THE IMPACT OF DRAINAGE ON THE DEVELOPMENT OF

Early Broward County

by Joe Knetsch

In 1900, what was to become the “Queen City” of Fort Lauderdale, had an active population of fifty-two, no churches and few businesses worthy of the name. It was a frontier settlement, not a city. It was a short step on the newly constructed Florida East Coast Railway, and little else. Most of the land in the area was covered with water, especially during the rainy season. Other than the mysterious beauty of the New River and the curiosity of seeing Seminole Indians trading at Stranahan’s store, there was little to draw settlers.

In 1906, this situation changed. In that year Governor Napoleon Bonaparte Broward and his colleagues on the Board of Trustees of the Internal Improvement Fund (T.I.I.F.) made the decision to begin the vast reclamation of the Florida Everglades by constructing and dredging a canal between the New River and Lake Okeechobee. In an historical instant, the little settlement on the river became the focus of national attention. A short column labeled “Facts Worth Knowing,” provides a description of the area in August 1915, which indicates the physical elements facing Broward’s pioneers:

Broward County is approximately 24 miles wide north and south, and 48 miles long east and west.

Broward County is approximately 1152 square miles, or 737,280 acres. Approximately one-eighth of this area is pine land, or 92,160 acres, the balance, or 645,120 acres being Everglades.2

For Everglades, read lands cov-
tered with water and grass most of the year. Draining this land would change the area forever and make it cultivatable for agricultural products. The canals envisioned by the T.I.I.F. would begin the process of this change.

The draining of the Everglades had long been a dream of many Floridians. Soon after the close of the Second Seminole War, for example, the famed Buckingham Smith Report, issued by the Federal Government, favorably concluded that such a drainage program was possible.\(^3\) Broward pioneer William Cooley also believed that the Everglades could be drained and noted such in his letter of August 11, 1851, to John Darling, then a member of the Board of Internal Improvement.\(^4\) Darling, himself an advocate of drainage, once proposed to drain the Everglades by diverting the water of the Kissimmee River valley into that of the Peace River, by means of a canal.\(^5\) Darling also corresponded with Miami River pioneer George W. Ferguson, whose views coincided with those of Cooley regarding the possibility of draining the Everglades by following the natural slope of the land.\(^6\) After the War Between the States, U. S. Deputy Surveyor Marcellus Williams, later one of Florida's leading land agents, offered his plan for drainage based upon his surveys of the area. His arguments, like those before him, were predicated upon the natural slope of all of the known drains of the Everglades, particularly the rivers. All that was needed, or so it seemed, was to deepen these natural channels and the waters would cascade from the land, leaving it dry enough for cultivation.\(^7\) The 1880s and 1890s saw Hamilton Disston's attempt to actually lower the levels of water in Lake Okeechobee and make the Everglades useful to agriculture. Disston's success with the St. Cloud sugar plantation, though short-lived because of the removal of the tariff and sugar subsidies by the Cleveland administration, paved the way for many future ventures. Indeed, Disston's associate, State Chemist R. E. Rose, was one of many people consulted by Governor Broward.\(^8\) Although this list of observations on the feasibility of draining the Everglades is far from exhaustive, it gives a clear idea as to how many felt about the eventual completion of the project.

Governor Broward, as is well known to Broward Legacy readers, ran his campaign for office on the promise of opening up the lands of the Everglades to small farmers, and not to big corporations such as the railroad and canal companies. His reformist stand on the question of the corporations had exposed him to many challenges. In the words of historian Samuel Proctor, Broward's biographer:

"Denounced as a demagogue, cursed as a radical, and threatened as a visionary Populist crusader, he had come through it all, valiant and undaunted, with high hopes and deep devotion to service. The phrases of his address, which had become household words through months of reiteration in the campaign, were unchangeable: "I favor the primary election system... Make the Railroad Commission a constitutional part of the Government... The common school is the cornerstone of our political structure... The Everglades of Florida should be saved... and they should be drained and made fit for cultivation..." The promises of a candidate had become the objectives of a governor."

