ORTONA LOCK
Caloosahatchee River, Cross-State Canal, Okeechobee Intracoastal Waterway
Ortona vicinity
Glades County
Florida

HAER FL-19
FL-19

HAER
FL-19

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
SOUTHEAST REGIONAL OFFICE
National Park Service
U.S. Department of the Interior
100 Alabama St. NW
Atlanta, GA 30303

HISTORIC AMERICAN ENGINEERING RECORD

ORTONA LOCK

HAER NO. FL-19

Location:	Located on the Caloosahatchee River, Ortona vicinity, Glades County, Florida USGS Goodno Quadrangle, 1973, Universal Mercator Coordinates: 17 N2962995 E469710
Dates of Construction:	1935-37
Engineers:	U.S. Engineer Office, Jacksonville, U.S. Army Corps of Engineers, War Department
Fabricator:	Spadaro Construction Company, Glades County, Florida (lock chamber and supporting structures) and Edgar H. Latham Construction Company, Miami, Florida (sector and taintor gates)
Present Owner:	U.S. Army Corps of Engineers
Present Use:	Lock, dam, and spillway for navigation and flood, drought, and regulatory control
Significance:	Engineered by the U.S. Army Corps of Engineers in 1935, Ortona Lock and Dam was designed for preventive measures during hurricanes, floods, and droughts while allowing navigation on the Okeechobee Intracoastal Waterway, a 155-mile passage connecting the Gulf of Mexico with the Atlantic Coast via Lake Okeechobee. In June 2000, the U.S. Army Corps of Engineers (Corps), Jacksonville District, proposed to make structural changes to Ortona Lock and Dam that would alter the structure, which was considered eligible to the National Register of Historic Places. A Memorandum of Agreement was signed between the Corps, Jacksonville District and the Florida State Historic Preservation Office stipulating that the St. Lucie, Moore Haven, and Ortona locks and dams would be documented to Level II HAER standards.

Report
Prepared by: David E. Port and Dena E. Hodes, New South Associates

Date: December 2001

PART I. HISTORICAL INFORMATION

A. Physical History

1. Date of construction: 1935-37.

2. Architect/Engineer: The Corps' supervising construction engineers at Ortona included Carawan Nelson and W.F. Simpson while the consulting engineer of the Okeechobee Flood Control District at both facilities was George B. Hills.

3. Original and subsequent owners: State of Florida, U.S. Army Corps of Engineers.

4. Original Builder, Contractor, Supplier: Edgar H. Latham Construction Company of Miami, Florida fabricated the lock sector gates and spillway taintor gates and served as the supervising architectural firm. Spadaro Construction Company of Glades County, Florida constructed the lock chamber, lock tenders' houses, garages, warehouse, and control houses.

5. Alterations and Additions: In 1963, the fifth bay of the spillway was removed, and the floodway channel on the south side of the lock was enlarged to allow for more effective control of floodwaters. At the same time, the spillway control house was moved to its present location on the south bank of the river.

B. Historical Context

The Caloosahatachee River flows southwest from Lake Okeechobee and empties into the Gulf of Mexico at the present day location of Fort Myers, Florida. Prior to the straightening and canalization of the river in the early twentieth century, there was a series of falls and rapids over the shallow bedrock some

five miles west of the current Ortona Lock and Dam. This natural ford provided the only feasible route across the river for travelers moving through the interior of the western Florida peninsula. It therefore, was an ideal site for a military outpost and during the Second Seminole War (1835-1842) Fort Thompson was constructed here.[1] Abandoned shortly after the war, it was reoccupied during the Third Seminole War in the 1850s, but remained only a landmark during the Civil War.[2]

Although many of the forts established during the Seminole wars developed into permanent settlements, Fort Thompson did not because of its frequent floods.[3] The military records and accounts from Fort Thompson as well as the other outposts in the region do, however, provide the earliest recollections about white settlement in this area.

Although this section of Florida remained relatively unknown and little occupied, the quest to drain the southern end of the peninsula began as soon as the United States acquired Florida in 1821. Americans were convinced that the soil of Everglades would support some of the richest agricultural lands in the country if only it was not inundated with so much water. This dream was heightened as truck farming became popular in the nineteenth century and refrigerated rail cars made shipment to northern destinations possible.[4] The prospect of a waterway through Lake Okeechobee across the state was also an incentive for draining programs.

One of the first steps in the process occurred in 1850 when Congress passed the Swamp Land Act, which gave states unusable swamplands provided that the proceeds from the sale of the property are used to reclaim the land for agricultural purposes. Much of the 20 million acres in Florida derived from the Swamp Land Act fell within the Okeechobee Basin and included the

---

[1] C.J. Clausen et al., *Cultural Resource Survey of Portions of the Port La Belle Development Tract, Glades and Hendry Counties, Florida*, Report submitted to General Development Corporation, Miami, Florida, by CCC Enterprises, Inc., North Port, Florida, Survey Project No. 107, July 1980, 29.

[2] Alfred Jackson Hanna and Kathryn Abbey Hanna, *Lake Okeechobee: Wellspring of the Everglades* (New York: The Bobbs-Merrill Company, 1948), 52.

[3] Clausen et al., 144.

[4] David McCally, *The Everglades: An Environmental History* (Gainesville: University Press of Florida, 1999), 86.

Caloosahatchee River. Public land surveys beginning in 1860 established range and township lines.[5] However, because of its inaccessibility much of the land around the Okeechobee Basin remained unsurveyed.

The region became more traversed in the years after the Civil War when large herds of cattle were driven across the Caloosahatchee River en route to Punta Rassa on the Gulf of Mexico. These early cattle drives were largely responsible for identifying and unofficially surveying vast ranges in the Okeechobeeland interior. The most well known of these cattlemen was Captain Francis Ashbury Hendry who, in 1869, moved his stock south from Fort Meade to the Caloosahatchee River where he built a ranch house on the ruins of Fort Thompson. Hendry established several Cuban contacts during the Civil War and continued shipping cattle from the interior of Okeechobeeland until the late 1880s. His 15,000 heads of cattle ranged over state lands in the area, and settlements consisting of herdsmen and farmers were established around the Fort Thompson area in the vicinity of Ortona Lock and Dam.[6] Hendry not only developed a thriving cattle business but he also served as Polk County's State Senator, Lee County Commissioner, and mayor of Fort Myers before his death in 1919 at age 86. During his political career, Hendry was an ardent supporter of the Okeechobee Waterway. Hendry County, formed in 1923, received its name from this cattleman as did the city of La Belle along the Caloosahatchee River, which was coined from the union of his two daughters' names, Laura and Belle.[7]

In 1879, U.S. Army Engineers and surveyors inspected the Caloosahatchee River at Fort Thompson and recommended dredging the river at federal expense from the mouth of Fort Myers to the cataract at Lake Flirt near present day La Belle.[8] This survey coincided with the completion of public land surveys and land patents, and the bulk of the public land was sold to corporate owners related to railroad or drainage operations. Fort Myers citizens and the 200 inhabitants along the Caloosahatchee River

---

[5] Florida Department of Natural Resources (DNR), Division of Land Management, Bureau of State Lands (BSL), Land Title Section, *Field Notes*, Vol. 211, p. 256.

