Game and Fresh Water Fish Commission. Likewise, these same entities concluded a memorandum of agreement on 1 November 1983, pledging to cooperate in dechannelization efforts and delineating specific responsibilities for each agency.⁴⁵



A remnant of the old Kissimmee River before channelization. (Source: South Florida Water Management District.)

One of the duties that the SFWMD assumed was purchasing floodplain lands in the Kissimmee Basin, both to expedite the demonstration project and to prevent further development in the area. In March 1984, the district's governing board decided to pursue a purchase plan for 40,000 acres in the Kissimmee Basin, even though the state would have to provide at least \$40 million for that action. According to board member Nathaniel Reed, price should not be a factor; "no blinking," he stated, "regardless of the financial crunch."⁴⁶ SFWMD officials proposed to fund the effort at least partly through the Water Management Lands Trust Fund, which was created by the state's Save Our Rivers Act of 1981 to allow the purchase of lands needed to conserve and protect water resources.

Yet an obstacle arose to both the purchasing plan and to the demonstration project. In March 1984, McArthur Farms Inc., Save Our Waterways Association, and Riley Miles (a Kissimmee resident and former SFWMD board member) opposed the SFWMD's new permit application to the Department of Environmental Regulation, charging, in the words of one newspaper account, that the demonstration project would "cause temporary and longterm pollution of the river" and would "drastically decrease the river's navigability."⁴⁷ Accordingly, the state held hearings on the application. In the course of these hearings, the SFWMD told concerned parties that the project would not adversely affect either navigation or flood control. The district also related the necessity of the demonstration project in order to determine exactly how restoring the river would impact the basin and whether or not changes in flora and fauna would occur. The project's purpose, the SFWMD reiterated, was to see whether "the historical ecological function of the river" could be restored through "the overall management of water, fish, and wildlife," in hopes that "further degradation of water quality" could be prevented and wildlife habitat restored.⁴⁸ The SFWMD's responses seemed to satisfy both the Corps and the Department of Environmental Regulation, and they issued permits for the Phase I work on 9 July and 29 July 1984.⁴⁹

But even though the SFWMD took the lead on the demonstration project, many of its officials still had viewpoints that differed from the opinions of other state authorities. In May 1984, for example, Estus Whitfield composed a draft outlining the Kissimmee River restoration program and why it was necessary. John Wodraska, who had become executive director of the SFWMD upon Maloy's resignation, took issue with some of Whitfield's statements. Whereas Whitfield claimed that channelization of the Kissimmee caused much ecological destruction, Wodraska held that actual construction work caused some damage, but that the system had "healed" since that time and was now "a stabilized ecosystem."⁵⁰ Likewise, Whitfield insisted that channelization was not necessary for flood protection in the Upper Kissimmee Basin (since improving structures in the area could accomplish the same purpose), but Wodraska disagreed, stating that channelization provided "necessary 'getaway' for floodwaters from the upper basin." Finally, Whitfield asserted that a diminishment in the river's water quality resulted from channelization, while Wodraska claimed that degradation occurred because of "the development of intensive land use practices" rather than from a "reduction in wetlands."⁵¹ Although both Whitfield and Wodraska agreed that some form of action was necessary to enhance ecological values in the Kissimmee Basin, they disputed how degraded the environment was and why that had occurred.

Such disconnect in views became more apparent in August 1984 when the Corps finally released its draft feasibility report on Kissimmee River restoration. This document noted that because of state requests, Congress had directed the Corps in 1978 to determine whether modifications to the congressionally authorized Kissimmee River project were “advisable.” In discussing this question, the Corps noted that the construction of C-38 had “reduced flooding and enabled more intense land use,” which some believed had led to “a number of adverse environmental effects.” The Corps contended with claims that channelization had accelerated eutrophication of Lake Okeechobee, stating that the bigger problem was the Taylor Creek-Nubbin Slough area, which contributed most of the phosphorous to the lake, and the EAA, which supplied most of the nitrogen. “There is little evidence to suggest that water quality has been degraded in the Kissimmee basin as a result of channel modification,” the report declared, “or that C&SF Project works . . . have accelerated the eutrophication of Lake Okeechobee.”⁵² These, of course, were arguments that the Corps had been making since the mid-1970s.