Of all the goals the Governor most wanted to see completed during his term, the drainage of the Everglades was the number one priority. In this vast project, he took a strong personal interest and invested an enormous amount of his energy, thought and time.\(^9\)

To get the project started required some survey work to be done. This was a complicated task for which many were not prepared. The first approach was ordered by the T.I.I.F. at their July 27, 1905, meeting. Here it was resolved that:

"Whereas, The Trustees of the Internal Improvement Fund desire a preliminary survey of the levels and soundings of that territory of the State of Florida lying between Lake Okeechobee and the Atlantic Ocean, beginning at a point on the St. Lucie River, as preliminary to the work of building or constructing canals for the purpose of lowering the water level in said lakes, and

Whereas, the said Trustees desire full and complete information as to the topography and geological formation of said territory to a depth of ten feet for the entire distance and securing the surface elevations for said distance, therefore,

Be it resolved, That the Trustees engage the services of J. O. Fries of Titusville, Florida, County Surveyor of Brevard County, to make said survey from the South prong of the St. Lucie River in a straight line as near as possible to a point in Okeechobee Lake at or near Chancy Bay..."

John Otto Fries was an extraordinary man and a highly competent surveyor. A graduate of the University of Uppsala, in Sweden, he had been the county surveyor for Orange County, prior to his service in Brevard and had also served as a U. S. Deputy Surveyor on numerous surveys. He had been employed, during his long and outstanding career, by many railroads and timber companies and by the Model Land Company (for the survey of Flamingo). His abilities were recognized..."
by the Bureau of Indian Affairs, also, and he assisted its agents in the taking of the census of Native Americans in Florida. Fries reported his results on September 21, 1905, and received his pay of $652.50, minus the $150.00 already paid on his account. The results did not satisfy the T.I.I.F. With dredge purchases already being negotiated and bonds being prepared for sale, a satisfactory survey was desperately wanted.

The man chosen for the task of a new survey for a more practical route was John W. Newman. On November 9, 1905, the Trustees passed the following resolution:

Be it resolved, By the Trustees of the Internal Improvement Fund of the State of Florida, that John W. Newman be employed at a salary of $125.00 per month and expenses, beginning from Saturday, 11th day of November, 1905, to proceed to Fort Lauderdale, State of Florida, and make a hydrographic and topographic survey of New River from Fort Lauderdale, including both the north and south branches of said river, to a point in the Everglades where the altitude approximates the mean low water level of Lake Okeechobee, and that he prepare profiles of said survey, showing the depth of water every one hundred feet and the approximate depth of muck or other formation to said rock, and surroundings of water and muck along the course of said survey, and to make an elaborate survey of the topographical and geological formation in the region about said New River, and to make calculations as to the quantity of water which will be discharged through a proposed canal one hundred and fifty feet wide and ten feet deep, and the effect which the discharge of such water will have upon the New River and adjacent lands; that the said survey be made by him, with a view to constructing a drainage canal extending from some point on the New River, through the Everglades, to Lake Okeechobee, of a

Map delineating the official boundaries of the Everglades as approved by the Trustees of the Internal Improvement Fund, 1907.
width equal to 150 feet and depth of ten feet for the whole course, ... 

The Trustees also gave Newman authorization to employ whomever he deemed necessary and to keep accurate accounts of all expenditures, which were to be reported bi-weekly.15

The dredges to be used in the beginning of this vast undertaking were being assembled in Chicago, by the Featherstone Foundry and Machine Company, when Newman was appointed engineer for the project. Governor Broward and Attorney General W. H. Ellis visited the Featherstone Company in August of 1905, and the proper contract was prepared at the company's headquarters and telegraphed back to Tallahassee. Broward, who was no stranger to dredging machinery, had constructed and operated a dredge on the Itchetucknee River during the early 1890s phosphate boom.14 The Governor selected Reed A. Bryan to supervise the assembling process when the finished machinery reached Fort Lauderdale. These craft were assembled at Sailboat Bend (Southwest Third Avenue) in Fort Lauderdale, and the first, the Everglades, was christened on April 2, 1906, with the Governor and his entire family present. The Okeechobee, the second dredge, was launched into service in October of the same year.15 Bryan, who had overseen the initial construction of the Everglades, was soon replaced by engineer Newman under direct orders from the Trustees on November 14, 1905.16 This action consolidated the engineering tasks of drainage under the guiding hand of Newman, leaving Bryan to take care of the fiscal side of the operation.