[6] Clausen et al., 42.

[7] Ibid., 47.

[8] Ibid., 45.

region were interested in the survey because of the frequent floods that engulfed the river valley. The year prior to the survey, rains were so heavy that the valley was submerged from February 6 to December 1 in 1878.[9] Many of the settlers living along the river's edge abandoned their homesteads for drier and higher grounds.

Under the direction of Captain Andrew Damrell of the U.S. Army Engineers' Mobile District, Assistant Engineer J.L. Meigs was chosen to conduct the survey of the Caloosahatchee River. Within three days, Meigs and his party had traveled from Fort Myers to Lake Flirt. Another two days were spent crossing into Lake Hicpochee through the saw grass marsh, water lilies, and floating wild lettuce. By the end of the week, Lake Okeechobee could not be seen because of the endless dense and impenetrable saw grass in all directions. Instead of turning back, Meigs chose to burn a path through the saw grass. The river grew shallower as they proceeded eastward. As Meigs' procession was reduced to a crawl with the group having to carry their boats eastward in two feet of water, the engineer concluded because there was no perceptible current within one-fourth mile of Lake Okeechobee, both Lakes Okeechobee and Hicpochee must be on the same elevation. On his return back to Fort Myers, the seasonal rains were restrained and drought conditions were evident. Crossing the cataract at Fort Thompson was possible by horse or wagon, and from this point eastward to Lake Okeechobee was shallow enough to wade. Meigs recommended that if dredging operations were to proceed, they must occur during the dry seasons or periods of drought. A canal 40' in width and 6' in depth would allow secure passage through this region. In spite of the sparse population and small trade of the region, Meigs further fueled the interest in future dredging operations by reporting that:

> the principal advantage, however, to be expected from this improvement would arise from the partial drainage of the wide margin of saw grass marsh bordering the shore of the Upper Caloosahatchee and the Lower Kissimmee, and surrounding Lakes Hicpochee and Okeechobee. The

[9] George E Buker, *Sun, Sand, and Water: A History of the Jacksonville District U.S. Army Corps of Engineers (1821-1975)* (Washington D.C.: United States Government Printing Office, 1981), 95.

> soil of these marshes is a rich black loam, 5 or 6 feet in depth, and deemed by experts admirably adapted to the growth of sugar cane.[10]

In 1877, Philadelphia capitalist Hamilton Disston made his first trip to Florida for a fishing vacation. The vast wilderness in south Florida captured his imagination and he saw a chance to create and shape this primeval territory. In 1881, he contracted to "drain overflowed land adjacent to Lake Okeechobee in return for half the area reclaimed" with state's Board of Trustees of the Internal Improvement Fund (I.I.F., which had been established to administer the lands provided by the Swamp Lands Act of 1850.[11] This agreement meant that Disston would be able to purchase and drain huge tracts of land at a lower price before he would sell them to recover his reclamation expense. After much legal maneuvering, the Atlantic and Gulf Coast Canal (A&GCC) and Okeechobee Land Company of Florida were chartered through Disston to handle the drainage contract with the state and acquire the lands reclaimed through drainage. Disston's land holdings ranged from St. John's County in the north to Lake Okeechobee and west along the Caloosahatchee River. It is Disston, therefore, who is credited with the initiation of draining the Florida Everglades. His venture was also reviewed as the first large-scale and successful attempt to begin intracoastal transportation across Florida's peninsula.

The A&GCC began work on January 1, 1882 with four dredges operating simultaneously. Dredging along the Caloosahatchee River focused on expanding the headwaters and constructing canals from Lake Flirt through Lake Hicpochee to the Three-Mile Canal, which connected to Lake Okeechobee. By the end of 1882, this first section was complete and reclamation of the swamplands was already occurring.[12]

Despite the dredging of the Caloosahatachee River and the construction of various canals, workers had not succeeded in lowering the level of Lake Okeechobee sufficiently by 1886. To solve this problem, new canals were constructed to drain marshes on either side of the main canals, thereby further distributing

---

[10] Ibid., 97.
[11] Hanna and Hanna, 95.
[12] Conrad Menge, "Early Dredging in the Lake Okeechobee Region," oral history of author, 1947, Clewiston Museum, Clewiston, Florida, 128.

and displacing the water level.[13] To check Disston's work, the Corps surveyed the Caloosahatchee River in 1885. Their annual report included descriptions of the area, noting the high banks from Fort Thompson to the mouth of the river. In addition, the Corps' survey showed that the waterway was navigable, and they began planning additional work such as clearing the banks from snags and widening its channel.

Later surveys evaluated the gradient between Lake Okeechobee's mean low-water level, which was 20.6' above sea level, and at La Belle, where this location was similar to the Gulf coastal datum at Punta Rassa and measured 1.5' above sea level. The fall from Lake Okeechobee to La Belle was precipitous, especially over the cataracts west of the present lock and dam at Ortona. The shallow river below La Belle was equally problematic because it accumulated the shoal or silt and sand from the frequent flooding carried downstream. The following excerpt is from the Corps' Annual Report (1901) of the 1885 survey:

> For 17 miles from its mouth, the [Caloosahatchee] river is broad and has a channel depth from 6 to 20 feet, with the characteristics of an estuary. This portion of the river is obstructed by oyster bars. Great beds of snags obstruct the upper river. From Alva down the country is being settled rapidly for the culture of sugar cane, pineapples, cocoanuts, oranges, limes, and lemons. Fine cattle ranges exist along the upper river…the works were not intended for the benefit of navigation, but they have incidentally opened a water route…the exception of the cut-offs, which on account of their bad location are an injury to the river.[14]

A report in 1886 by Colonel James M. Kreamer, Chief Engineer of the Okeechobee Drainage Company stated:

---

[13] Ibid.

[14] C.A. Kimes and L.C. Crocker, "The Caloosahatchee River and Its Watershed: A Historical Overview," (Fort Myers, Florida: submitted to Florida Gulf Coast University Library Services and South Florida Water Management District under subcontract from Florida Center for Environmental Services, Agreement No. SR819, FAU DSR No. 96-127, revised September 1998), available from www.ces.fau.edu/library/caloos-watershed/index.html; INTERNET.

> Further drainage through the Caloosahatchee is barred from the fact that the capacity of the upper Caloosahatchee River at Fort Thompson is fully taxed at present to carry the water reaching that point via the drainage canals already constructed; and the residents of that region are petitioning the Internal Improvement Board to provide relief during and subsequent to the rainy season by closing the canal at a point west of Lake Hicpochee.[15]

When the residents of what was then Lee County were not satisfied that their earnest pleas and requests to the I.I.F. Board were heard, they took matters into their hands and constructed earthen dams along the waterway at the headwaters of Lake Hicpochee. The dam was shortly dismantled, but clearly, this vigilantism and frustration from local residence was mounting in proportion to the inadequate responses from the State Drainage Commission.