Aside from its conclusions regarding the condition of the Kissimmee River and its effects on Lake Okeechobee, the Corps discussed different alternatives that it could take to allow for at least a partial restoration of ecological conditions along the Kissimmee River. The six that it found feasible included partially backfilling C-38; constructing controlled wetlands; having agriculturists implement Best Management Practices (BMPs) to decrease the amount of nutrients in runoff; creating impounded wetlands at various points along the river; manipulating pool stages to increase wetlands; and restoring wetland conditions to Paradise Run, an eight-and-a-half mile stretch of the river in the southern part of the Kissimmee floodplain. However, the Corps had serious reservations about several of these, including the partial backfilling plan. Although environmentalists, state officials, and the SFWMD had all embraced either partial or full backfilling as the best program, the Corps disagreed. For one thing, it believed that backfilling would increase flooding risks in the Lower Kissimmee Basin. The Corps also claimed that partial backfilling could actually reduce the number of wetland acres, in part because not enough water would exist “to attain a natural hydroperiod.” Indeed, the Corps asserted, it would produce only “a semi-natural riverine system.”⁵³

Instead of partial backfilling, the Corps recommended the BMP, Paradise Run, and pool stage manipulation options because they would produce “the greatest benefit at the lowest cost.” Yet the Corps claimed that it could not participate in these programs because “while generally beneficial for environmental concerns,” they would not “contribute to the nation’s economic development.” Moreover, the Corps explained, if the state wanted to initiate the partial backfill plan or Phase II of the Demonstration Project, the Corps would have to obtain congressional authorization since these actions would “significantly alter the flood control and navigation purposes of the Kissimmee River project.” The Corps believed that its report contained useful information that the state could use in developing its own restoration efforts, but from the Corps’ perspective, “there is no basis for Federal implementation of modifications to the Kissimmee River Basin.”⁵⁴

Upon examining the draft feasibility report, state officials wondered about some of the Corps’ conclusions. Governor Graham was especially concerned about the Corps’ unfavorable partial backfilling assessment, fearing that it would “impede the State’s restoration efforts,” and he disagreed with the Corps’ recommendation against federal participation.⁵⁵ In response, the



The floodplain of Pool B of the Demonstration Project. (Source: South Florida Water Management District.)

Corps emphasized that it was required by law to recommend the plan that had “the greatest net economic benefit” and that it could find “no basis for Federal implementation of project modifications.” According to the Corps, the Kissimmee River project was “functioning as designed,” and altering it through partial backfilling would reduce “existing and future” economic project benefits, while producing only “limited environmental benefits.” The Corps therefore had no “overriding reason” to suggest implementation of partial backfilling.⁵⁶ This view did not change; when the Corps issued its final feasibility report in September 1985, its conclusions were largely the same as in the draft report, although, based on comments from state agencies, it did revise upward its estimate of wetlands acreage produced by partial backfilling. Regardless, the report still stated that BMPs, pool stage manipulation, and restoring wetlands at Paradise Run provided the best economic benefits, and it maintained that no federal action was warranted.⁵⁷

To many environmentalists and state authorities, this was just another example of the Corps stonewalling the issue because it was not interested in restoring the Kissimmee River. That charge, although technically true, did not take into account all of the nuances of the situation. Some Corps officials, such as Devereaux, were clearly against complete restoration. “The Kissimmee River is a man-changed system now, and it will always be one as far as I can see,” he stated in 1984. “I don’t see any reasonable way that it can ever go back to doing what people refer to as a pure kidney function.”⁵⁸ Colonel Charles Myers III, who replaced Devereaux as

District Engineer, agreed. “There are people in the Kissimmee Valley benefiting from the valley as it now exists,” he said. “There’s no way we can back up to 1900.”⁵⁹ Whether Devereaux and Myers took this position because they did not want to admit that channelization had been a mistake, or whether they truly believed that it was not possible to return the river to a natural state is unclear. On the one hand, the Corps’ position was technically correct: it could not do anything to alter the original purpose of channelization without authorization from Congress, nor could it recommend a project if economic benefits did not justify it. The main problem, however, was that the Corps did not pursue restoration with enthusiasm, or support the idea in a meaningful way, effectively preventing the issuance of any congressional “authorization.” In the eyes of many environmentalists and state officials, the agency was merely hiding behind its operating regulations to get what it truly wanted – the maintenance of C-38.⁶⁰

With the Corps unwilling to participate in any restoration efforts, the state of Florida and environmentalists laid the groundwork for their own endeavors. In August 1984, Governor Graham oversaw the beginning of the SFWMD’s demonstration project by symbolically planting a baby cypress tree on the banks of the Kissimmee River. He declared that the state’s goal in the endeavor was that “by the year 2000, the water system will look and function more as it did in the year 1900 than it does today.”⁶¹ Graham also continued to call for federal participation in Kissimmee restoration, and environmental organizations sought to repair the breaches in the Everglades Coalition, banding together again in order to stimulate public involvement in South Florida ecological issues.⁶²



The tree planted by Governor Graham by the Kissimmee River. (Source: U.S. Army Corps of Engineers, Jacksonville District.)

