

## CHAPTER TWO

### Federal Intervention: The Central and Southern Florida Flood Control Project, 1948

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Schemes to drain the Everglades in the first half of the twentieth century had created problems that few people foresaw, including the destruction of plant and wildlife in South Florida, a textbook example of the law of unintended consequences. Other problems resulted from soil subsidence, saltwater intrusion into freshwater wells, and fires raging in times of drought. The financial difficulties of the state of Florida and the Everglades Drainage District (EDD) precluded any local solutions to these problems. In addition, two hurricanes in 1947 caused devastating floods, destroying millions of dollars of property and cropland. These problems convinced state officials and other Floridians that it was time for drastic action, and they once again turned to the U.S. Army Corps of Engineers for help. The Corps proposed a comprehensive water control plan in 1948 that would curb floods and supply water for urban and agricultural interests, alleviating fires, soil subsidence, saltwater intrusion, and plant and wildlife damage in the process. Congress approved this plan in 1948, thereby creating the Central and Southern Florida Flood Control Project. Even though this project proposed an entire water control plan for Central and South Florida, it still left some people uneasy as to how it would address Florida's valuable fish, wildlife, and plant resources. Floridians generally lauded the establishment of the project, believing that it provided secure protection against future flooding, but there were fissures in this consensus that would eventually become gaping crevices.

By the 1930s, drainage had opened up numerous acres of land in South Florida to agriculture and settlement. But the removal of water had some unintended ecological consequences. For one thing, the muck soil exposed by drainage easily caught fire when it became too dry. These fires generally occurred underneath the surface and produced heavy amounts of smoke, leading to rather bizarre scenes of trees with obliterated roots but no trunk damage sinking into the earth.<sup>1</sup> Such fires became numerous in the Everglades in the 1920s and 1930s; one periodical reported in 1931 that "there are areas in the glades . . . that have been burning underground for years."<sup>2</sup>

High rates of soil subsidence created other problems. The removal of water from the land oxidized bacteria in plant remains, thereby facilitating the complete decomposition of organic detritus. The subsequent soil loss sometimes amounted to as much as one inch per year. One observer claimed in 1942 that the city of Belle Glade was "six feet farther down than it was 25 years ago" and that Clewiston residents "add a new step to their front stoops every two or three years so they can reach the shrinking ground."<sup>3</sup> Drainage also caused saltwater from the Atlantic Ocean to intrude into freshwater wells because a loss of surface water allowed saltwater to flow into creeks during high tide and permeate the limestone strata underlying the banks. Because of this, by 1938, more than 1,000 wells moved inland by the city of Miami in the 1920s and 1930s had saltwater contamination.<sup>4</sup>



**A muck fire on the Rotenberger Tract. (Source: South Florida Water Management District.)**

The prevalence of these problems, and the lack of state resources, led federal agencies, especially the Soil Conservation Service of the U.S. Department of Agriculture and the U.S. Geological Survey (USGS), to investigate solutions. The Soil Science Society of Florida, an organization formed by Florida scientists in 1939, aided these agencies in their efforts. At the first meeting of the society in 1939, R. V. Allison, its president and chief of the University of Florida's Everglades Agricultural Experiment Station, discussed soil and water problems. He explained that only in the last few years had scientists adequately understood "the duty of water and its relation to the soil as well as to the plant." Too much drainage had allowed subsidence to devastate soil levels, making it the most pressing soil problem affecting the Everglades. In order to curb subsidence, Allison proposed that a water control program be implemented that would flood uncultivated lands "as much of the year as possible" and consider the water needs of cultivated areas. Because Allison did not know what these needs were, he called for a "careful, exacting study" of "the handling of ground water" by cultivated tracts, "looking to economic plant response on the one hand and the best possible stabilization of the soil body on the other."<sup>5</sup> He also called on federal, state, and local officials to recognize that the Everglades hydrologic unit consisted of three elements: the Kissimmee River, which served as the watershed; Lake Okeechobee, which operated as the storage basin; and the Everglades itself, which was the overflow area.

Others in the Soil Science Society agreed with Allison's assessment. H. A. Bestor, a drainage engineer with the U.S. Sugar Corporation, stated in 1943 that an orderly plan for

developing the Everglades needed to emphasize conservation of water over its disposal. Officials should institute “water control planning,” Bestor continued, to preserve wildlife, to control soil subsidence and prevent muck burning, to utilize land for agriculture, and to preserve municipal water supplies. “All present land use,” he concluded, “is challenged by lack of appreciation that conservation of its organic soils is vitally dependent on water control management.”<sup>6</sup>

Meanwhile, the USGS, the Florida Geological Survey, and the Florida State Board of Conservation were conducting inquiries into saltwater intrusion and well contamination in South Florida. In 1939, the cities of Miami, Miami Beach, and Coral Gables, in conjunction with Dade County, entered into an agreement with the USGS to examine surface and well supplies in South Florida in order to receive information about how to prevent “a grave municipal water-supply shortage.”<sup>7</sup> USGS scientists, including geologist Gerald Parker, investigated the substrata of southern Florida and found that saltwater was entering the Biscayne Aquifer (the only source of fresh ground water in the Miami region) from below. The problem was that drainage had upset the natural balance between salt water and fresh water in the aquifer by lowering the groundwater table. To restore this equilibrium, Parker argued, freshwater tables had to be kept at 2.5 feet above sea level. The main way to ensure this was to build control dams at the mouths of canals draining Miami and its surroundings, and to establish a better water control plan for the region.<sup>8</sup>

Scientists, then, were well aware of the destruction that drainage was wreaking on natural resources, but the general public needed something more accessible to move them to action. Publications in national magazines such as *Collier's* and *Audubon* helped, but the biggest boost came in 1947 when a 57-year-old journalist named Marjory Stoneman Douglas published a book chronicling the destruction of the Everglades. Born in Minnesota in 1890 and raised in Massachusetts, Douglas moved to Miami in 1915 to join the staff of her father's newspaper, the *Miami Herald*. She quickly became involved with the Florida Federation of Women's Clubs, which was one of the area's major promoters of conservation, and focused many of her *Miami Herald* articles on creating a healthy urban environment through zoning, public parks, and tree planting. Douglas also championed the beauty and distinctiveness of the Everglades, and she joined the Tropic Everglades National Park Association soon after its formation. When her friend Hervey Allen, an editor at Rinehart Books, invited her to contribute to his series focusing on American rivers, she readily agreed, deciding to write about the Everglades, which the Seminole had called *pahokee*, meaning grassy waters. Using that word for her inspiration, she published *The Everglades: River of Grass* in the fall of 1947, and it soon became a bestseller.<sup>9</sup>

Using stunning and beautiful prose, Douglas painted a picture of the geological and ecological life of the Everglades, describing how, before drainage, water from Lake Okeechobee spilled over the lake's south rim, combined with rainwater, and became the “river of grass,” flowing slowly, almost imperceptibly, southward, giving life to the disparate flora and fauna in the region. Douglas chronicled the different drainage programs that the state had instituted, as well as land development schemes and hurricanes that had influenced the area. Then, in the crowning chapter, she outlined how drainage was killing the Everglades:

The endless acres of saw grass, brown as an enormous shadow where rain and lake water had once flowed, rustled dry. The birds flew high above them, the ibis, the egret, the heron beating steadily

southward along drying watercourses to the last brackish pools. Fires that one night glittered along a narrow horizon the next day, before a racing wind, flashed crackling and roaring across the grassy world and flamed up in rolling columns of yellow smoke like pillars of dirty clouds. . . . But in all the creatures of these solitudes where the Tamiami Trail and the long canals stretched their thin lines, and in the hearts of the Indians, there was a sense of evil abroad, a restlessness, an anxiety that one passing rainfall could not change.<sup>10</sup>

To restore the beauty and natural conditions of the Everglades, Douglas argued, “a single plan of development and water control for the whole area, under the direction of a single engineer and his board” had to be instituted.<sup>11</sup> With that plan, the different water demands of disparate sections in South Florida then could be coordinated, and areas could be developed for water conservation. Ultimately, she concluded, the people of South Florida needed to cooperate with the federal government to develop this project.