Clearly, however, the drainage operations and the opening of the waterway brought in new settlers. From 1884 to 1893, Disston's efforts had converted thousands of acres of swampland into fertile soil and made possible the cities that ring Lake Okeechobee. During the 1880s, the population in the area expanded. The towns of Alva and Olga were established along the Caloosahatchee River; Lee County was formed, encompassing 2 million acres and the entire Caloosahatchee Region; Fort Myers became an incorporated town, and thousands of acres of new citrus farms were developed since the south Florida river region had survived the devastating North Florida Citrus Freeze of 1884. Another survey conducted by the Corps' engineers in 1886 identified approximately sixty farms along the Caloosahatchee. Steamboat traffic brought in tourists and goods. By 1888, traffic along the Caloosahatchee River was transporting $160,000.00 worth of goods out of Okeechobee and an equal amount in general merchandise and equipment back into the interior.[16]

Between 1880 and 1910, there was a widespread pattern of land acquisition in South Florida. Landowners were large corporations like Disston's A&GCC and Okeechobee Land Company.

---

[15] Kimes and Crocker.
[16] Ibid.

Others included the Plant Investment Company, the Louisville and Nashville (L&N) Railroad Company, and the Wisner Land Company, which invested in land for the resale or development of properties. In addition, as dredging continued and marshes were drained, more land was surveyed and made available.[17]

One surveyor was John A. Henderson who investigated and documented much of the swamp and overflow land in south Florida. Henderson was compensated with over 98,000 acres including the land now occupied by the Ortona Lock and Dam.[18] Most of the land lining the Caloosahatchee River changed hands in the 1880s and 1890s and was sold to cattle ranchers and timber industries. Commercial and sport fishermen were also commonly seen taken advantage of the river and lake beyond.[19]

By 1907, the Caloosahatchee River region's population exceeded 7,000 inhabitants and all freight and passenger traffic moved through Fort Myers.[20] Settlers along the Caloosahatchee generally were fair-weather residents who constructed dwellings from cane poles and cabbage fan palms and subsisted by fishing, hunting, and light farming. Residents along the river's bank enjoyed the steamboat traffic and were often contracted by steamboat operators to chop and load cord wood for the wood-burning boilers from the numerous palm and oak groves that lined the waterway.[21]

Since the Fort Thompson era, cattle continued to graze freely on state land and agriculture was also successful. Sugar cane fields and hogs were also commonly seen in the area. At the railroad crossing of Chiaha, renamed Ortona in 1926 by Italian immigrant Jerome G. Attanasio, a depot was built and a sugar cane mill operated here. Cattle pens were erected alongside the tracks. Nearby were field workers' houses, sawmills along the river's banks, and land dredges used to build early roads through the hammocks.[22]

---

[17] Clausen et al., 54.
[18] Ibid.
[19] Ibid., 58.
[20] Kimes and Crocker.
[21] Glades County Board of Commissioners, *Glades County, Florida History* (Moore Haven, Florida: Rainbow Books, 1985), 123.
[22] Larry Lucky, (Glades County Tax Assessor), unrecorded interview with author, 13 April 2001.

The area received an additional boost in the early twentieth century when Governor Napoleon Bonaparte Broward focused his attentions on Everglades reclamation by creating the state Board of Drainage Commissioners who authorized the construction of more canals in the Everglades in 1906. The canals formed the basic design of the present Okeechobee Waterway. Without the use of locks, shallow drift navigation from the Gulf of Mexico to the Atlantic Ocean was possible via the Caloosahatchee River, Lake Okeechobee, and the North New River Canal in 1912.[23] Private companies with proven records and competent engineers were solicited and awarded contracts for dredging operations by the State Drainage Commission. In 1910, the Furst-Clark Construction Company of Baltimore, Maryland, and Galveston, Texas, was awarded the contract and bought four dredges from the state (the *Everglades*, *Okeechobee*, *Caloosahatchee*, and *Miami*) to continue construction on the North New River Canal. Furst-Clark had a secure reputation for dredging operations having a year before been awarded the Cape Cod Canal project in Massachusetts.[24] The Company was equipped with a fleet of hydraulic suction dredges. In addition, Furst-Clark had a host of steam-powered land excavators or draglines that were transported by rail as well as towing craft for the dredges.[25]

On August 25, 1912, the North and South New River Canals were complete, and the first steamship made its maiden voyage with prospective land speculators and financial backers. The journey from Fort Myers to Fort Lauderdale took two days with passengers stopping overnight at Richard J. Bolles' hotel at Lake Harbor and marveling at his lush vegetable garden, grown in fertile reclaimed land.[26] Regularly scheduled steamers to Lake Okeechobee and across the waterway included the *Suwanee*, *Lily*, and *Passing Thru* carrying freight, mail, and passengers.[27]

In 1913 and in the following years, the District increased drainage and reclamation activities in proportion to land sales and speculation. However, this increased effort also

---

[23] Kimes and Crocker.

[24] Robert H Farson, *Cape Cod Canal* (Yarmouth Port, Massachusetts: Cape Cod Historical Publications, 1977), 35.

[25] Hanna and Hanna, 132.

[26] Ibid., 180.

[27] National Register of Historic Places Inventory - Nomination Form, "Lock No. 1, North New River Canal," *Florida Master Site File*, 1977: 4, Located in R.A. Gray Building, Tallahassee.

intensified flooding problems along the upper regions of the Caloosahatchee River. Excessive drainage activities and heavy rains in 1912 had caused the river to flow upstream from La Belle to Lake Okeechobee. When met with downstream discharges from the lake, the river would swell and overflow its banks. The Caloosahatchee had a higher elevation than the water level at the lake, and the river's waters crested eight feet above the 12-foot banks at La Belle.[28] Landowners along the river and floodplains called for an end to the drainage and discharge into the Caloosahatchee. A loose compromise was reached and the District agreed to build three locks along the river.

One was located at Citrus Center (Caloosahatchee Lock No. 2) and another was built on the west end of Lake Flirt at the ford near the site of Fort Thompson (Caloosahatchee Lock No. 3) sometime after 1915. Little is known about their exact location or construction since they were both dismantled in 1937 during the Corps' widening and straightening of the upper Caloosahatchee River. The third was assembled in the new town of Moore Haven (Caloosahatchee Lock No. 1) in 1917.[29] Additional locks were constructed at the North New River, Miami, and West Palm Beach and St. Lucie River (No. 1).

Present day Ortona Lock resides between the historic east and west ends of Lake Flirt. From the 1880s to the 1920s, this lake even with its dredged navigable canal was regarded either as a muddy hole or a bound swollen river that could not regulate Lake Okeechobee's discharge. The Citrus Center facility was described in historical accounts and photographs show the facility flooded in 1922.[30] Historic accounts also describe Lake Flirt overflowing its banks during rainy seasons from excessive floodwaters, and these two lock facilities along the Caloosahatchee were known to divert the discharged swollen water eastward and back upstream toward Lake Okeechobee in the mid-1910s.[31]

---

[28] Kimes and Crocker.

[29] Lawrence E. Will, *A Pioneer Boatman Tells of Okeechobee Boats and Skippers* (St. Petersburg, Florida: Great Outdoors Publishing Company, 1965), 13.