At the same time, Graham adopted a seven-point plan for Kissimmee River restoration, beginning with Phase I of the demonstration project. Other steps included restoring wetlands in the Paradise Run area; expanding the Best Management Practice program to include not only Taylor Creek-Nubbin Slough, but also the lower Kissimmee River; developing modeling systems to measure hydraulic and sediment transport effects of restoration endeavors; and acquiring 50,000 total acres of the Kissimmee floodplain.⁶³ As part of this plan, Graham dismantled the Kissimmee-Okeechobee-Everglades Coordinating Council and gave responsibility for all restoration aspects, such as land acquisition, physical modeling, and the development of restoration alternatives, to the SFWMD.⁶⁴

To help the SFWMD in its endeavors, Graham also established a 34-member Kissimmee River Resource Planning and Management Committee – composed of individuals from local, state, and federal agencies, including the Corps and the SFWMD – to review land and water problems in the Lower Kissimmee and Taylor Creek basins. In August 1984, Graham directed the committee to focus on land use management, land acquisition, water quality protection, and economic development in its examinations; by doing so, he hoped that the state could “guarantee the long-term health of the [Kissimmee] river system.”⁶⁵

One of the first tasks that the committee undertook was investigating land acquisition. This was important not only for the demonstration project to occur, but also because of continuing agricultural encroachment into the Kissimmee floodplain, hastening drainage of the region. One account reported that between 1958 and 1972 – the era when the Corps was straightening the river – agriculturists drained over half of the unimproved land in the region and planted it to Bahia grass for grazing. Then, in the early 1980s, citrus growers considerably increased their holdings in the Kissimmee area. Because of these endeavors, according to naturalist Ted Levin, “land that once spawned bobcats and sandhill cranes now [grew] cattle and oranges.”⁶⁶



A citrus field. (Source: U.S. Army Corps of Engineers, Jacksonville District.)

To forestall further development, the Resource Planning and Management Committee proposed to develop “a workable land use strategy” to protect the river and allow for its restoration.⁶⁷ In January 1985, the committee sent to the state seven land management options that it considered viable. These ranged from doing nothing to acquiring land in fee simple to recommending that counties and the city of Okeechobee adopt a comprehensive land management and zoning plan.⁶⁸ After receiving these suggestions, the SFWMD decided to continue with its goal of purchasing 50,000 acres of the Kissimmee floodplain, and in January 1985, it bought 7,500 acres with funds provided under the Save Our Rivers Act. The district stated that public management of half-mile strips of land on both sides of C-38 would be necessary for restoration to succeed, as well the acquisition of an additional 42,500 acres to protect the entire floodplain. According to Executive Director Wodraska, the purchase was “a giant stride” that would allow the SFWMD to see “if we can coax Nature to reestablish some of her lost beauties into the river’s marshes.”⁶⁹

But as the end of 1985 approached, it was clear that, unless a change of attitude occurred, the state would have to generate any restoration effort without federal involvement. Colonel Charles T. Myers III, District Engineer of the Jacksonville District, for example, presented the Corps’ final feasibility report to the Board of Engineers for Rivers and Harbors, recommending in person that no federal action be taken. According to Myers, a District Engineer usually did not present negative reports to the Board, but because the Jacksonville District’s decision was “a very controversial” one “that necessitated lots of discussion,” he believed it was necessary.⁷⁰