Douglas’s declaration of the necessity of federal involvement rang true to many Floridians observing the financial and administrative difficulties of the EDD. She referred to the period



**Marjory Stoneman Douglas signing copies of *The Everglades: River of Grass*, 1947. (Source: The Florida Memory Project, State Library and Archives of Florida.)**

from 1931 to 1942 as “the era of utter confusion” in South Florida because of the financial straits of the EDD and the lack of a central authority in drainage matters. Florida’s 1913 drainage law had authorized the establishment of subdrainage districts with their own taxing powers; when these districts were formed, they developed their “own plan of operation shaped to local desires.”<sup>12</sup> By 1948, there were 12 of these districts covering approximately 100,000 acres of land.<sup>13</sup> Moreover, in 1931, the state legislature removed the governor and state officials from the EDD board, replacing them with five local members appointed by the governor. According to EDD engineer Lamar Johnson, this action “completely divorced” the district “from direct Tallahassee control,” resulting in

“non-payment of taxes, bond litigation, and little funds with which to operate for ten years.”<sup>14</sup> Meanwhile, Douglas argued, cattle ranchers and vegetable farmers on lands surrounding Lake Okeechobee wanted the maintenance of a low water level so that more agricultural land would be available, while residents of Broward and Dade counties desired a high level “to guard their own fields and their drying, over-used, city well-fields.” These conditions produced “bad feeling, wrangling and confusion.”<sup>15</sup>

After receiving financial help from the Reconstruction Finance Corporation, the EDD addressed some of the soil subsidence and other problems created by drainage, using studies conducted by the Soil Conservation Service and the Soil Science Society of Florida. In the early 1940s, the Soil Conservation Service had discovered that much of the land in southern Florida was unsuitable for agriculture because of an inadequate soil depth. The EDD’s board wondered whether these tracts could be used for water conservation and storage, and asked engineers

Turner Wallis and Lamar Johnson to work with a Soil Science Society committee to investigate the possibilities. In May 1944, this committee suggested that the EDD use public lands as water conservation areas in order to improve wildlife and plant habitat and to stop soil subsidence and burning.<sup>16</sup>

Acting on these recommendations, Johnson, who became chief engineer of the EDD in 1946, drew up maps showing three possible water conservation areas in Palm Beach, Broward, and Dade counties, located mostly on acreage already owned by either the IIF trustees, the State Board of Education, the EDD, or the counties. The IIF trustees approved the plan, but the state legislature, influenced by a faction of landowners who wanted the land sold and the proceeds applied to the EDD's debt, mandated that voters in the three counties would have to approve the measure before any conservation areas could be created. "A popular referendum was usually considered a kiss of death at that period of Florida's history," Johnson later explained. "It looked dark for the future of the conservation areas at that point."<sup>17</sup>

In the meantime, settlement and economic development continued to increase in South Florida, especially around Lake Okeechobee and on the east coast. State officials noted in 1948 that there were "great tourist and business cities" along the coastal ridge of southern Florida, while agricultural communities clustered around the lake and on the western and northern side of the Kissimmee River Basin.<sup>18</sup> Cattle ranches and dairies proliferated in the Kissimmee and St. Johns basins; one estimate placed the number of cattle in these areas at 410,000 head. In addition, numerous farmers raised truck crops on the drained soil south of Lake Okeechobee, including beans, tomatoes, eggplant, cabbage, potatoes, and celery. The Corps reported that 160,000 acres in the Kissimmee River Basin and south of Lake Okeechobee were planted to truck crops in the 1945-1946 growing season, producing \$67 million in vegetables. Citrus farms were also important, located from the Kissimmee Basin to Davie, southwest of Fort Lauderdale; approximately 268,000 acres of citrus groves existed in 1948. But cane sugar was the most significant crop in the Everglades. In 1934, Congress had passed the Sugar Act, which had divided cane sugar production into different quotas, thereby boosting prices. With this help, the U.S. Sugar Corporation and other companies planted 32,000 acres to cane, raising 873,000 tons of sugar in 1941. According to A. G. Matthews, chief engineer for the State of Florida's Division of Water Surveys and Research, the Everglades produced 2,330,232 tons of citrus fruits and vegetables from 1944 to 1946, as well as \$11,764,000 worth of sugar and 120,000 head of beef.<sup>19</sup>

The high production of agricultural crops and the rising number of people living around Lake Okeechobee and along the east coast meant that any kind of storm similar to the 1926 and 1928 hurricanes would have a devastating impact on South Florida. But because of the levee that the Corps had built around Lake Okeechobee, and because of the existing drainage works, settlers felt secure from flooding, a feeling reinforced after drought hit the region in 1944 and 1945. According to Lamar Johnson, "the Everglades vegetation and soil burned for months and the acrid smoke over Miami did not inspire the same sentimental emotions that the moon over that city does."<sup>20</sup> The Corps reported that between 1943 and 1946, "cattle died in the pastures of the Kissimmee Valley for lack of water; smoke from burning muck lands of the Everglades darkened the coastal cities; and salt water moved inland along drainage canals and through the underlying rock."<sup>21</sup>

But in the first months of 1947, rain began falling on the Everglades in large amounts. On 1 March, a storm dropped six inches of rain, while April and May also saw above average totals. The situation became severe in the summer, the apex of Florida's traditional rainy season (which usually lasts from June through October). As September approached and the rains continued, the ground in the Everglades became waterlogged and lake levels reached dangerous heights. Then, on 17 September, a hurricane hit Florida on the southwest coast, passing Lake Okeechobee on the west and dumping large amounts of rain on the upper Everglades, flooding most of the agricultural land south of Lake Okeechobee.<sup>22</sup> George Wedgworth, who would later become president of the Sugar Cane Growers Cooperative of Florida and whose parents were vegetable growers in the Everglades, related that his mother called him during the storm and told him, "This is the last call I'll make from this telephone because I'm leaving. . . . [W]e've got an inch or two of water over our oak floors and they're taking me out on a row boat."<sup>23</sup> Such conditions were prevalent throughout the region.