[30] Lucky.

[31] Will, *Pioneer Boatman*, 13.

Even after the locks at Lake Flirt, Citrus Center, and Moore Haven were operational, the Caloosahatchee River remained turbulent. Lake Okeechobee's discharge sent its overflow rushing down the channel and canal networks inundating the croplands downstream. The river valley's residents considered their interests to be at odds with the State Drainage Commission's efforts that valued dredging operations for navigational purposes over flood control.[32] With Federal intervention through the U.S. Army Corps of Engineers, conflicts between landowners and agencies developed over drainage solutions and the intent behind these strategies. Each side envisioned a different solution for the management of the lake's discharge and the river. In an effort to bring together these different perspectives, the Florida State Legislature created the Caloosahatchee Improvement District in August 1925 for the purpose of providing drainage, flood control prevention, irrigation, and navigation west of the Everglades Drainage District, specifically to the Caloosahatchee River Valley. The Caloosahatchee Improvement District's borders were enlarged to encompass the area from Fort Thompson westward to Fort Myers, 45 miles in length, 12 miles in width, and 332,746 acres of land in Lee, Hendry, and Glades Counties.[33]

The Caloosahatchee Improvement District attempted to discharge overflow eastward toward the uplake side of the river before it would reach La Belle and the lower river valley, thereby attempting to alleviate some of the prevalent flooding in the region. Both the Everglades Drainage District and newly formed Caloosahatchee District placed the financial responsibilities for these improvements with the Corps of Engineers, while the Corps assumed the Districts were responsible for all improvements that it took upon itself.[34] The George B. Hills Company recommended that an improvement tax should be levied for the proposed benefits to the residents of the river valley to compensate for cost incurred.[35] Unfortunately, land sales were retarded in the river valley because of the financial responsibility dispute, which in turn affected the Caloosahatchee District's revenue source and continued dredging operations. The Caloosahatchee Improvement District was

---

[32] Kimes and Crocker.
[33] Ibid.
[34] Clausen et al, 90.
[35] Kimes and Crocker.

dissolved in 1927 because of inadequate funding and plans for more drainage were halted.

The Hurricanes of 1926 and 1928 decimated much of the Everglades including the town of Moore Haven and prompted the federal government to authorize the U.S. Army Corps of Engineers to come to the aid of Florida.[36] By December 1929, legislation was introduced calling for Federal cooperation, and the Okeechobee Flood Control District was created to cooperate with the Federal government in a plan to provide flood protection to south Florida. Plans, specified through the 1930 Rivers and Harbors Act called for deeper and wide channels on the Caloosahatchee and St. Lucie Rivers and to control and manage Lake Okeechobee and the waterways associated with the Everglades Drainage District through locks and dams.[37] Following plans already in place, the straightening and widening of the Caloosahatchee River began at La Belle on December 10, 1930. Materials dredged from the canals were used to construct the Herbert Hoover Dike, a 140-mile long, 34′ high levee that surrounds the shoreline of Lake Okeechobee.[38] In June 1934, the Corps was authorized to operate and manage all locks and dams along the Okeechobee Waterway. A year later, they were granted control over all national flood control projects. Also in that year, the Corps officially assumed control of the Okeechobee Waterway and its watershed.[39]

Flood control work and dredging of the Caloosahatchee River continued in the 1930s. An estimated $5.78 million was appropriated by Congress for these contracts. The MacWilliams Company and Standard Dredging Company were contracted to straighten the Caloosahatchee River channel while locally owned Spadaro Construction Company was contracted to erect the locks, spillways, and structures at both the proposed Ortona site and the Moore Haven facility. Antonio Spadaro who lived in Citrus Center owned the construction company. The supervising architectural firm was the Edgar H. Latham Company. Most of the electrical wiring and outfitting was subcontracted to Harry H. Turner of Clewiston. Plumbing was subcontracted to Pete Christensen and the painting and floor finishing went to George

---

[36] Hanna and Hanna, 264.
[37] Kimes and Crocker.
[38] Buker, 125.
[39] Kimes and Crocker.

Burchard of La Belle. The total cost for construction was $856,904.15.

When Ortona Lock construction began in 1935, Captain James Burt Cox was one of the first engineers hired for the project. Captain Cox operated a dredge and had previously been working on the Herbert Hoover Dike prior to arriving at Ortona. The Corps' engineer at Ortona was Robert Pierce, and when the locks were complete, Jack O'Day was the first lockmaster.

The Corps hired locally and abroad, thereby maximizing the labor force for this monumental project. During the early years of the New Deal, construction increased under impetus from President Franklin D. Roosevelt's Public Works Administration, which spent $4.1 million dollars for the Okeechobee Waterway. Corps and state funds brought this total to over $5.8 million dollars. As construction reached its height in 1937, the Corps' major source of construction funds came directly from Washington in the form of unemployment relief, and in fiscal year 1938, funds for the project were scaled back.[40]

Newspaper accounts from the *Glades County Democrat* report that the opening celebration and formal dedication of the Cross-State Canal was made on March 19, 1937. A flotilla of dignitaries journeyed from Stuart to Fort Myers, Florida, along the Cross-State Canal, making an overnight stop in Clewiston. These representatives included U.S. Secretary of Commerce Daniel C. Roper who represented President Roosevelt's behalf, Florida State Senator Claude Pepper, W.P. Franklin, and members of the Okeechobee Flood Control District such as Attorney General Cary Landis, Commissioner of Agriculture Nathan Mayo, and State Treasurer W. V. Knott. Within the first three months of the waterway's opening, over 3,000 vessels passed through the Cross-State Canal. W.P. Franklin, the veteran waterway leader, gave this keynote address to the gathered honoraries in Clewiston:

> The Cross-State Canal was the greatest achievement in Florida's history and one of the biggest small things that has happened in the entire United States. This canal, connecting Stuart to Fort Myers, was suggested by Jefferson Davis in 1836, when he was Secretary of War. He recommended to Congress that this was the

---

[40] Glades County Board of Commissioners, 127.

> most logical place for a canal from the Atlantic to the Gulf, and more than a hundred years later we are realizing his predicting. Parts of the existing canal will be used; large locks will be built. Again I tell you, the younger men must take up the burden and complete this as a ship canal of major importance, as we planned it when we started work on it a quarter of a century ago.[41]

The lock was officially completed on August 6, 1937, and was the last major construction project in the Cross-State Canal. The new waterway saved 255 miles from the more traditional route of journeying around Cape Sable in the Florida Keys to connect the Gulf to the Atlantic. The U.S. Army Corps of Engineers still owns and manages the locks.

PART II. LOCK AND DAM DESCRIPTION

A. General Statement:

1. Summary Description

The Ortona Lock and Dam is situated in a 58-acre reservation on the north and south sides of the Caloosahatchee River between the city of La Belle and Lake Hicpochee. Ortona's lock serves the purpose of navigation while the connecting spillway is operated for flood control, irrigation, and maintenance of water stages during low-flow periods and water conservation during droughts.