After receiving the report, the Board deliberated on the recommendation, while Governor Graham lobbied for federal involvement. “As the State of Florida pursues its goal of restoring the Kissimmee River,” he told the Board, “we will seek federal approval of and participation in this project.” Graham claimed that the channelization of the river had decreased the basin’s original wetlands by “70 to 80 percent,” and that this had led to degradation of water quality and loss of wetland habitat. Therefore, “just as the Corps has been a partner with the State in flood control, water supply, navigation, and other public works projects,” Graham wanted it also to participate “in our new mission of environmental enhancement.” Although the state could pledge “a great many dollars” towards Kissimmee River restoration, it still needed federal help in order to make a final restoration plan viable. Graham asked the Board to overturn the Jacksonville District’s no federal participation recommendation, and he pledged to “work closely with the Corps” to develop “a specific restoration plan.”⁷¹ Despite Graham’s efforts, the Board ultimately agreed with the District’s decision, and in July 1987, Chief of Engineers Lieutenant General E. R. Heiberg III transmitted a report to Congress, stating that it was “not advisable” for the Corps to participate in project modifications “in the interest of water quality, flood control, recreation, navigation, loss of fish and wildlife resources, environmental problems, and loss of environmental amenities.” Instead, Heiberg recommended that District Engineer Myers “continue to cooperate with the State of Florida under his existing authorities.”⁷²

In the meantime, Congress had passed the Water Resources Development Act of 1986 (WRDA-86), which authorized approximately \$16 billion worth of water projects. Along with mandating cost sharing between local and federal interests on water projects, the law also contained a section significant to the Kissimmee River controversy.⁷³ Riding the wave of environmental concerns with water resource development, Congress included Section 1135 in

WRDA-86, authorizing the Corps to review existing projects and to “determine the need for modifications” in those projects in order to “improv[e] the quality of the environment in the public interest.”⁷⁴ If the Corps made any modifications, the law directed, non-federal interests would pay 25 percent of the total cost.

Florida officials tried to get the Corps to undertake restoration of the Kissimmee River under the authority granted by Section 1135. In 1987, according to an Everglades status report issued by the governor’s office, Governor Robert “Bob” Martinez, a Republican who had replaced Graham that same year (Graham had won an election bid for the U.S. Senate), informed Acting Assistant Secretary of the Army (Civil Works) John Doyle of “Florida’s strong desire to restore the values of the Kissimmee River.” Martinez asked Doyle to consider the Kissimmee “as it makes plans for implementing Section 1135.”⁷⁵ Florida’s congressional delegation, which now included Graham, requested the Corps to take the same action, but the politicians were not alone. Indeed, environmentalists, led by the Sierra Club and Theresa Woody, its Florida representative, made a push for Kissimmee River authorization under Section 1135. Their position was strengthened when the environmental community agreed that the only project it would request under Section 1135 was Kissimmee River restoration.⁷⁶ The Jacksonville District, led by Colonel Robert L. Herndon, District Engineer, nominated the project for Section 1135 consideration, but when it went to the Secretary of the Army (Civil Works) for approval, the Reagan administration determined that, according to Herndon, it was an “inappropriate use of federal funds to conduct such an environmental demonstration” and refused to transmit the request to Congress.⁷⁷ Regardless, Congress included \$2 million in its 1988 fiscal year budget for a Corps Kissimmee River demonstration project. Unfortunately, the executive branch’s Office of Management and Budget never allocated funds for that purpose, and Herndon was left



Kissimmee River. (Source: South Florida Water Management District.)

to face environmentalist blame. “I would be more than willing to carry out environmental enhancement features of the Kissimmee River,” Herndon related in 1989, but until he received authorization to use money for that purpose, “my hands are rather well-tied.”⁷⁸

In addition to this setback, some disagreements surfaced between environmentalists and state authorities as to what restoration meant. To people such as Richard Coleman, who spearheaded grassroots efforts supporting dechannelization, it meant “restoring [the Kissimmee] to what it was before, bend-for-bend, acre-for-acre.”⁷⁹ State officials were not so sure. Louis Toth, who headed up the SFWMD Demonstration Project, defined restoration as “restoring a functioning ecosystem.”⁸⁰ Stanley Hole, chairman of the SFWMD’s governing board in the mid-1980s, agreed. “We can’t just go in there and fill the [flood canal], no matter how the environmentalists cry for it,” Hole stated. Instead, the SFWMD would try to “restor[e] the values the river offered in its pristine state without sacrificing the navigational and recreational benefits that channelization brought about.”⁸¹

Despite these disagreements, the state and environmentalists had achieved some success on the Kissimmee front. Faced with a presidential administration largely uninterested in environmental quality, and with a Corps of Engineers that was, at best, unable to participate in restoration efforts and, at worst, dragging its feet because it did not want to dechannelize the Kissimmee, Governor Bob Graham and the SFWMD pushed Kissimmee restoration along. Because of the demonstration project (the construction of which the SFWMD had completed by 1986), the state now had a mechanism in place to observe how the environment would react if restoration occurred, and it had fully dedicated state resources to dechannelization. This commitment continued even when the Republican Martinez assumed the governorship from the Democrat Graham. With dechannelization, the state had taken its first steps along the road of ecosystem restoration, and it would move farther down that path in the 1990s.