Before the area had a chance to recover from the devastation, another hurricane developed, moving into South Florida and the Atlantic Ocean by way of Fort Lauderdale. The amount of rainfall was not as severe in the upper Everglades, but coastal cities received rain in large quantities, including six inches in two hours at Hialeah and nearly 15 inches at Fort Lauderdale in less than 24 hours. The EDD, under the direction of Johnson, kept its drainage canals open to discharge to the ocean as much of the floodwater in the agricultural area as it could, exacerbating coastal flooding. East coast residents charged Johnson with endangering their lives in order to please agricultural interests, but Johnson vehemently denied this, explaining that "the entire Everglades was flooded several feet and the flood was moving southward and eastward" – coastal cities would have been inundated regardless of the output from the drainage canals.<sup>24</sup>

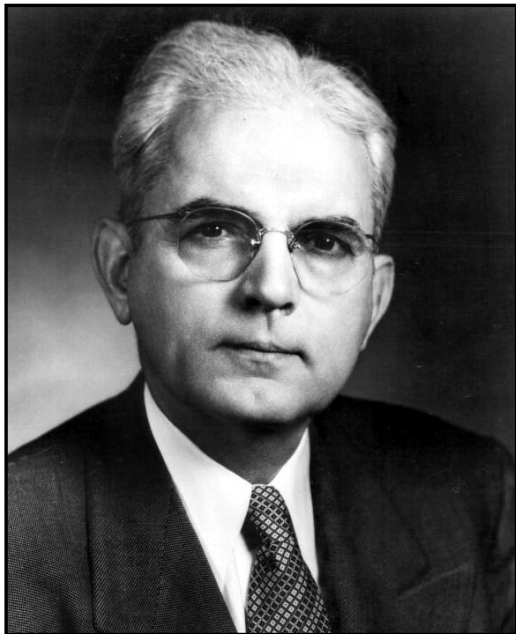


**Damage caused by the 1947 hurricane. (Source: The Florida Memory Project, State Library and Archives of Florida.)**

Whoever was to blame, the hurricanes had devastating effects. Although the levee around Lake Okeechobee held, preventing the large numbers of deaths that occurred in 1926 and 1928, over 2,000 square miles of land south of the lake was covered by, in the words of U.S. Senator Spessard Holland, "an endless sheet of water anywhere from 6 to 7 feet deep down to a lesser depth." The Corps estimated that the storms caused \$59 million in property damage throughout southern Florida, but Holland believed that the agency had "understated the actual figures."<sup>25</sup>

The destruction shocked citizens of South Florida, both in the upper Everglades and in the coastal cities, and they demanded that something be done.<sup>26</sup>

Acting on these concerns were Florida's two U.S. senators, Holland (who became a member of the Senate Public Works Committee in 1947) and Claude Pepper. Both were Democrats; Holland had served as governor of Florida from 1941 to 1945, while Pepper had served in the Senate since 1936. After the September and October hurricanes, the two were inundated with resolutions and pleas from residents and city and county governments requesting more stringent water control. The Soroptimist Club of the Palm Beaches, for example, informed Holland that



**Senator Spessard Holland. (Source: The Florida Memory Project, State Library and Archives of Florida.)**

“it is clearer than ever that an overall Glades water control plan must be established” in South Florida.<sup>27</sup> The city commission of the city of Stuart was more specific, asking that a water plan provide not only for the control of flooding, but also “include conservation of fresh water.”<sup>28</sup>

At the time, Corps leaders were already investigating flood control measures south of Lake Okeechobee, in part because of the flooding that occurred during the spring rains in 1947. With so many South Floridians in disparate parts of the region calling for flood control, however, Pepper became convinced that the Corps needed to expand its efforts. “The time has come when we have got to deal with the flood situation in the Peninsula of Florida, as a whole,” he informed Lieutenant General R. A. Wheeler, Chief of Engineers, in October 1947. “It is all fundamentally one single problem and has got to be approached as a single problem with a single comprehensive program.” Pepper therefore requested that the Corps “take steps . . . to formulate plans for a comprehensive flood-control program for the whole flooded area.”<sup>29</sup> Wheeler agreed with Pepper, explaining that he had already implemented measures to begin “a comprehensive study of the entire flood problem of south Florida from the headwaters of the Kissimmee River to points south of Miami.” The “urgent need” for a solution to the flood control problems, Wheeler noted, meant that the Jacksonville District would devote much of its resources to complete an overall study and submit it to Congress “early in the coming calendar year.” Wheeler told Pepper that the Corps already had enough congressional authorizations for “examinations, surveys and reports on individual streams and canals” to allow it to conduct a comprehensive study without additional legislation, meaning that the Corps could proceed immediately.<sup>30</sup>

In its preparation of the flood control plan, the Jacksonville District, led by District Engineer Colonel Willis Teale, held public hearings where local agencies and the general public relayed their wants and needs. Most of the comments in these meetings echoed Pepper's claims that uncoordinated local efforts in the past had failed to solve any of the region's water problems and that a comprehensive plan was “the only possible solution.”<sup>31</sup> Listening to these concerns, Teale



and the Jacksonville District formulated a plan recognizing that flood protection, drainage, and water control were all interrelated problems in South Florida. According to a Corps press release, the program

contemplates the protection of 1,000 square miles of rich agricultural muck land immediately south of Lake Okeechobee, improvement of water control in large conservation areas outlined by local interests, and providing the coastal cities with protection from floodwaters from the Everglades by impounding such waters within water conservation areas, encircled by levees large enough to retain all of the water entering them during a period of severe rainfall such as has been experienced this year.

Teale explained that the Corps had developed this plan through ongoing field surveys and office studies, as well as through consultations with “various federal, state and local interests.”<sup>32</sup> These included officers of the U.S. Sugar Corporation, the Palm Beach County Water Resources Board, Osceola Groves, and the Florida Division of Water Surveys and Research.<sup>33</sup>



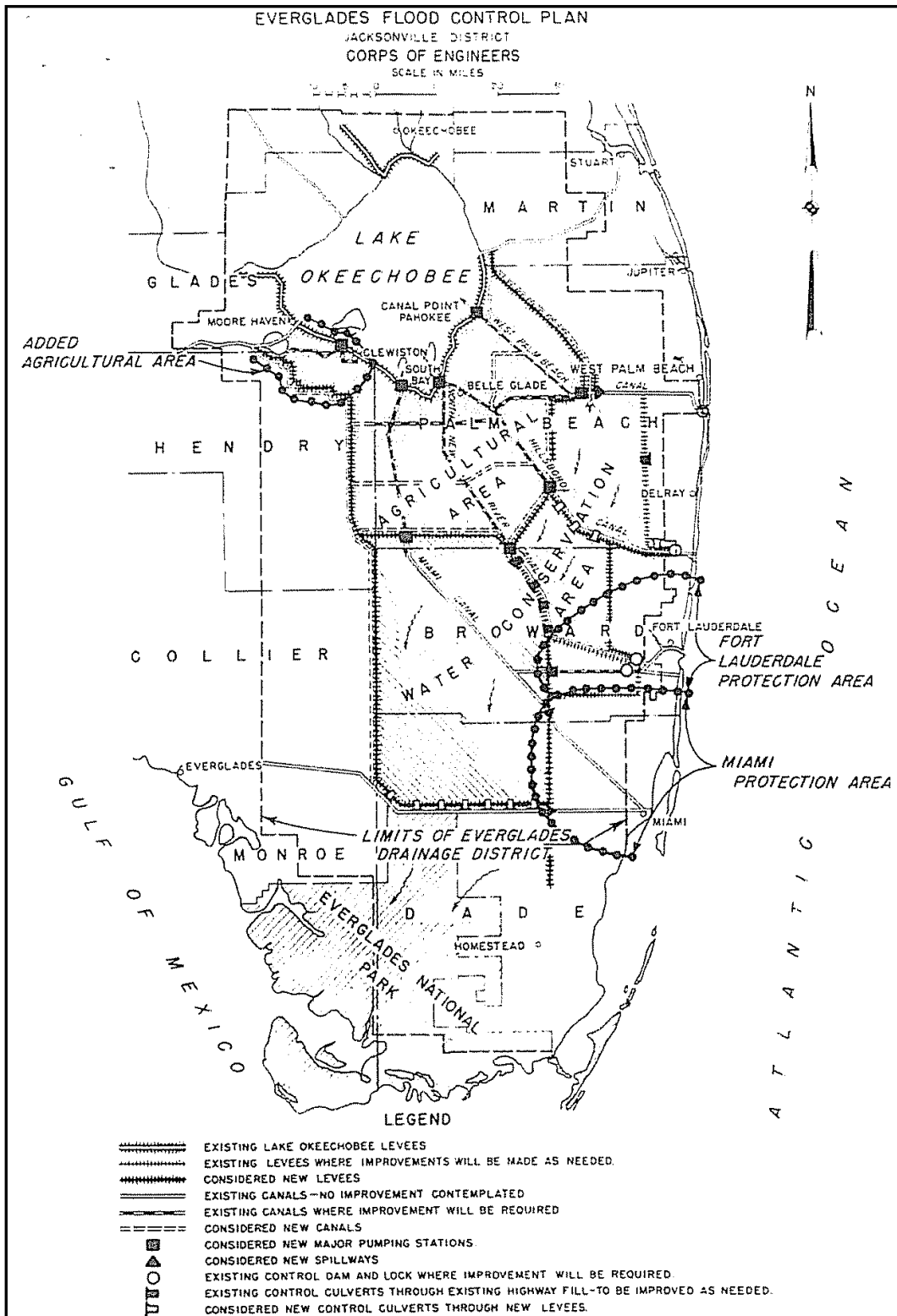
**Senator Claude Pepper. (Source: The Florida Memory Project, State Library and Archives of Florida.)**