Completed in 1937, the lock measures 250′ in length and is 50′ wide. It is constructed of reinforced concrete with steel sector gates. The gates are operated from the four machinery and control houses located adjacent to the lock chamber. The spillway is also composed of reinforced concrete and consists of two taintor gates and two vertical or slide gates used to control the flow of water. These gates are operated by a control house on the south bank of the river adjacent to the spillway. A manmade island in the center of the river separates

---

[41] "Roper Stresses Importance to Commerce of Developing Stuart-Fort Myers Ship Canal at Ceremonies Today: National and State Officials Witness Opening of Cross-State Waterway," *Stuart Daily News*, 22 March 1937.

the lock and the spillway. Other buildings that date to the lock's construction include a lock tender's house that now serves as the main office and a powerhouse, which houses the 31 Kilowatt (K/W) diesel engine-generator unit, the water pumping system and space for general maintenance and repairs. They are located adjacent to one another on the north bank of the river. To the east of the lock tender's house are a concrete block fire pump house and a water treatment plant, which were both constructed in 1948.

Non-historic structures on the reservation include a three-bay, concrete block garage that is set just north of the lock tender's house.

2. Condition

The historic buildings and structures at the Ortona Lock and Dam are in good condition. The lock and dam is a functioning property, used for flood control and to enable navigation. Accordingly, its systems and structures have been well tended by the U.S. Army Corps of Engineers, Jacksonville District. The lock and spillway have faced some modifications, but their original function and form is unaltered. Only one of five original lock tender's residences remains and although it has faced some alterations, it also retains its general form and style.

B. Site

1. General Site Description

The lock and dam complex has a north south orientation to the Caloosahatchee River. The spillway lies on the south bank of the river while the lock is on the north with an artificial island between the two. The control houses are set immediately adjacent to the lock and spillway while the lock tender's house, power house, and other buildings are all located on the north or lock side of the river.

Both the north and south sides of the river have access roads to the reservation as well as picnic and camping areas.

2. Landscape

The Ortona reservation area consists of 58 acres. There are 1800′ of asphalt-treated 10′ width drives and 2100′ of graded drives. The grounds are landscaped with Royal palm trees, water oaks and ornamental shrubs that were planted in 1937. The grass on eight acres immediately around the lock and spillway structures is maintained as a lawn and tended by an outside landscaping contractor. The island between the spillway and lock chamber is currently being cultivated and developed as a natural park and resting stop for visitors along the waterway.

3. Buildings/Structures

The complex contains the lock and dam and its support structures. All of the buildings are painted cream-white with a reddish-brown trim, and the doors and awnings are also painted brown. The Ortona reservation has a uniformed look yet with aesthetically pleasing qualities.

PART III. SOURCES OF INFORMATION

A. Engineering Drawings

As-built drawings of Ortona Lock and Dam were gathered at the U.S. Corps of Engineers Office, South Florida Operations Office, Clewiston District. Drawings illustrating modifications to the facility were also identified at this location. Other drawings were gathered from the *U.S. Army*

Corps of Engineers Okeechobee Waterway (1948), a compendium of maps illustrating various structures and facilities, current and proposed flood control projects, canals, and hyacinth removal plans. This resource was likely
compiled to coincide with the creation of the Central and Southern Florida Flood Control Projects and the later District between 1947 and 1950.

The engineering drawings have been electronically scanned producing high-resolution images and will be donated to the Florida State Archives, Tallahassee, Florida.

B. Historic Views

Photographs were collected during this investigation. Two date from 1935-37 during the actual construction of Ortona (Appendix). Copies of these photographs were obtained from Ray Theilan, former lockmaster of the Moore Haven facility. An aerial obtained from the South Florida Water Management District's archives is also shown.

The maps and historic views follow on pages 22-28.

C. Interviews

Hunter, Chris (Schenectady Museum Archivist). Unrecorded interview with author. 21 July 2000.

Lucky, Larry (Glades County Tax Assessor). Unrecorded interview with author. 13 April 2001.

Menge, Conrad. "Early Dredging in the Lake Okeechobee Region." Oral history of author. 1947. On file at the Clewiston Museum, Clewiston, Florida.

Thielen, Ray. Interview by author. Moore Haven, Florida, June 2000. New South Associates.

Ray Thielan, former lockmaster of Moore Haven, was interviewed on two occasions in June 2000 at his home in the town of Moore Haven. Mr. Thielan is the last lockmaster who not only remembers the actual construction of the Ortona and Moore Haven facilities, but who also worked on the construction of the Herbert Hoover Dike during the Depression. Mr. Thielan retired in 1980 from the Moore Haven facility.

Several individuals were consulted for advice and source information. They included Mr. Ed Miller of the Corps' South Florida Operations Office, Clewiston District, Mr. Larry Lucky, property tax assessor for the Glades County Courthouse, Mr. Charles Drawdry, Lockmaster at Ortona, Mr. Mel Wills of the Kissimmee/Orlando Pioneer Museum, Mr. J.B. McClary of the Clewiston Museum, and Mr. Chris Hunter, archivist at Schenectady Museum, New York.

D. Bibliography

Primary and unpublished sources:

"Datum Planes in the Caloosahatchee River - Lake Okeechobee Drainage Areas, Florida." Letter from the U.S. Coast and Geodetic Survey and the U.S. Engineer Department, mid-to-late 1930s. Copy obtained from the Corps' South Florida Operations Office, Clewiston District.

Florida Department of Natural Resources (DNR). Division of Land Management, Bureau of State Lands (BSL), Land Title Section. *Field Notes*, Vol. 211, p. 256. Located in Commonwealth Building, Tallahassee.

National Register of Historic Places Inventory - Nomination Form: "Lock No. 1, North New River Canal." *Florida Master Site File*, 1977. Located in R.A. Gray Building, Tallahassee.

Operation Manual: Ortona Lock. Department of the Army, Jacksonville District, Corps of Engineers. SAJP 1130-2-4. 18 October 1971. Copy obtained from the Corps' South Florida Operations Office, Clewiston District.

Operation and Maintenance Manual: Central and Southern Florida Flood Control Project As Maintained by the Corps of Engineers. Department of the Army, Jacksonville District, Corps of Engineers. SAJP 1130-2-10. 1 December 1971. Copy obtained from the Corps' South Florida Operations Office, Clewiston District.

U.S. Army Corps of Engineers. *Annual Report of the Chief of Engineers*. Vol. 1, 1879.

_____. *Lake Okeechobee and Okeechobee Waterway Historic Properties Management Plan*. February 1997.

_____. *Okeechobee Waterway*. Map collection. Jacksonville Florida District. 1948.

Newspapers:

Glades County Democrat, 26 April 1935 – 16 July 1937.

Stuart Daily News, 22 March 1937 – 20 July 1937.

Stuart News, 9 January 1964.

Secondary and published sources:

Buker, George E. *Sun, Sand, and Water: A History of the Jacksonville District U.S. Army Corps of Engineers (1821-1975)*. Washington D.C.: United States Government Printing Office, ca. 1980.