Chapter Eight Endnotes

- ¹ See “The ‘Sewer Ditch’ Undone,” *Audubon* 89 (March 1987): 114.
- ² U.S. Army Corps of Engineers, Jacksonville District, *Kissimmee River Study Including Taylor Creek – Nubbin Slough Basins* (Jacksonville, Fla.: U.S. Army Corps of Engineers, 1980).
- ³ Jacksonville District, *Kissimmee River Study Including Taylor Creek – Nubbin Slough Basins*.
- ⁴ Arthur R. Marshall, “Repairing the Florida Everglades: A Brief Update to the members of the Coalition to Repair the Everglades,” 2 April 1983, Folder 5, Box 1, Marshall Papers.
- ⁵ “Report Backs Kissimmee River Restoration,” *The News Tribune*, December 13, 1981; Steve Yates, “Marjory Stoneman Douglas and the Glades Crusade,” *Audubon* 85 (March 1983): 118.
- ⁶ “The Problem & The Plan,” *For the Future of Florida: Repair the Everglades* 2 (1981): 2.
- ⁷ As cited in “Kissimmee ‘Disaster’: Graham Asks Corps To Speed Up Repairs,” *The Tampa Tribune*, 1 March 1982.
- ⁸ Colonel Alfred B. Devereaux interview by George E. Buker, 23 April 1984, Jacksonville, Florida, 58-59, transcript in Library, Jacksonville District, U.S. Army Corps of Engineers, Jacksonville, Florida [hereafter referred to as Devereaux interview].
- ⁹ “Political Fix For Wetland Woes,” *ENR* 186 (2 September 1982): 33.
- ¹⁰ Stine, “Environmental Politics and Water Resources Development,” 65.
- ¹¹ Patrick Thomas Gannon, Sr., “On the Influence of Surface Thermal Properties and Clouds on the South Florida Sea Breeze” (Ph.D. diss., University of Miami, 1977).
- ¹² All quotations in Robert H. Boyle and Rose Mary Mechem, “Anatomy of a Man-Made Drought,” *Sports Illustrated* 56 (15 March 1982): 46-48.
- ¹³ As quoted in Margaret Yansura, Public Information Office, South Florida Water Management District, to Executive Director, Deputy Executive Director, and all Department Directors, n.d., File Kissimmee River, Box 17166, SFWMDAR.
- ¹⁴ As quoted in Ron Mierau, “Trip Report – May 14, 1982, Regional Influence of Drainage on the Hydrologic Cycle in Florida,” 19 May 1982, File Kissimmee River, Box 17166, SFWMDAR.
- ¹⁵ As quoted in Boyle and Mechem, “Anatomy of a Man-Made Drought,” 48.
- ¹⁶ Quotation in Vince Williams, Fishery Biologist, to Mr. Richard Coleman, Polk County Sierra Group, 17 February 1982, Folder 8, Box 3, Marshall Papers; see also Nathaniel P. Reed to Victoria Tschinkel, et al., 2 February 1982, Folder 43, Box 1, *ibid.*
- ¹⁷ South Florida Water Management District New Release, 24 May 1982, File Kissimmee River Restoration (File #1), Box 17166, SFWMDAR.
- ¹⁸ South Florida Water Management District New Release, 24 May 1982.
- ¹⁹ “Kissimmee Flood Plan Stalled After Protests,” *Fort Lauderdale News and Sun-Sentinel*, 14 August 1982.
- ²⁰ “River Raising Halted,” *Okeechobee News*, 20 August 1982.
- ²¹ Quotation in “Ranchers: Kissimmee River Level Fine as Is,” *The Palm Beach Post*, 5 September 1982; see also “Kissimmee Plans for Restoration Slowed by Corps?” *The Palm Beach Post*, 4 September 1982.
- ²² Quotations in “Water-Management Fight Simmers Along Kissimmee,” *The Miami Herald*, 6 March 1983.
- ²³ Quotation in “Issue Paper: Save Our Everglades,” 9 August 1983, 5, copy in Folder 16, Box 2, Marshall Papers; see also Bob Graham, Governor, to Honorable Ronald Reagan, 8 August 1983, *ibid.*

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²⁴ As quoted in “Graham Seeking Rescue Blueprint for Everglades,” *The Palm Beach Post*, 8 April 1983.