Another important resource was the Soil Conservation Service. Because of the soil subsidence and muckburning problems in the Everglades, the Service had conducted numerous surveys, including those involving topography, subsurface rock strata, soil classification, and hydraulics. The studies, which were ongoing, had convinced Service officials that much of the Everglades could be “soundly developed for agricultural use,” although specific areas, as explained above, were more fitting for water conservation.<sup>34</sup>

Essentially, Teale took the Corps’ own studies of the Everglades and Lake Okeechobee and coupled them with the Soil Conservation Service’s report in order to develop a flood control and water supply program that proposed to solve all of South Florida’s flooding, saltwater intrusion, and soil subsidence concerns. On 2 November 1947 – only a couple of weeks after the second hurricane had hit Florida and only five days after Pepper had requested a comprehensive plan – the Jacksonville District issued a press release delineating its preliminary proposal. This included the Corps’ plan for the Everglades, as well as flood control structures within the Kissimmee and Upper St. Johns river basins (projects that were still tentative pending further District studies). In an innovative manner, given that the study of ecosystems and ecology had still not gained a wide audience in the United States, the District, influenced by the ideas of personnel in the Soil Conservation Service, declared that it would treat the whole area, from the Kissimmee headwaters to south of Miami, as “one watershed,” or, essentially, as one ecosystem.<sup>35</sup>

The press release left no doubt that, despite some attempts to control soil subsidence and saltwater intrusion, the proposal was primarily a flood control plan that would protect the east coast and allow for “a sound program of expansion of agricultural activities.” Yet the Corps also





Map showing the Jacksonville District's initial comprehensive proposal, 1947. (Source: Claude Pepper Collection, Claude Pepper Library, Florida State University, Tallahassee, Florida.)

promised “improvement of conditions favorable to the propagation and maintenance of fish and wildlife within the conservation areas.” Accordingly, the plan provided for the construction of levees and canals protecting and draining a 1,000 square mile area “suitable for long-term agricultural use,” as well as structures discharging floodwater into water conservation areas for the protection of coastal cities such as Miami and West Palm Beach. The Corps still had to conduct economic studies of the plan, the press release explained, as well as more intensive surveys of the Central Florida region, but the core of the program was in place.<sup>36</sup>

Over the next several weeks, Teale, Holland, and Pepper held several public hearings with local interests to hear their comments about the plan. Although some flood control districts wanted an additional control canal to extend from Lake Okeechobee to alleviate high waters, few interests, if any, expressed any anxiety about the plan’s effects on Everglades National Park.<sup>37</sup> Instead, most merely wanted something in place to safeguard South Florida from future floods. Pepper and Holland received numerous statements supporting the proposed program, and promised to keep in close contact with the Corps throughout the plan’s preparation.<sup>38</sup>

Based on this feedback, Teale revised the tentative plan and issued the Jacksonville District’s final report in December. Although not significantly different from the program delineated in the November press release, especially in its focus on flood prevention (which, of course, was what most Floridians wanted), the December version was more complex, delineating measures to relieve saltwater intrusion and water supply problems. Teale noted that the program would be executed over a wide area in Central and South Florida, including the Upper St. Johns River, the Kissimmee River Basin, Lake Okeechobee and its outlets, the Everglades itself (defined as a 40-mile-wide “grassy marsh” extending 100 miles from Lake Okeechobee to the South Florida coast), and coastal areas in Palm Beach, Broward, and Dade counties.<sup>39</sup>

According to Teale, who, again, was influenced by studies conducted by the Soil Conservation Service, the general problem affecting those areas was that drainage had “altered the natural balance between water and soil,” causing “parched prairies and burning mucklands,” saltwater intrusion, and flooding. A restoration of the “natural balance between soil and water” was necessary, and this could be accomplished through three means: flood control, water control, and water conservation.<sup>40</sup> Water conservation was especially key because the development of storage areas could prevent flooding and secure a more reliable supply for municipalities, agriculture, and the wildlife and plants within the Everglades. As later explained by Chief of Engineers Wheeler, the plan, which was for “flood protection, water control, and allied purposes,” would eliminate flooding by removing water in wet seasons and storing it for use during dry periods. It would also control water levels to benefit agriculture and municipal water supplies.<sup>41</sup>

Recognizing that Everglades National Park had only been established the year before, Teale and the Jacksonville District also proclaimed that the “preservation of fish and wildlife” was an important element of the plan. Teale noted that South Florida had served in the past as “one of the greatest natural habitats for fish, birds, and game on the North American Continent,” yet now, many of these species were “virtually extinct.” The Corps had therefore consulted with the U.S. Fish and Wildlife Service to allow “full consideration” of fish and wildlife objectives in the comprehensive plan.<sup>42</sup>

In fulfill the various desired objectives, Teale made recommendations for each area covered by the project. For the Kissimmee River Basin, Teale proposed that the Corps turn several lakes into storage basins for flood control, conservation, and water supply, building levees and control structures around them. The Kissimmee River itself would also be enlarged. Teale suggested that projects be commenced in the Lake Okeechobee/Everglades area, including enlarging the St. Lucie Canal and the Caloosahatchee River for better water control, and extending the levee around the lake from the St. Lucie Canal northward, tying it into the north shore levee. He proposed that another levee be built on the northwestern shore of the lake, and possibly another outlet canal as well. To provide flood protection to agricultural lands in the upper Everglades, Teale recommended the construction of a levee around the 1,027-square-mile region, as well as “a canal network connected to eight pumping stations on the perimeter of the system.”<sup>43</sup>

Following the EDD’s suggestion, Teale also proposed that large parts of the Everglades be held as three water conservation areas, totaling 1,500 square miles in Dade, Broward, and Palm Beach counties.<sup>44</sup> As recommended by Teale, the conservation areas would be larger than those outlined by Johnson, but they would serve important functions. The pumping stations proposed for the agricultural areas, for example, could divert water into the conservation areas in times of excess rain, and could extract water in the same way during drought. Impounding water in the conservation areas would also prevent flooding in coastal cities, and the stored water could be used to “raise the ground-water table and improve water supply for the east-coast communities, ameliorate salt-water intrusion in the east-coast water supply well fields and streams, and benefit fish and wildlife in the Everglades.” Teale proposed that the conservation areas be created by building levees from the West Palm Beach Canal south to the Tamiami Trail. The levee system would then follow the Tamiami Trail westward to the Collier County line, and then turn north where it would tie into the west rim levee blocking off the agricultural area south of Lake Okeechobee. Other levees would be built along the Hillsboro and North New River canals to divide the conservation areas into three sections.<sup>45</sup>