Clausen, C.J., M. Almy, C.S. Clausen, M. Fryman, J. Milanich, J. Van Winkle, J. Wallace, and B. Wharton. *Cultural Resource Survey of Portions of the Port La Belle Development Tract, Glades and Hendry Counties, Florida*. Report submitted to General Development Corporation, Miami, Florida, by CCC Enterprises, Inc., North Port, Florida. Survey Project No. 107, July 1980.

Farson, Robert H. *Cape Cod Canal*. Yarmouth Port, Massachusetts: Cape Cod Historical Publications, 1977.

Glades County Board of Commissioners. *Glades County, Florida History*. Moore Haven, Florida: Rainbow Books, 1985.

Hanna, Alfred Jackson and Kathryn Abbey Hanna. *Lake Okeechobee: Wellspring of the Everglades*. American Lake Series, New York: The Bobbs-Merrill Company, 1948.

Kimes, C.A. and L.C. Crocker. "The Caloosahatchee River and Its Watershed: A Historical Overview." Forty Myers, Florida: Submitted to Florida Gulf Coast University Library Services and South Florida Water Management District under subcontract from Florida Center for Environmental Services, Agreement No. SR819, FAU DSR No. 96-127, revised September 1998; available from www.ces.fau.edu/library/caloos-watershed/index.html;INTERNET.

Will, Lawrence E. *A Pioneer Boatman Tells of Okeechobee Boats and Skippers*. St. Petersburg, Florida: Great Outdoors Publishing Company, 1965.

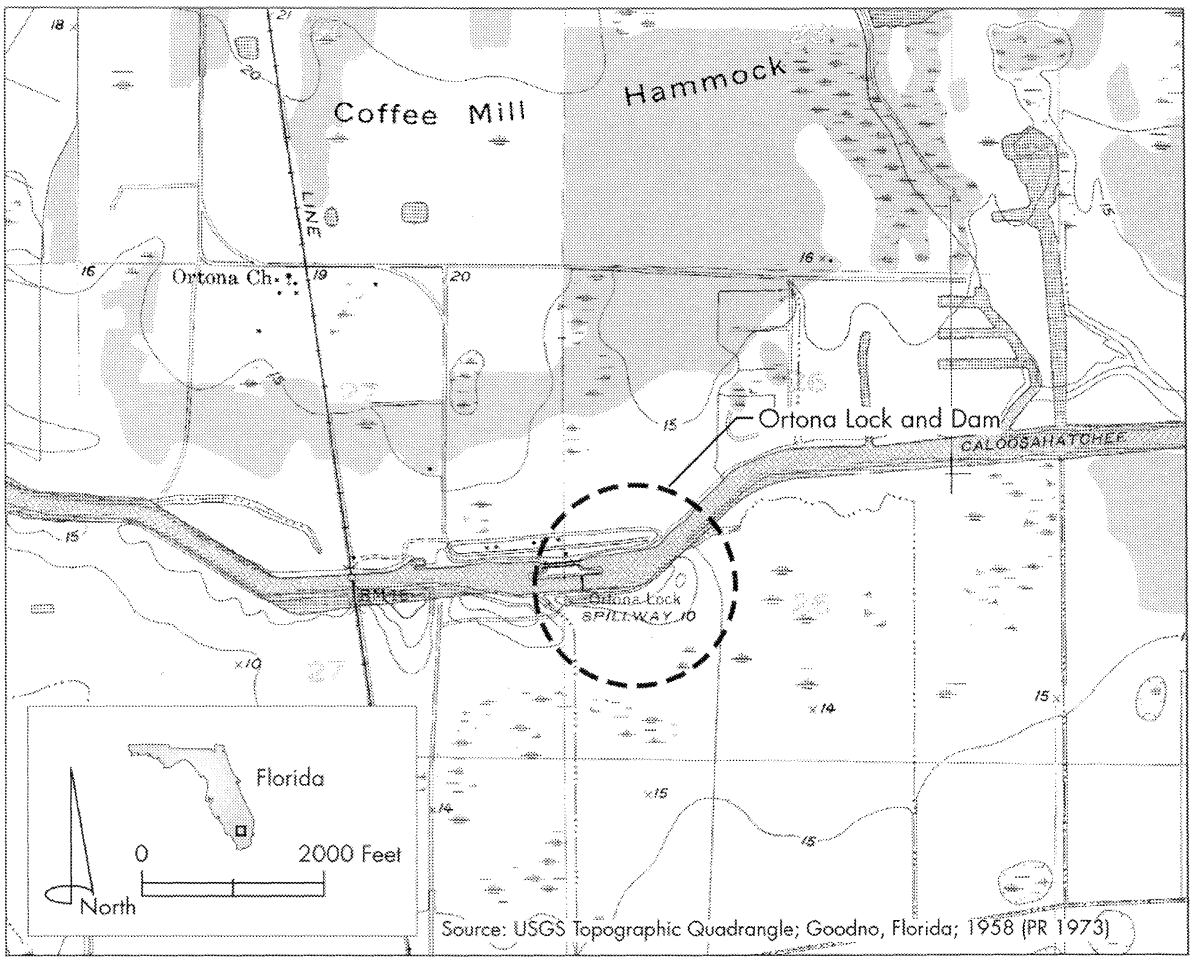
_____. *Okeechobee Hurricane and the Hoover Dike*. Belle Glade, Florida: Glades County Historical Society, 1990.