²⁵ Quotation in Devereaux interview, 59; see also Buker, *The Third E*, 85.

²⁶ Coordinating Council on the Restoration of the Kissimmee River Valley and Taylor Creek – Nubbin Slough Basin, “Significant Findings Adopted by Majority Vote on 8/19/83,” File Kissimmee River Restoration History (File #1), Box 17166, SFWMDAR; “Efforts to Restore Kissimmee Called Political,” *The Miami Herald*, 10 August 1983; Devereaux interview, 59.

²⁷ Coordinating Council on the Restoration of the Kissimmee River Valley and Taylor Creek – Nubbin Slough Basin, “Kissimmee River Restoration: Public Hearing Discussion Paper, Public Meetings, August 1983,” File Kissimmee Valley Planning Area, Box 17166, SFWMDAR.

²⁸ First quotation in “Battle Lines Flank the Kissimmee’s Banks,” *The Miami Herald*, 8 August 1983; second quotation in David S. Anthony, “Kissimmee River Survey Review: Reasons for Preferring Partial Backfilling Alternative,” Folder 9, Box 3, Marshall Papers.

²⁹ Sue Douglas, “Save the Everglades,” *Oceans* 18 (March/April 1985): 4.

³⁰ Both quotations in “Angry Ranchers Oppose River Project,” *The Palm Beach Post*, 11 August 1983; see also “Water, Growth Hinge on Plan,” *The Palm Beach Post*, 11 August 1983; “Governor Sees the Caged and Free Kissimmee,” *The Miami Herald*, 11 August 1983; “Troubled Waters: Panel to Consider Fate, Direction of Kissimmee River,” *Fort Lauderdale News and Sun-Sentinel*, 7 August 1983.

³¹ Quotations in Coordinating Council on the Restoration of the Kissimmee River Valley and Taylor Creek – Nubbin Slough Basin, “Council Recommendations on Kissimmee River Restoration, Adopted by Unanimous Vote on August 19, 1983,” File Kissimmee River Restoration History (File #1), Box 17166, SFWMDAR; see also “Kissimmee Restoration Gets Boost,” *The Miami Herald*, 20 August 1983.

³² Coordinating Council on the Restoration of the Kissimmee River Valley, “Kissimmee River Restoration: Public Hearing Discussion Paper.”

³³ As quoted in Douglas, “Save the Everglades,” 4. Hole himself came from an interesting background, as he was previously an engineer for the Gulf American Corporation, the promoter of Golden Gate Estates. After leaving the corporation to become chairman of Collier County’s water management advisory board, he continued to serve as a consultant to Gulf American. Carter, *The Florida Experience*, 241.

³⁴ As quoted in Jared Orsi, *Hazardous Metropolis: Flooding and Urban Ecology in Los Angeles* (Berkeley: University of California Press, 2004), 130-131.

³⁵ “Graham Applauds Decision on Kissimmee Restoration,” *The Miami Herald*, 20 August 1983; “Kissimmee Council Decides to Undo Channelization,” *The Stuart (Fla.) News*, 21 August 1983. Maloy later related that he came back from a Coordinating Council meeting, telephoned the SFWMD’s director of operation and maintenance, and told him, “Bill, I want you to put a weir across the Kissimmee Channel.” When the director expressed some disbelief, Maloy continued, “Let’s see whether or not we can really impact the reestablishment of the oxbows and the way the river actually ran.” See Maloy interview, 5-6.

³⁶ Quotations in “Kissimmee River Demonstration Project,” File Kissimmee River Demonstration Project, 1983 (File #1), Box 17166, SFWMDAR; see also Buker, *The Third E*, 86.

³⁷ “Comments Submitted to the Department of Environmental Regulation by the Latt Maxcy Corporation,” 31 October 1983, File Kissimmee River Demonstration Project, 1983 (File #1), Box 17166, SFWMDAR.

³⁸ Devereaux interview, 61.

³⁹ Whitfield interview, 20.

⁴⁰ Devereaux interview, 58, 62.

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⁴¹ Will Abberger and Estus Whitfield, *Save Our Everglades: The Kissimmee River* (Tallahassee, Fla.: State of Florida, Office of the Governor, Office of Planning Budgeting, Natural Resources, Unit, 1985), 27-28; see also “WMD Seeks Permits for River Restoration,” *South Florida Water Management District Bulletin* 9 (Winter 1983): 1.