There were other features to the program, such as improving existing canals and building control structures on waterways within Dade County for flood control and to prevent saltwater intrusion, but these were the essential features of the Corps’ plan. Yet the proposal was vague on how it would allow for fish and wildlife preservation, even though the Corps considered this an “important feature” of the project. Outside of the conservation areas, which would allow for the protection of “large parts of the Everglades” and the “preservation of wildlife,” the plan offered no firm proposals for how the project could benefit fish and wildlife. Regardless, Teale estimated that the program would cost \$208 million, with an annual operation and maintenance charge of \$3.7 million. He recommended that local interests pay \$29 million of the total cost, including 15 percent of all construction charges, and that the state establish an agency to coordinate the program locally.<sup>46</sup>

On 31 December 1947, South Atlantic Division Engineer Colonel Mason J. Young concurred with Teale’s report, although he admitted that “since construction of the comprehensive project will take place over an extended period, many features of the plan will require further detailed study prior to the initiation of construction.” He also emphasized that “if the coastal and Everglades sections of south Florida are to continue to prosper and develop, conservation of their water resources is as important and urgent” as flood control and drainage. Young foresaw

increasing demands on water in South Florida, and he insisted that the Corps make adequate provision in the planning process to store water “to the maximum practicable limit.”<sup>47</sup>

After gaining Young’s approval, the Board of Engineers for Rivers and Harbors reviewed the report. During its deliberations, which included a public hearing on the plan, the board encountered some opposition; a few interests, such as the U.S. Sugar Corporation and the EDD, criticized parts of the plan. The board of commissioners of the EDD, for example, complained about the size of the water conservation areas, fearing that landowners in Palm Beach, Broward, and Dade counties would object to the impoundment of so much land. However, the EDD emphasized that it endorsed the program as a whole, believing that it was a sound plan for water management.<sup>48</sup>

Others voiced concern that the project would take too long to provide flood protection. These feelings were heightened in the first months of 1948 because of the continued saturation of the ground in South Florida and the high levels of Lake Okeechobee. To alleviate some of these concerns, the Board of Engineers recommended that initial construction begin with those structures that would protect the coastal cities and the agricultural area south of Lake Okeechobee, as well as whatever works were necessary to control the level of the lake. However, the board also suggested that the Jacksonville District examine the plan prior to construction “in cooperation with a responsible local or State agency” and make any feasible changes that did not “adversely [a]ffect the principal objectives of the plan.”<sup>49</sup>

With the Board of Engineers’ approval, the report went to Chief of Engineers Wheeler. Characterizing the plan as providing the works necessary “to prevent a repetition of recent destructive flooding” and “to stabilize the present agricultural economy of the region,” Wheeler endorsed the project and recommended that it be presented to Congress.<sup>50</sup> He also suggested that Congress provide an appropriation of \$70 million so that the Corps could begin the first phase.

Although the \$208 million total cost of the project and the initial \$70 million appropriation was a considerable sum of money, especially in the 1940s, it was not as much as the federal government had spent on other projects. In 1928, for example, Congress authorized \$325 million for the Corps to conduct flood control efforts on the Mississippi River from Cairo, Illinois, south to the Gulf of Mexico. This was a much larger region than the South Florida flood control project would cover, but it still was a significant expense, especially considering that the total federal budget in 1930 only was \$3.3 billion. According to historian Martin Reuss, “no other water project involved as great a percentage of the federal budget at the time of its authorization as did Mississippi valley flood control.”<sup>51</sup> In comparison, the Corps asked Congress for less money for South Florida flood control, although, admittedly, the area was a great deal smaller and was confined to one state.

Before Congress received the report, the U.S. Department of the Interior submitted its comments on the plan. Assistant Secretary of the Interior William Warne explained that coordination with the Corps was essential because the project would affect the work of several Interior agencies, including the National Park Service (NPS), the Bureau of Indian Affairs, the USGS, and the U.S. Fish and Wildlife Service (FWS). Perhaps recognizing the plan’s vagueness regarding fish and wildlife propagation, Warne noted that the NPS was especially concerned about how the project would affect Everglades National Park and its resources because the park

was formed specifically to preserve flora and fauna. Because the park's dedication had occurred only recently, the NPS had not conducted any studies on the possible effects, whether beneficial or harmful, of the proposed plan. Its major worry, Warne explicated, was whether the Corps could guarantee an adequate water supply for the park, especially to prevent saltwater encroachment and "disastrous fires" in "the hazardous season between October and May." In its proposal, Warne explained, the Corps never discussed "what definite regulations would be promulgated to insure the release of such waters," nor did it outline what specific structures were needed to facilitate water releases to the park. Warne also recommended that park and Corps officials develop "the details of the plan" to guarantee that the park's "unique" ecological resources were preserved in their "natural state."<sup>52</sup>

The preliminary nature of data also tempered the FWS's overall commendation of the project. Its main conclusion was that if the project truly provided "adequate restoration and control of water levels in a large part of the Everglades," it would "generally improve" fish and wildlife

conditions, especially if state or federal authorities operated the water conservation areas for fish and wildlife benefits.<sup>53</sup> But Warne emphasized that "loss of certain unique wildlife habitats" would result as well. The Corps' overall proposal "considers fish and wildlife as adequately as it can in light of the preliminary nature of the Service's findings," Warne explained, but the FWS still needed to coordinate closely with the Corps throughout project planning "to insure minimum damage to, and maximum benefits for, wildlife resources."<sup>54</sup>

COMPREHENSIVE REPORT ON CENTRAL AND  
SOUTHERN FLORIDA FOR FLOOD CONTROL  
AND OTHER PURPOSES

LETTER

FROM

THE SECRETARY OF THE ARMY

TRANSMITTING

A LETTER FROM THE CHIEF OF ENGINEERS,  
UNITED STATES ARMY, DATED FEBRUARY 19, 1948,  
SUBMITTING A REPORT, TOGETHER WITH ACCOMPANYING PAPERS AND ILLUSTRATIONS, ON A PRELIMINARY EXAMINATION AND SURVEY OF, AND A REVIEW OF REPORTS ON, RIVERS, LAKES, AND CANALS OF CENTRAL AND SOUTHERN FLORIDA FOR FLOOD CONTROL AND OTHER PURPOSES, MADE PURSUANT TO CONGRESSIONAL AUTHORIZATIONS



May 6, 1948.—Referred to the Committee on Public Works  
and ordered to be printed, with five illustrations