E. Likely Sources Not Investigated

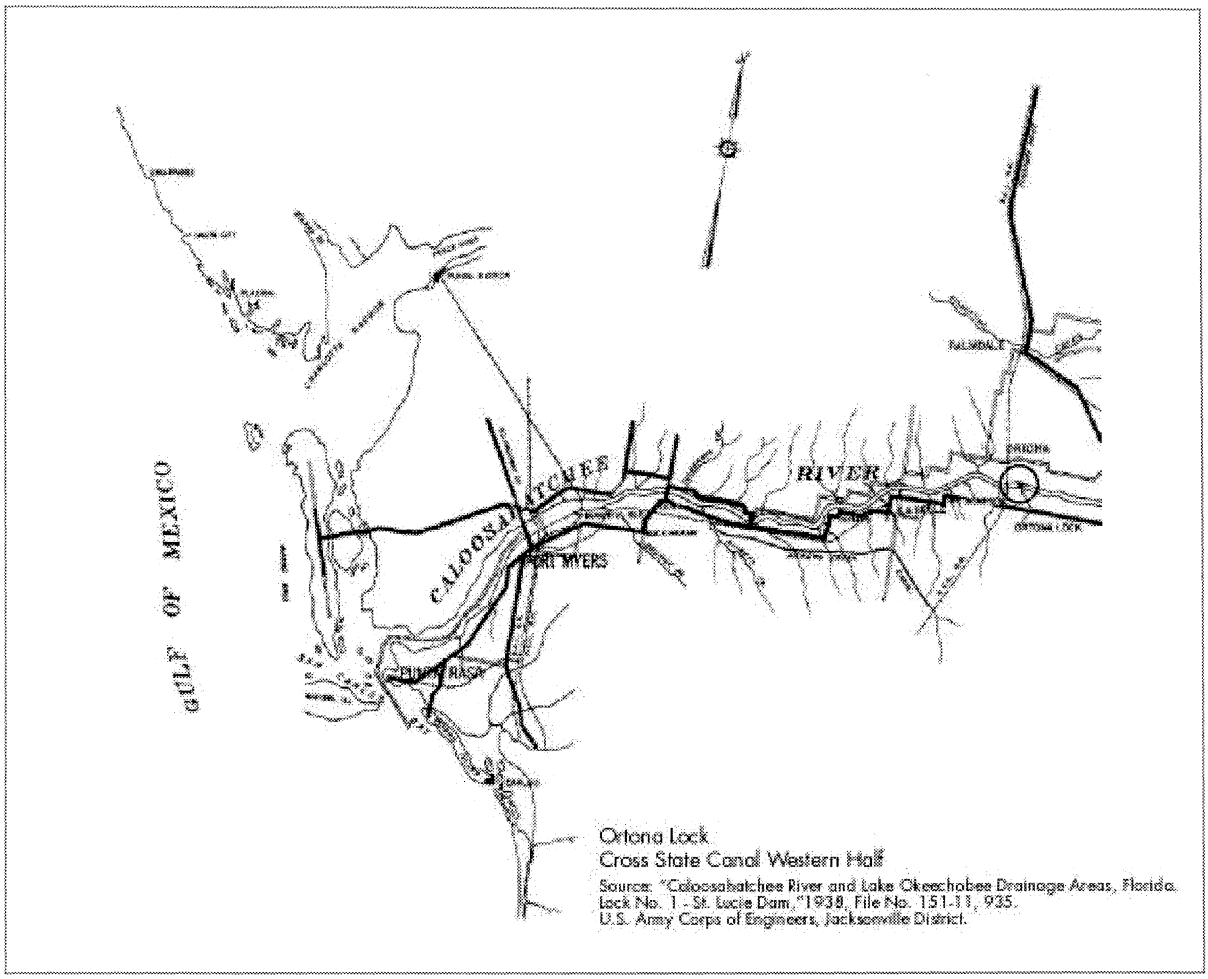
During the course of our investigation, several archival repositories were examined including the Historic Museum of South Florida in Miami, Florida. While obtaining copies of photographs and documents at this location, it was discovered that the University of South Florida in Miami has one of the largest collections of historical documentation and photographs of the Everglades' history. However, one must be a student to gain access to their archival materials. In addition in June 2000 through April 2001, their archival repository was in the process of being curated and relocated to another facility within the university.

Larry Lucky provided a list of individuals who are related to the former lockmasters or who might have additional information about the construction of the locks. These individuals include the following:

Donald Peeples of Citrus Center (the place of Caloosahatchee Lock No. 2) has photos of Lake Flirt, Lock No. 2, and Ortona and Moore Haven locks. Marvin Williams of Ortona is a member of the Sebring Historical Society, and he was an old historian of the Moore Haven area. Bart Cox's daughter, Lois Calcin, lives in Clewiston and may remember her father's position as lockmaster of Ortona.

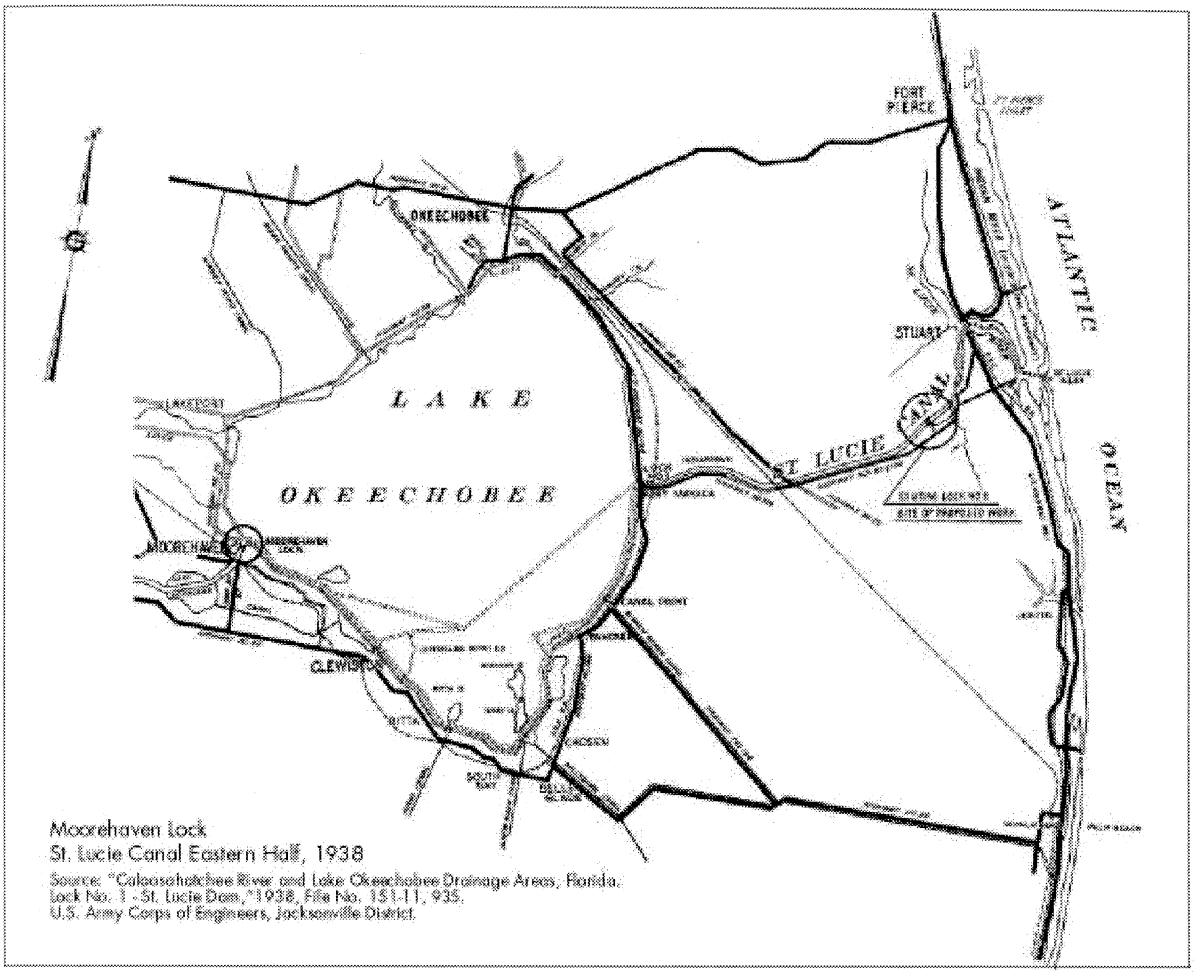


USGS Topographic Quadrangle Location Map of Lock No. 2- Ortona.