⁴² Jan Horvath, Director, Resource Coordination Department, to Mr. W. H. Morse, Chairman, Osceola Waterways Committee, Kissimmee/Osceola County Chamber of Commerce, 30 December 1983, File Kissimmee River Demonstration Project (File #1), 1983, Box 17166, SFWMDAR.

⁴³ As quoted in “Saving the Everglades,” *The Times-Union and Journal*, 8 January 1984.

⁴⁴ State of Florida, Office of the Governor, Executive Order No. 83-178, 4 November 1983, copy in Abberger and Whitfield, *Save Our Everglades: The Kissimmee River*, Attachment 12, 100-106.

⁴⁵ Memorandum of Agreement Between Florida Department of Environmental Regulation and the South Florida Water Management District and the Florida Game and Fresh Water Fish Commission, and the Florida Department of Agriculture and Consumer Services, and the Florida Department of Natural Resources, and the Florida Department of Community Affairs Concerning the Restoration of the Kissimmee River, 1 November 1983, copy in Abberger and Whitfield, *Save Our Everglades: The Kissimmee River*, Attachment 11, 89-99.

⁴⁶ Quotations in “District Will Push Restoring of River,” *Fort Lauderdale News and Sun-Sentinel*, 17 March 1984.

⁴⁷ “SFWMD May Buy Kissimmee Flood Plain,” *Fort Lauderdale News and Sun-Sentinel*, 16 March 1984.

⁴⁸ Fred Schiller, Director, Community Relations Division, to John P. Clark, Public Issue Specialist, Community Relations Division, 28 June 1984, File Kissimmee River Demonstration Project (File #1), 1983, Box 17166, SFWMDAR.

⁴⁹ Abberger and Whitfield, *Save Our Everglades: The Kissimmee River*, 28.

⁵⁰ John R. Wodraska, Executive Director, to Mr. Estus Whitfield, Office of the Governor, 6 February 1985, File Kissimmee Restoration History (File #1), Box 17166, SFWMDAR.

⁵¹ Both quotations in Wodraska to Whitfield, 6 February 1985; see also “Draft—May 29, 1984, Kissimmee River Restoration,” File Kissimmee Restoration History (File #1), Box 17166, SFWMDAR.

⁵² U.S. Army Corps of Engineers, Jacksonville District, *Central and Southern Florida, Kissimmee River: Executive Summary* (Jacksonville, Fla.: U.S. Army Corps of Engineers, 1984), 2-5, 17 [hereafter referred to as 1984 Executive Summary].

⁵³ 1984 Executive Summary, 6-10.

⁵⁴ All quotations in 1984 Executive Summary, 22-23; see also Stuart Appelbaum interview by Brian Gridley, 22 February 2002, 8, Everglades Interview No. 11, Samuel Proctor Oral History Program, University of Florida, Gainesville, Florida.

⁵⁵ As cited in untitled memorandum, 4 June 1985, File 1517-08 (Kissimmee River-Lake Okeechobee, FL-12222), Jan. 1985-Dec. 1985, Box 25, Accession No. 077-96-0033, RG 77, FRC.

⁵⁶ Untitled memorandum, 4 June 1985.

⁵⁷ See U.S. Army Corps of Engineers, Jacksonville District, *Central and Southern Florida: Kissimmee River, Florida* (Jacksonville, Fla.: U.S. Army Corps of Engineers, 1985), i-ii; Kissimmee River-Lake Okeechobee-Everglades Coordinating Council, “Save Our Everglades: Annual Summary Report,” January 1986, i.

⁵⁸ Devereaux interview, 67.

⁵⁹ As quoted in Ronald A. Taylor, “Saving a Fountain of Life,” *U.S. News and World Report* 100 (24 February 1986): 64.

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⁶⁰ See Buker, *The Third E*, 86-87.

⁶¹ As quoted in Natalie Angier, “Now You See It, Now You Don’t,” *Time* 124 (6 August 1984): 56.

⁶² See Robert Pierce, “South Florida’s Land Puzzle: Federal, State, and Private Agencies Purchase Protection,” *National Parks* 59 (July/August 1985): 17.

⁶³ Kissimmee River-Lake Okeechobee-Everglades Coordinating Council, “Save Our Everglades: Annual Summary Report,” January 1986, 7.