The commencement of dredging and the continuation of surveying attracted many new workers to the Fort Lauderdale area. These laborers performed a wide variety of tasks, serving as cooks for the dredge crews, chainmen, axmen and boatmen for the survey crews, woodcutters and haulers for the supply of fuel for the dredges, mechanics for the repair and maintenance of the dredges and boats (most were motorized by then), clerks in the businesses which supplied the crews with daily stores, and carpenters for maintaining and repairing the wooden portions of the dredges and constructing houses and stores for the new inhabitants. Other services and skilled labor positions, such as that of stenographer, secretary, clerk, lock inspector, assistant engineers, lock tender, drayman, accountants, etc. were soon in demand to satisfy the needs of the growing business of drainage. Not all of these individuals were "transients," and many settled in the area as soon as dame fortune chose to smile upon them, adding their skills and education to the labor pool of what was soon to become Broward County.

A look at the early businesses of the area indicates that the impact of Everglades drainage was very healthy for their growth. By following the expenditures of the Trustees (and the Everglades Drainage District, created in 1905 to oversee the work, but having the same personnel as the Trustees) one can readily see the amount of money spent by the government in promoting its interest in drainage. In a small, local economy, the impact of a rush of funds can be very great. Businesses like Stranahan's store, E. T. King's boat works, Dade Lumber Company, P. N. Bryan & Sons and the New River Transportation Company, prospered under the heavy demands placed upon them by the drainage business. Boats and launches had to be repaired, cords of wood had to be supplied for fuel, materials had to be moved back and forth between the town and the dredges, and timber had to be supplied for the dredges.
The photo above shows Brickell (Southwest First) Avenue, then Fort Lauderdale's main street, as it appeared in 1905. The 1910 photo below, looking north across New River at the F.E.C. Railway bridge, shows evidence of the economic activity the drainage project brought to the town. The man at left in the boat is Scott Holloway, captain of the dredge Okeechobee.
for supplying fresh meat for the men working on the lock on July 25, 1910. While King Sons' Company and other firms are also listed, the above will suffice for a sampling of the business generated, both large and small.

In addition to this expansion of the local economic base, the drainage operation attracted national attention to the area. This attention, in turn, attracted investors willing to become involved in reclamation and make their fortune in real estate. The name of R. P. Davie, of course, needs little introduction to readers of Broward's history. Soon after the dredging began, Davie negotiated the purchase of lands in the Everglades and set forth draining and improving the property. As Victoria Wagner put it in her book The History of Davie and its Dilemma: "In 1906, millionaire R. P. Davie bought about 27,500 acres. Construction of irrigation and drainage canals was begun and smaller parcels of land, usually 10 acres each, were sold to persons all over the country. Brochures were sent out advertising 'The First Improved Town in the Everglades', and the settlers began to arrive, attracted by the cheap land, warm climate and rich soil." Although Ms. Wagner has the wrong date (the deed is dated June 3, 1908, and the accompanying lease June 24) she well describes the spirit of the time. The Davie deal was not an outright purchase in that the agreement also included language about draining the land and leasing it for the purpose of growing "an experimental sugar farm" with the idea of eventually establishing sugar mills. The canal to be cut by Davie would not be less than twelve feet wide and three feet deep, with the banks to be "levelled for road purposes." Davie, and his partner, J. R. McKinnie, were to bear the entire costs of this canal and road work. However, they were given permission to construct "laterals, drains and canals, to be used for drainage and transportation purposes from their lands aforesaid into the canals now being cut by the Board of Trustees..."

All of this work would come under the watchful eye of the Trustees and their engineer. Davie's work was relatively successful, and many settlers were attracted to the new area. So successful, in fact, that many of those wishing to purchase lands from other land companies often visited the Davie lands to see what might be in store for them. Colonel George G. Mathews' Fort Lauderdale Sentinel, a true "booster" paper, often trumpeted the virtues of the Davie settlers and their accomplishments on the reclaimed land.