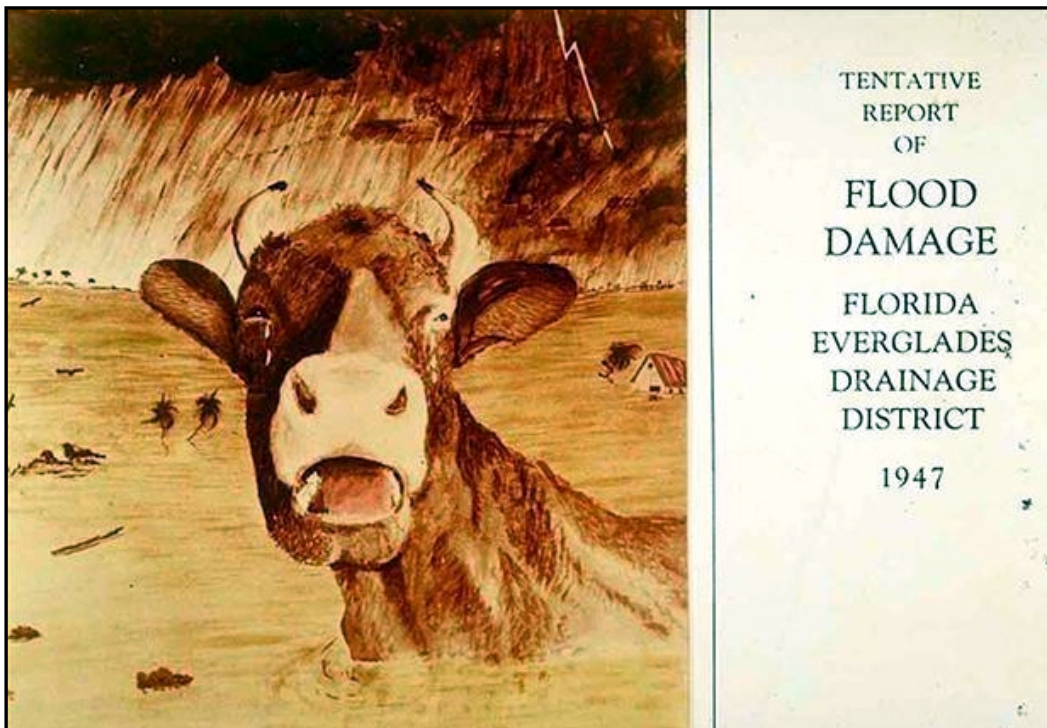
UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1949

90243

Cover of House Document 643.

The Corps responded to these concerns by assuring the Interior Department that it would remain in close contact with the pertinent agencies. Yet many Floridians were more concerned about receiving adequate flood control than they were with fish and wildlife issues, especially because saturated land and high water conditions in the spring of 1948 raised the specter of more flooding. According to Senator Holland, these conditions forced South Florida residents “to look ahead to next fall with great apprehension,” leading Holland to place all of his efforts on getting the Corps project passed. “I shall continue to do everything in my power to get it enacted with the greatest possible speed,” he declared, “and then to get the large appropriations which are required so that work can be started.”<sup>55</sup>

Such assurances were comforting to South Florida residents, but some still decided to take matters into their own hands. One way that they tried to foster support for flood control was by putting together a book of photographs of the 1947 flood, a proposal first floated to Claude Pepper by the Atlantic and Gulf Canals Association, Inc. Fearing that Congress would not approve the necessary appropriations for the comprehensive program, the association recommended that it compile 150 photographs of flood conditions and publish “a booklet containing news stories from over the 11 counties with illustrations” that could be given to Florida’s congressional delegation, the Corps, and “each member of the Congress.”<sup>56</sup> The Palm Beach County Resources Development Board, the EDD, and the counties of Palm Beach, Broward, and Dade brought this idea to fruition, issuing a book that included a startling front-cover picture of a crying cow standing shoulder deep in water. The document soon became known as the “Weeping Cow” book, and, according to Lamar Johnson, it was “an indication of the concerted effort of the citizens of the area to promote the flood control project.”<sup>57</sup>



Cover of the "Weeping Cow" book. (Source: South Florida Water Management District.)

Acting on these sentiments, and having remained in close contact with Corps officials as Teale's report made its way through the necessary channels, Holland and Pepper introduced a bill into the U.S. Senate in May 1948 to authorize the comprehensive water control project. The bill was referred to the Subcommittee on Flood Control and Improvement of Rivers and Harbors of the Committee on Public Works, and on 12 May 1948, the subcommittee began hearings. In order to expedite the authorization of the project, Florida's delegation presented a united front during the meetings, with Holland largely orchestrating the testimony that was presented. "The delegation is standing entirely together on this," Holland related. "Even those from the districts not directly affected are familiar with the plight which is the plight of the State, and, we think, of the Nation."<sup>58</sup> Dwight L. Rogers, one of Florida's representatives to Congress, agreed. "There is absolutely no dissension," he declared. "We are all united, State, Federal, and everyone else down there."<sup>59</sup>

The testimony in the hearings almost solely focused on the flood control and water supply benefits were of the project. Almost all of the witnesses discussed the devastating damage of the 1947 flood and the necessity of preventing such a disaster from happening again. Moreover, the agricultural production of the region was emphasized repeatedly in order to convince senators that protection was necessary. There was little mention of the effects of the project on the South Florida ecosystem, outside of declarations that the water conservation areas would provide benefits to fish and wildlife. The only person in the hearings speaking solely as a representative of plant and wildlife interests was Eustace L. Adams, who represented the Dade County Conservation Council and the Florida Wildlife Federation; no officials from Everglades National Park, the FWS, or even the Florida Game and Fresh Water Fish Commission testified. It is unclear why this oversight occurred, but District Engineer Colonel R. W. Pearson of the Jacksonville District later claimed that it stemmed from the lethargy of the interested agencies. He accused the Florida Game and Fresh Water Fish Commission, for example, of evincing "a considerable lack of interest in the project" during these formative stages.<sup>60</sup>

Regardless, the strong united front presented by Florida's congressional delegation convinced the Senate to include the project in its Flood Control Act of 1948, naming it the Central and Southern Florida Flood Control Project (C&SF Project). After some wrangling in the House of Representatives over the appropriation amount, the House passed the bill and President Truman signed it on 30 June, thereby authorizing \$70 million to be expended on the first phase of the project.<sup>61</sup> This initial segment would include building levees and other flood control works to protect the east coast communities from flooding, and constructing structures to control Lake Okeechobee levels and to protect agriculture south of Lake Okeechobee. With the legislation passed, the next step was for the state to find a way to raise its share of the construction cost and to determine what local agency would cooperate with the Corps in the building and operation of the project. "It certainly is a source of joy to me that we have made a constructive start on the flood control program," Holland reported, "and I hope that we may continue to work with the complete unity which has manifested itself so far."<sup>62</sup>

The cooperation between the Corps, local and state agencies, and the federal government throughout the preparation of the flood control plan was remarkable, especially when compared to the development of a \$325 million flood control project in 1927 and 1928 for the Mississippi River. That process was marked by political wrangling, jurisdictional disputes, and discord



between Congress and President Calvin Coolidge. The development of South Florida's plan was not nearly as contentious for several reasons. For one, the Florida project involved only one state, rather than the multiple entities crossed by the Mississippi River. Among other things, this meant that Florida's plan did not receive the kind of national attention that the Mississippi River project garnered. For another, the overwhelming desire of most Floridians for some form of immediate flood protection necessitated that the Corps use all of the resources available to it in order to piece together a plan that could be passed as quickly as possible. Finally, Floridians were willing to pay part of the cost of the plan as necessitated by Congress, whereas local interests around the Mississippi River were more reluctant to share any costs.<sup>63</sup>

With the authorization of the C&SF Project, the state of Florida finally had a program that promised to eliminate the flood and water supply problems of South Florida. Because of the imbalance of water that drainage created, the region faced either too much water, as evidenced by the flood of 1947, or too little of the resource, as shown by the fires, soil subsidence, and saltwater intrusion problems that plagued the area. To resolve these issues, the Corps developed a plan that would prevent flooding in coastal cities and in the agricultural land south of Lake Okeechobee, while also providing conservation areas for water storage and fish and wildlife habitat. With almost universal approval in Florida, the plan seemed to be the solution to South Florida's water woes and the mechanism by which increased settlement in the area could occur.