⁶⁴ Attachment to Jon Glogau, Office of the Attorney General, Department of Legal Affairs, to Peter Antonacci, 17 September 1991, File PRO Background, Kissimmee River Restoration, Box 21213, SFWMDAR.

⁶⁵ Quotations in “Graham Panel to Study Growth Problems in Kissimmee River Region,” State of Florida, Office of the Governor Press Release, 20 August 1984, File Kissimmee River Resource Planning and Management Committee, Box 17166, SFWMDAR; see also Bob Graham, Governor, to Colonel Charles T. Myers III, District Engineer, U.S. Army Corps of Engineers, 14 August 1984, File 1517-08 (Kissimmee River-Lake Okeechobee, Fla.) Study 12222, Box 25, Accession No. 077-96-0033, RG 77, FRC.

⁶⁶ Ted Levin, *Liquid Land: A Journey Through the Florida Everglades* (Athens: The University of Georgia Press, 2003), 238-239.

⁶⁷ “Issue Paper: Kissimmee River Resource Planning and Management Committee,” August 1984, 4, File Kissimmee River Resource Planning and Management Committee, Box 17166, SFWMDAR.

⁶⁸ “Kissimmee River Resource Planning and Management Committee Land Acquisition Strategy Subcommittee Expanded Options A Through G,” attachment to John P. Clark, Public Issue Specialist, Resource Coordination Department, to Mr. Dwaine T. Raynor, Bureau of State Land Planning, 10 January 1985, untitled file, Box 17166, SFWMDAR.

⁶⁹ South Florida Water Management District News Release, 23 January 1985, File Kissimmee River, Box 17166, SFWMDAR.

⁷⁰ Colonel Charles T. Myers III interview by George E. Buker, 30 December 1987, Jacksonville, Florida, 30, transcript in Library, Jacksonville District, U.S. Army Corps of Engineers, Jacksonville, Florida.

⁷¹ Bob Graham, Governor, to Colonel John W. Devens, Resident Member, Board of Engineers for Rivers and Harbors, 28 January 1986, File 1517-08 (Kissimmee River-Lake Okeechobee, FL-12222), Jan. 1986-Dec. 1986, Box 25, Accession No. 077-96-0033, RG 77, FRC.

⁷² Quotations in E. R. Heiberg III, Lieutenant General, USA, Chief of Engineers, to The Secretary of the Army, 6 July 1987, File 10-1-7a (Kissimmee River-Lake Okeechobee, FL) 12222, Box 25, Accession No. 077-96-0033, RG 77, FRC; see also Buker, *The Third E*, 87.

⁷³ For a thorough discussion of the Water Resources Development Act of 1986 and its significance, see Reuss, *Reshaping National Water Politics*.

⁷⁴ Act of 17 November 1986 (100 Stat. 4082, 4251).

⁷⁵ Quotations in “Everglades Status Report,” 12 January 1988, File Everglades, Box 88-02, S1331, Executive Office of the Governor, Brian Ballard, Director of Operations, Subject Files, 1988, FSA; see also Dale Twachtman, Secretary, Florida Department of Environmental Regulation, to Honorable Robert K. Dawson, Assistant Secretary of the Army (Civil Works), 11 February 1987, File LO Major Programs, Correspondence, Background, LOSAC, Box 18060, SFWMDAR.

⁷⁶ See Theresa Woody, “Grassroots in Action: The Sierra Club’s Role in the Campaign to Restore the Kissimmee River,” *Journal of North American Benthological Society* 12, No. 2 (1993): 203; Theresa Woody interview by Theodore Catton, 18 January 2005, Naples, Florida, 1; Theresa Woody, Southeast Associate Field Representative, Sierra Club, to John R. Wodraska, Executive Director, South Florida Water Management District, 5 June 1987, File LO Major Programs, Correspondence, Background, LOSAC, Box 18060, SFWMDAR.

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⁷⁷ Colonel Robert L. Herndon interview by Joseph E. Taylor, 26 May 1989, Jacksonville, Florida, 19, transcript in Library, Jacksonville District, U.S. Army Corps of Engineers, Jacksonville, Florida [hereafter referred to as Herndon interview].

⁷⁸ Quotation in Herndon interview, 19; see also Buker, *The Third E*, 87-88.

⁷⁹ As cited in Glass, "Rebirth of a River," 13-14.

⁸⁰ As cited in Glass, "Rebirth of a River," 13-14.

⁸¹ As quoted in Douglas, "Save the Everglades," 5.