Davie was soon followed by Richard Bolles, Dr. E. C. Chambers, the Tatum Brothers and others. In light of the later scandals associated with the name of Richard Bolles, it would be appropriate to see exactly what was contracted for between the Trustees and Bolles, a nationally known real estate promoter and developer from Carlsbad, New Mexico. Contrary to some reports, Richard J. Bolles was not required by his articles of agreement with the Trustees to construct any canals or guarantee the drainage of any of the 500,000 acres he contracted to purchase at $2.00 per acre. The contract specifically stated what canals would constitute a "comprehensive drainage system" to rid the land of water to a depth of three feet below the surface of the land. The responsibility for this system of drainage was totally in the hands of the Trustees. The terms of the contract stated that for every two dollars paid by Bolles, fully one half of the amount must be applied to the purchase of dredges, hiring of labor, actual work constructing the promised canals, etc. The burden for the drainage was with the Trustees pure and simple. This point is made in order to understand that when Bolles was indicted on mail fraud charges and accused of misleading buyers into purchasing swamp lands, he was exonerated in the Florida case, and, unfortunately, died before any verdict was rendered in the Kansas City, Missouri trial. In one of the more unique instances in Florida's colorful legal history, the entire cabinet and two governors attended the Kansas City trials, appearing on behalf of E. C. Chambers and Bolles. That many of the "salesmen" of these lands were convicted, or pleaded no contest, does not necessarily taint Richard Bolles, whose contract and responsibilities were very specific and clear.

One of the more notable ventures in what is today Broward County came with the Everglades Sugar and Land Company. This company and its sister companies, the Everglades Land Company and the Everglades Land Sales Company, were all based in Chicago and controlled by the same personnel, most notably V. W. Helm and R. M. Price in the beginning. Wishing to reclaim their lands south of the Davie company holdings, the Everglades Sugar and Land Company made numerous attempts in 1911 and 1912 to persuade the Trustees to have the company lands in Townships 50 through 53 in Ranges 38 and 39 surveyed. The Trustees finally complied and also agreed to allow the company to hold a sales contract on lands between its holdings and the State lands on the South New River canal, with a favorable option to buy, all in Township 50, Ranges 40 and 41. The company then negotiated with the Trustees to have the latter pile the dredged rock and other material in dike fashion not less than five feet above level ground, all the way through the lands of the Davie Experimental Farm and the lands of the Everglades Sugar and Land Company. The Trustees agreed to this modified diking arrangement provided that it was recognized that no right-of-way interests would be given up in the process and that none of the "spoil" could be removed from said piles without written permission of the Trustees. Furthermore, the Trustees gave the company the power to enforce this policy on their lands. From the company's point of view, this agreement gave them a modified right-of-way and an insurance level on the dike which would prevent overflow into their lands during high water.

The Everglades Sugar and Land Company had other plans of their own for the lands purchased from the Trustees. Their plans reflected on the pace of drainage by the Trustees and the questionable nature of some of the work. As a point of reference, the Trustees had just passed through a period of relative scandal with the
attempted suppression of the J. O. Wright Report, a Congressional and State investigation, major litigation with the Southern States Land Company and others, and the realization that the sale of Everglades land was too slow to finance the promised drainage project, thus forcing the Trustees to look into the issuance of bonds. These events almost forced firms like the Everglades Sugar and Land Company to search for ways to lessen or eliminate their reliance on the Trustees’ promised program. In light of the problems later faced by Bolles and E. C. Chambers, this was prudent planning on the part of the company.

The company’s plan was announced on the front page of the Fort Lauderdale Sentinel, on January 17, 1913. The bold headline read: “Everglades Sugar and Land Company Authorizes Bond. To Build Dikes Completely Around All Their Land. Will Make Them Entirely Independent of the Everglade Drainage Project.” The plan was simple, but effective. The company was “to build dikes completely around its lands, construct interior canals and a network of large laterals.” The plan also included large pumping stations sufficient to remove excess water during the rainy season, in the likely event that the main canals dug by the Everglades Drainage Project failed to carry off the required amount. The aim was to keep the lands of the company dry enough for profitable farming during the rainy season, with a capacity to irrigate the land when the drier months came. The Everglades Sugar and Land Company, it should be noted, was selling these lands through its own offices and those of the Everglades Land Company and the Everglades Land Sales Company, all based, originally, in Chicago. However, because of their alleged success in selling these lands, the group closed their Chicago offices in September of 1913, and shifted the entire operation to Miami. According to the newspaper account of this move, the company could do this “due to the fact that the sales already made are amply sufficient to provide the company with the necessary funds to complete its drainage work.” The company also believed, according to this same report, that the land, once drained, would command even higher prices, thereby assuring the continued success of the operation. The sales were said to be sufficient enough to insure covering the estimated $300,000 contract to drain the remaining company lands. The total amount of land involved in this newer work would amount to nearly fifty thousand acres. This change of address and direction also meant a change in management. V. W. Helm and H. E. Myers agreed to leave the firm and were replaced by A. J. Bendle and R. W. Ralston.