Yet there were slight discolorations in this seemingly beautiful picture, blotches that in time would stain the entire canvas. It was clear both from the Corps' proposal and from testimony before Congress that, although fish and wildlife preservation was regarded as an "important feature" of the project, flood control and water supply were the biggest concerns of most Floridians. The U.S. Department of the Interior, the NPS, and the FWS all claimed that fish and wildlife preservation had to take a prominent position in the project's operation, but the vagueness of the plan on how it would aid fish and wildlife, coupled with the clamor for flood protection and water supply, virtually guaranteed that fish and wildlife interests would take a backseat. This made Interior officials nervous about the project, but the looming fear of flooding felt by most Floridians steamrolled these concerns and created a groundswell of support for the project that Congress could not ignore. Even Marjory Stoneman Douglas, who had decried the destruction of the Everglades, believed that the Corps was on the right track. Because of the project, she wrote, "the rich earth will be saved" and "the vast supply of wonderful water will be controlled and used to their utmost needs by the people of Florida and their unborn generations to come."<sup>64</sup> The ensuing decades would, in some fashion, fulfill her prediction, but, in the eyes of many critics, only by manipulating and damaging the already-imperiled and over-engineered flora and fauna of the Everglades.

## Chapter Two Endnotes

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<sup>1</sup> McCally, *The Everglades*, 142.

<sup>2</sup> John Chapman Hilder, "America's Last Wilderness: The Florida Everglades Are Going Dry," *World's Work* 60 (February 1931): 56.

<sup>3</sup> Robert McCormick, "Lavish Land," *Collier's* 110 (8 August 1942): 66.

<sup>4</sup> McCally, *The Everglades*, 145-146.

<sup>5</sup> Dr. R. V. Allison, "The Soil and Water Conservation Problem in the Everglades," *Soil Science Society of Florida Proceedings* 1 (1939): 35-42; McCally, *The Everglades*, 147. This was not the first time that Allison had advocated these ideas. He had declared as early as 1928 that overdrainage caused more problems than underdrainage, and had told the Florida State Horticultural Society that year that muck fires could be stopped by storing water on undrained areas. Dovell, "A History of the Everglades of Florida," 559-560.

<sup>6</sup> H. A. Bestor, "Reclamation Problems of Sub-Drainage Districts Adjacent to Lake Okeechobee," *Soil Science Society of Florida Proceedings* 5-A (1943): 164.

<sup>7</sup> Florida State Board of Conservation, *Fourth Biennial Report, Biennium Ending December 31, 1940* (Tallahassee: Florida State Board of Conservation, 1941), 55; see also McCally, *The Everglades*, 146.

<sup>8</sup> Garald G. Parker, G. E. Ferguson, S. K. Love, et al., *Water Resources of Southeastern Florida with Special Reference to the Geology and Ground Water of the Miami Area*, U.S. Geological Survey Water Supply Paper 1255 (Washington, D.C.: Government Printing Office, 1955); McCally, *The Everglades*, 146; Grunwald, *The Swamp*, 203-204.

<sup>9</sup> Jack E. Davis, "'Conservation is Now a Dead Word': Marjory Stoneman Douglas and the Transformation of American Environmentalism," *Environmental History* 8 (January 2003): 53-61.

<sup>10</sup> Douglas, *The Everglades*, 349-350.

<sup>11</sup> Douglas, *The Everglades*, 383.

<sup>12</sup> Marjory Stoneman Douglas, "What Are They Doing To The Everglades?" 8, at Library of Congress, "Reclaiming the Everglades: South Florida's Natural History, 1884-1934" <<http://memory.loc.gov/ammem/award98/fmuhtml/everhome.html>> (3 December 2004).

<sup>13</sup> House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 80th Cong., 2d sess., 1948, H. Doc. 643, Serial 11243, 30.

<sup>14</sup> Johnson, *Beyond the Fourth Generation*, 85.

<sup>15</sup> Douglas, "What Are They Doing To The Everglades?" 8.

<sup>16</sup> Johnson, *Beyond the Fourth Generation*, 174-175; Blake, *Land Into Water*, 175.

<sup>17</sup> Quotation in Johnson, *Beyond the Fourth Generation*, 155-256, 177-179; see also Blake, *Land Into Water*, 175-176.

<sup>18</sup> A. G. Matthews, Chief Engineer, to Hon. George W. Malone, 19 May 1948, in Senate Committee on Public Works Subcommittee, *Rivers and Harbors – Flood Control Emergency Act: Hearings Before a Subcommittee of the Committee on Public Works, United States Senate*, 80th Cong., 2d sess., 1948, 269.

<sup>19</sup> Matthews to Malone, 19 May 1948; Hanna and Hanna, *Lake Okeechobee: Wellspring of the Everglades*, 278-304; House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 8, 19-21; Vileisis, *Discovering the Unknown Landscape*, 174.

<sup>20</sup> Johnson, *Beyond the Fourth Generation*, 139.

<sup>21</sup> House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 2.

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<sup>22</sup> Johnson, *Beyond the Fourth Generation*, 135-136; Blake, *Land Into Water*, 176.

<sup>23</sup> George Wedgworth and Barbara Miedema interview by Matthew Godfrey, Belle Glade, Florida, 9 July 2004 [hereafter referred to as Wedgworth and Miedema interview].

<sup>24</sup> Quotation in Johnson, *Beyond the Fourth Generation*, 139-140; see also Blake, *Land Into Water*, 176-177; Grunwald, *The Swamp*, 219.

<sup>25</sup> Senate Committee on Public Works Subcommittee, *Rivers and Harbors – Flood Control Emergency Act*, 141-142.

<sup>26</sup> Johnson, *Beyond the Fourth Generation*, 145.

<sup>27</sup> Irene B. Burnham, Corresponding Secretary, Soroptimist Club of the Palm Beaches, to Spessard L. Holland, Senator, 12 November 1947, File Flood Control (Oct.-Dec. 1947), Box 287, Spessard L. Holland Papers. Manuscript Series 55, Special and Area Studies Collections, George A. Smathers Library (East), University of Florida, Gainesville, Florida [hereafter referred to as Holland Papers].

<sup>28</sup> Resolution No. 406, 12 November 1947, File Flood Control (Oct.-Dec. 1947), Box 287, Holland Papers.

<sup>29</sup> Claude Pepper to Lt General R. A. Wheeler, Chief of Engineers, 28 October 1947, Folder 11, Box 33, Series 201, U.S. Senate Correspondence, Claude Pepper Collection, Claude Pepper Library, Florida State University, Tallahassee, Florida [hereafter referred to as Pepper Collection].

<sup>30</sup> Lieutenant General R. A. Wheeler, Chief of Engineers, to Honorable Claude Pepper, 3 November 1947, Folder 11, Box 33, Series 201, Pepper Collection.

<sup>31</sup> House Committee on Public Works, *Central and Southern Florida Flood Control Project*, report prepared by the Library of Congress, 84th Congress, 2d session, 1956, Committee Print 23, 6.

<sup>32</sup> Press Release, Corps of Engineers, Jacksonville, Fla., District, 2 November 1947, Folder 11, Box 33, Series 201, Pepper Collection.

<sup>33</sup> See, for example, Colonel Willis E. Teale, District Engineer, to Honorable Claude Pepper, United States Senate, 22 April 1947, Folder 11, Box 33, Series 201, Pepper Collection.

<sup>34</sup> H. H. Bennett, Chief, Soil Conservation Service, United States Department of Agriculture, to Hon. Claude Pepper, United States Senate, 9 September 1947, Folder 11, Box 33, Series 201, Pepper Collection.

<sup>35</sup> Press Release, Corps of Engineers, Jacksonville, Fla., District, 2 November 1947.