How successful was the company, and its allied firms? By 1915, they had successfully drained most of the land in their primary tract, south of the South New River Canal, and were extending their operations into the “Royal Glade Tract.” In a typical “booster” piece, published in the Fort Lauderdale Sentinel on March 14, 1915, the company claimed:

Two hundred and forty-four men out of a possible total of two hundred and forty-six, sent to Miami by agents of the Everglades Land Sales Company within the last twelve days, invested in lands in the Everglades all the purchases being made in the holdings of the Everglades Land Sales Company along the canal from Fort Lauderdale, principally on the Royal Glade

and Davie farm tracts. The purchases range in size from a few acres to 320 acres, the purchasers coming from the four corners of the continent.

The largest group, the article continued, came from Arizona, with the others coming primarily from the Midwest, i.e. Chicago, Indiana, Missouri, and the Dakotas. Because the Royal Glade Tract was still unclaimed, the company noted it would make extensive improvements. A forty foot canal was to be dug around the entire tract, which itself would be dissected by two seventy-five foot canals, with an additional “240 miles of lateral ditches, 9 feet wide and 6 feet deep, these ditches to be one-fourth of one mile apart. Soil thrown up from the canals will be leveled off and high dry turnpikes made.” The fact that some of these canals and roadways could be seen not too long ago on the ground and from the air indicates that the company did much of the work promised.

All of the land companies had sales offices throughout the country or abroad. The stories of the founding and development of cities like Hallandale, Oakland Park, Dania and Pompano, to name only a few, are replete with the tales of the early settlers clearing and draining the land, without the aid of the huge Everglades Drainage Project, important as that was. The history of the land reclamation of eastern Broward County has been indicated in a number of articles in the Broward Legacy over
the last few years. The writings of Paul George, William Adams, Myrtle English and, of course, Cooper Kirk, have all demonstrated the important work done by the Model Land Company, the Florida East Coast Railway, the Florida Coast Line Canal and Transportation Company (and its many land company off-shoots), and private individuals in draining and reclaiming the land for agricultural purposes. Yet, in the end, it was the great project of Napoleon Bonaparte Broward which gave the nation its first real glimpse of the possibilities of the drainage of Florida's swamp land. The publicity generated by this great enterprise stirred imaginations all over the world and assisted the land companies in their recruitment of settlers.31

As the area moved toward independence from Dade County, in 1915, the Everglades Drainage Project, which continued to pump money and manpower into the community, began to realize many of its goals. Land along the main canals became drier, land companies built laterals and connecting canals into the main lines, and water disappeared from the surface. The progress of the State's efforts was closely monitored by the Sentinel and most other southern Florida newspapers. The new drainage engineer, Fred C. Elliot, kept the public well informed of this progress by his numerous publications, personal appearances and well covered reports to the Trustees. One such report, given in February of 1913, shows the rapid progress of the drainage project, as its major troubles began to fade. As of February 1913, Elliot stated, the Hillsboro Canal, all forty-nine miles of it, was two-thirds complete; the seventy-seven mile long Miami Canal had nine and a half miles to go before being opened to tide water and was also two-thirds complete; the North New River Canal was open and nearly completed to specifications; the South New River Canal, connecting with the Miami Canal after running twenty-one miles, was one-half complete; the forty-two mile long West Palm Beach Canal had just been put to contract and was scheduled for completion in 1916; and the "stub" canals—Sapper Creek, Snake Creek, and Cypress Creek—were two-thirds, three-fifths and one-third finished, respectively. Taken together, these canals represented a total of 14,000,000 cubic yards of rock and earth moved for the purposes of drainage.32

The popularity of the drainage movement received many critical blows in the era prior to the United States' entry into the First World War. The Bolles and Chambers trials in Kansas City received national attention. The trouble the Trustees project faced with the Wright report, bonding problems, and the Southern States Land Company litigation caused many would-be settlers to have second thoughts. However, because, in the short run, the movement was very successful, people became interested in the prospect of living in Florida's former swamp land. With the attention of the nation diverted to national defense and world peace, the project moved quietly to-
ward completion in the late 1910s. The public's collective memory, as most pundits now recognize, is relatively short, and with the war intervening, the stage was set for the tremendous promotions of the famous Florida Land Boom of the 1920s. From whistle stop to boom town, the growth of Fort Lauderdale, and Broward County, would not have been possible without the influx of new money and people onto the local scene. The wealth, skills, hopes and dreams of these swampland pioneers depended on the success of the drainage projects. That we are here today, on dry land, speaks highly of that effort.

Brickell Avenue, Fort Lauderdale, 1911.

Notes

1. Philip Weidling and August Burghard, Cheekered Sunshine: The History of Fort Lauderdale 1793-1965 (Fort Lauderdale: Wake-Brook House, 1974), 23-29. This older, but still valuable, history gives a picture of the city at this stage in its growth that is worth the short read.

2. Fort Lauderdale Sentinel, August 27, 1915, 1.

3. United States Senate Report No. 242, 30th Congress, 1st Session, August 12, 1848.


5. Joe Knetusch, "John Darling, Indian Removal, and Internal Improvements, 1848-1856," Tampa Bay History, vol. 17 (Fall/Winter 1995), 6-19. For the specific citation, see 13-14, where the writer quotes most of the letter containing this fantastic scheme.

6. Ibid., 15-16. Also see, Paul S. George and Joe Knetusch, "Life on the Miami Frontier," South Florida History Magazine, Fall 1990, 7-9. The entire letters, two in number, are here transcribed and explained concerning Ferguson's views on drainage and internal improvements.


12. Ibid., 79.

13. Ibid., 91.


16. Trustees Minutes, vol. 6, 92.

17. Ibid., vol. 6, 284-294. There were, of course, additional vouchers listed for Newman and many Broward merchants. However, the intent is to show the rise of the payroll size and the potential for the growth of the Broward economy within a very short span of time.

18. Ibid., vol. 6, 286-296.

19. Ibid., vol. 8, 243, 246, 252, 268, 292, 300, 323, 345, 370, 385, 396, 398, 422, 425, 465, 472, 487, 506, 542. There is no claim to a sophisticated statistical method in obtaining these figures or the average cited. All of the raw data can be found on the pages indicated. These are simply listings of vouchers of the Trustees.

20. Ibid., vol. 8, 509, 542, 549, 583.


23. The Fort Lauderdale Sentinel for this period is available on microfilm in the offices of the Broward County Historical Commission. From the latter part of 1912 until 1916, there appear to be weekly reports from the area and numerous "eyewitness accounts" of the progress of that section.

24. Trustees Minutes, vol. 9, 502-519. The Kansas City newspapers, particularly the Times, followed his trial closely. For the only Florida treatment of the case, and that limited by the biographical nature of the work, see: Cynthia Roberson Waddell, "William V. Knott: A Plain, Old-Fashioned Democrat," Doctoral Dissertation, Florida State University, Tallahassee, 1994. Dr. Waddell notes that most of the cabinet and two governors, Gilchrist and Tramel, appeared on behalf of Dr. E. C. Chambers. Her discussion of the duties of a cabinet member in this era (192-236) is one of the best available.

25. Trustees Minutes, vol. 9, 625-626. The earlier appeals to have the lands surveyed can be found on pages 107, 269, 282, 307, and 484 of the same volume. In most cases, the company was represented by Helm and Price.


27. Fort Lauderdale Sentinel, January 17, 1913, 1.

28. Ibid., September 5, 1913.

29. Ibid.

30. Ibid., March 14, 1915, 1.

31. Dr. Paul George's articles on Oakland Park and Floranada, Dr. William Adams' piece on Hallandale, Myrtle English's early work on Dania, Hallandale and Davie should be consulted. Dr. Cooper Kirk's article, "Foundations of Broward County Waterways," in the Winter/Spring 1985 edition of Broward Legacy, is almost required reading on the subject. The author's own work on Olof Zetterlund, the Everglades Plantation Company (which attempted to grow rice on its lands in present-day Plantation), and Arthur Galt give some useful background on the drainage of the land and the prices which it commanded.