<sup>36</sup> All quotations in Press Release, Corps of Engineers, Jacksonville, Fla., District, 2 November 1947.

<sup>37</sup> See Pelican Lake Sub-Drainage District, et al., to Honorable Claude Pepper, United States Senate, et al., 13 November 1947, Folder 11, Box 33, Series 201, Pepper Collection.

<sup>38</sup> See “Notes Covering Meeting Held at the El Comodoro Hotel, Miami, December 7, 10 A.M. – 1 P.M.,” Folder 11, Box 33, Series 201, Pepper Collection.

<sup>39</sup> Quotations in House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 15-18, 56-58; see also Hanna and Hanna, *Lake Okeechobee: Wellspring of the Everglades*, 352. For an example of a study conducted before 1947, see House, *Caloosahatchee River and Lake Okeechobee Drainage Areas, Florida (Side Channels)*, 79th Cong., 2d sess., 1947, H. Doc. 736, Serial 11059.

<sup>40</sup> House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 32-35.

<sup>41</sup> R. A. Wheeler, Lieutenant General, Chief of Engineers, to The Secretary of the Army, February 19, 1948, in House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 2. A paper written by Harold A. Scott, Chief of the Planning and Reports Branch of the Jacksonville District, in 1951, stated that the major purposes of the project were to protect the agricultural area and east coast communities from flooding.

## Chapter Two Endnotes (continued)

“Distribution of Water in the Central and Southern Florida Project,” 26 September 1951, 2, South Florida Water Management District Reference Center, West Palm Beach, Florida.

<sup>42</sup> House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 36.

<sup>43</sup> House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 38-42.

<sup>44</sup> Despite Johnson’s bleak opinion about Florida referenda, residents of Dade, Broward, and Palm Beach counties, convinced by the devastation of the floods, had ratified establishment of the water conservation areas late in 1947. Blake, *Land Into Water*, 177.

<sup>45</sup> House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 42-43.

<sup>46</sup> House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 44, 46-54 (quotation on p. 36).

<sup>47</sup> Colonel Mason J. Young, Corps of Engineers, Division Engineer, to the Chief of Engineers, United States Army, 31 December 1947, in House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 59-60.

<sup>48</sup> Board of Commissioners of Everglades Drainage District by W. D. Hilsabeck, Chairman, to Board of Engineers for Rivers and Harbors, 27 January 1948, File Flood Control Permanent (January 1948), Box 287, Holland Papers.

<sup>49</sup> R. C. Crawford, Major General, Senior Member, to The Chief of Engineers, 9 February 1948, in House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 11-12.

<sup>50</sup> Wheeler to The Secretary of the Army, in House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, 1-5.

<sup>51</sup> Reuss, *Designing the Bayous*, 111, 121.

<sup>52</sup> William G. Warne, Assistant Secretary of the Interior, to Lt. Gen. R. A. Wheeler, 13 April 1948, in House, *Comprehensive Report on Central and Southern Florida for Flood Control and Other Purposes*, vii. Likewise, in January, Daniel Beard, superintendent of the park, had conveyed to Teale his understanding that “future [Corps] studies will give full consideration to the interest of the Everglades National Park and that the water problem in the park area will be a subject of cooperative study.” Beard to The District Engineer, 28 January 1948, File 1110-2-1150a (C&SF) Proj Genl—Flood Control (May 49-July 49), Box 8, Accession No. 077-01-0023, RG 77, Records of the Office of the Chief of Engineers, Federal Records Center, Atlanta, Georgia [hereafter referred to as FRC].

<sup>53</sup> United States Department of the Interior, Fish and Wildlife Service, Region 4, “A Preliminary Evaluation Report of the Effects on Fish and Wildlife Resources on the Everglade Drainage and Flood Control Project, Palm Beach, Broward, and Dade Counties, Florida,” October 1947, 1, 18-19, copy in Library, Jacksonville District, U.S. Army Corps of Engineers, Jacksonville, Florida; see also Willis E. Teale, Colonel, Corps of Engineers, District Engineer, to The Regional Director, Fish and Wildlife Service, 21 November 1947, File A—Policy Action Taken by Corps of Engineers, Box 3, Entry 57A0179, Wetlands, 1944-1956, U.S. Fish and Wildlife Service, Atlanta Regional Office, Office of River Basin Studies, RG 22, Records of the U.S. Fish and Wildlife Service, National Archives and Records Administration Southeast Region, Atlanta, Georgia.

<sup>54</sup> Warne to Wheeler, 13 April 1948.

<sup>55</sup> Spessard L. Holland to Honorable Edwin A. Menninger, Publisher, The Stuart News, 10 March 1948, File Flood Control Permanent (Feb. 16-March 31, 1948), Box 287, Holland Papers. Apparently, the hurricanes had changed Holland’s view of flood control. In 1947, EDD engineer Lamar Johnson had enlisted Holland’s aid to get an appropriation for flood control. At that time, Johnson reported, Holland “figuratively jumped on me with both feet. He told me that I had no business in Washington and that I should take my problem to [Chief of Engineers] Colonel Jewett.” Johnson, *Beyond the Fourth Generation*, 158.

Chapter Two Endnotes (continued)

<sup>56</sup> Atlantic Gulf Canals Association Inc. to Hon. Claude Pepper, Senate Office Building, 7 November 1947, Folder 11, Box 33, Series 201, Pepper Collection.

<sup>57</sup> Johnson, *Beyond the Fourth Generation*, 160.

<sup>58</sup> Senate Committee on Public Works Subcommittee, *Rivers and Harbors – Flood Control Emergency Act*, 144.

<sup>59</sup> Senate Committee on Public Works Subcommittee, *Rivers and Harbors – Flood Control Emergency Act*, 165.

<sup>60</sup> Quotation in Pearson to Colonel B. L. Robinson, Corps of Engineers, U.S. Army, South Atlantic Division, 21 August 1950, File 1110-2-1150a (C&SF) Proj Genl—Flood Control (May 50-Aug 50), Box 9, Accession No. 077-01-0023, RG 77, FRC; see also Senate Committee on Public Works Subcommittee, *Rivers and Harbors – Flood Control Emergency Act*, 183-184, 216-217, 249. Interestingly, the NPS initially proposed that the law authorizing the C&SF Project be amended to state that no work could occur that would affect Everglades National Park until the director of the NPS and the Chief of Engineers had established a mutually agreeable plan of operation. It dropped its request a few weeks later after Corps leaders assured it “that any plan of flood control will be taken up with us insofar as it may affect the Everglades National Park.” “Chronological Documentation of National Park Service Efforts and Corps of Engineers Responsibility to Assure Everglades National Park of Fresh Water Supply from Central and Southern Florida Flood Control Project,” 5, File CE-SE Central and Southern Florida FCP Everglades National Park Basic Data, U.S. Fish and Wildlife Service, Vero Beach administrative records [hereafter referred to as FWSVBAR].

<sup>61</sup> Act of 30 June 1948 (62 Stat. 1171, 1176).

<sup>62</sup> Spessard L. Holland to Honorable Ray Iverson, 23 June 1948, File Flood Control Permanent (May-June 1948), Box 287, Holland Papers.

<sup>63</sup> For more information on the development of the Mississippi River and Tributaries Project, see Charles A. Camillo and Matthew T. Percy, *Upon Their Shoulders: A History of the Mississippi River Commission from Its Inception Through the Advent of the Modern Mississippi River and Tributaries Project* (Vicksburg, Ms.: Mississippi River Commission, 2004), 141-172.

<sup>64</sup> Douglas, “What Are They Doing To The Everglades?” 12.