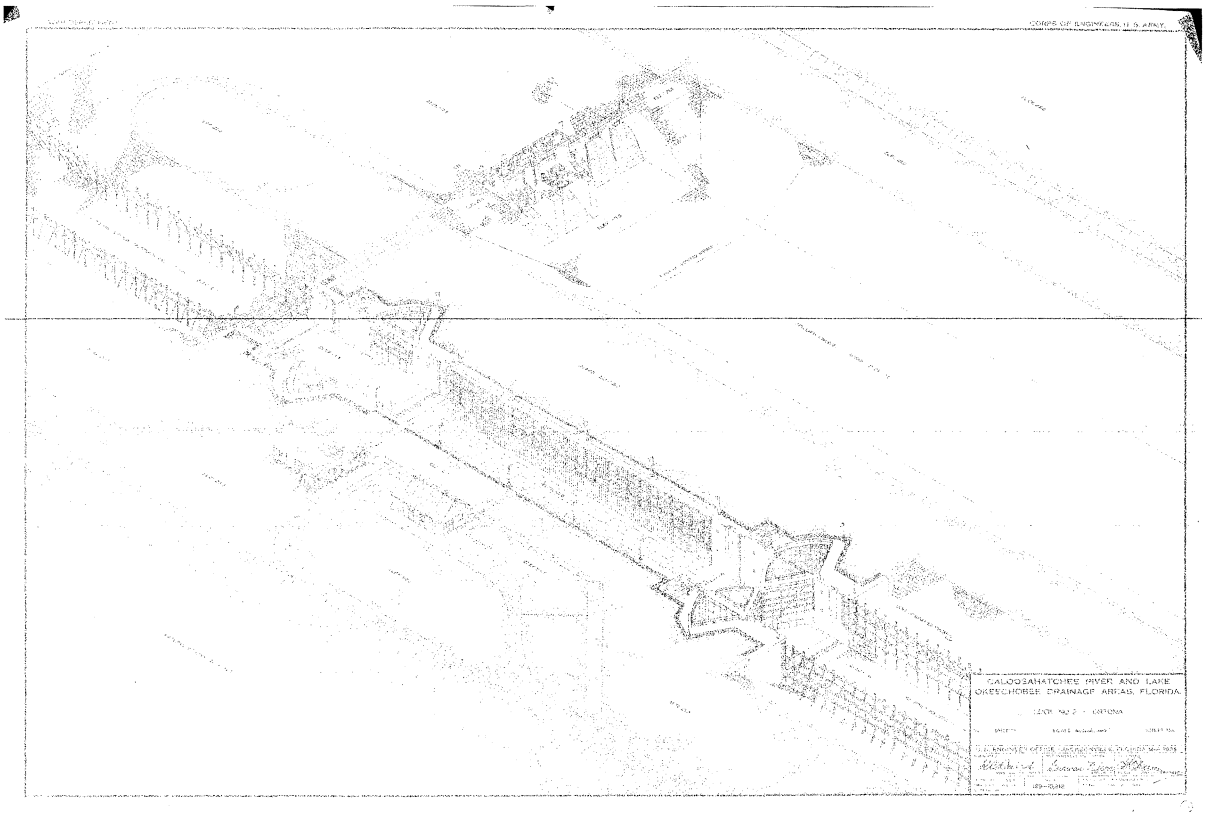
Ortona Lock
Cross State Canal Western Half

Source: "Caloosahatchee River and Lake Okeechobee Drainage Areas, Florida. Lock No. 1 - St. Lucie Dam," 1938, File No. 151-11, 935. U.S. Army Corps of Engineers, Jacksonville District.



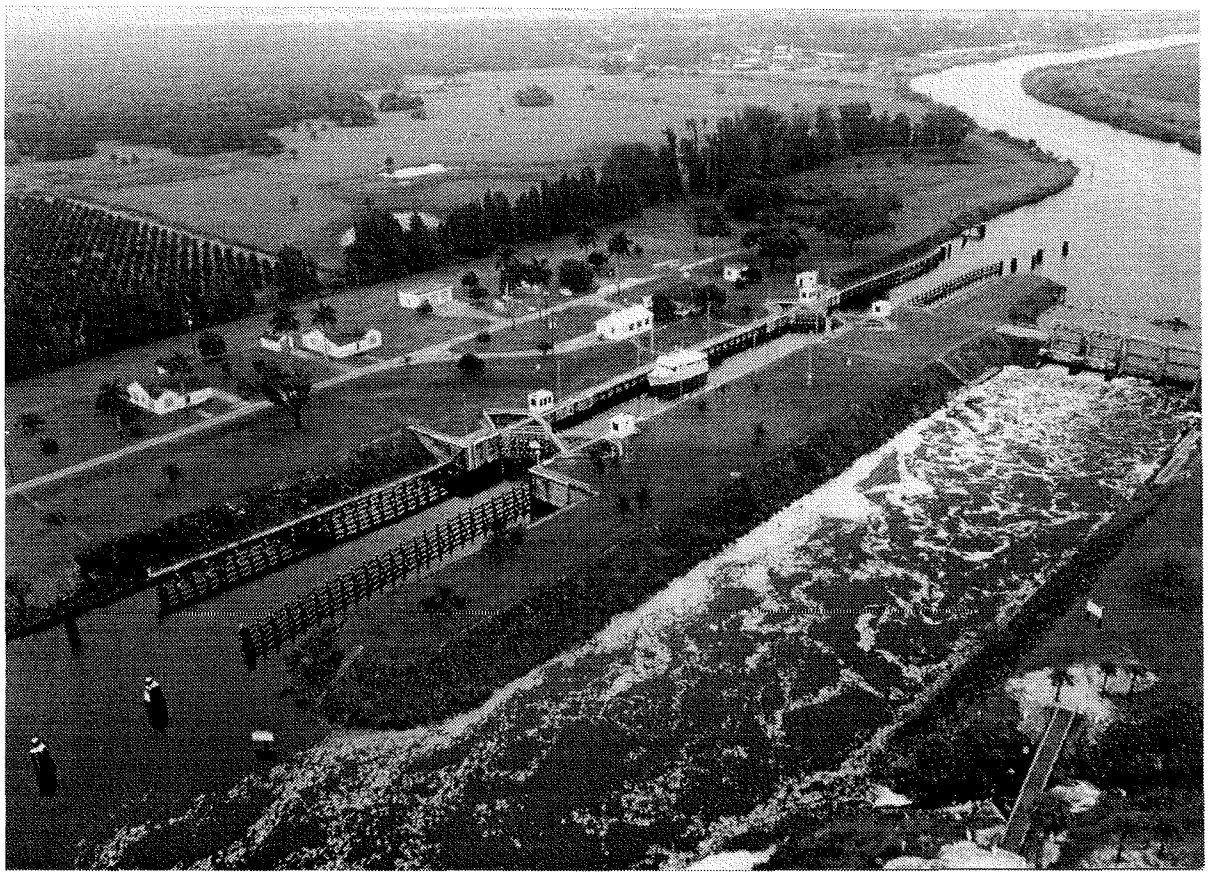
Moorehaven Lock
St. Lucie Canal Eastern Half, 1938

Source: "Caloosahatchee River and Lake Okeechobee Drainage Areas, Florida. Lock No. 1 - St. Lucie Dam," 1938, File No. 151-11, 935. U.S. Army Corps of Engineers, Jacksonville District.



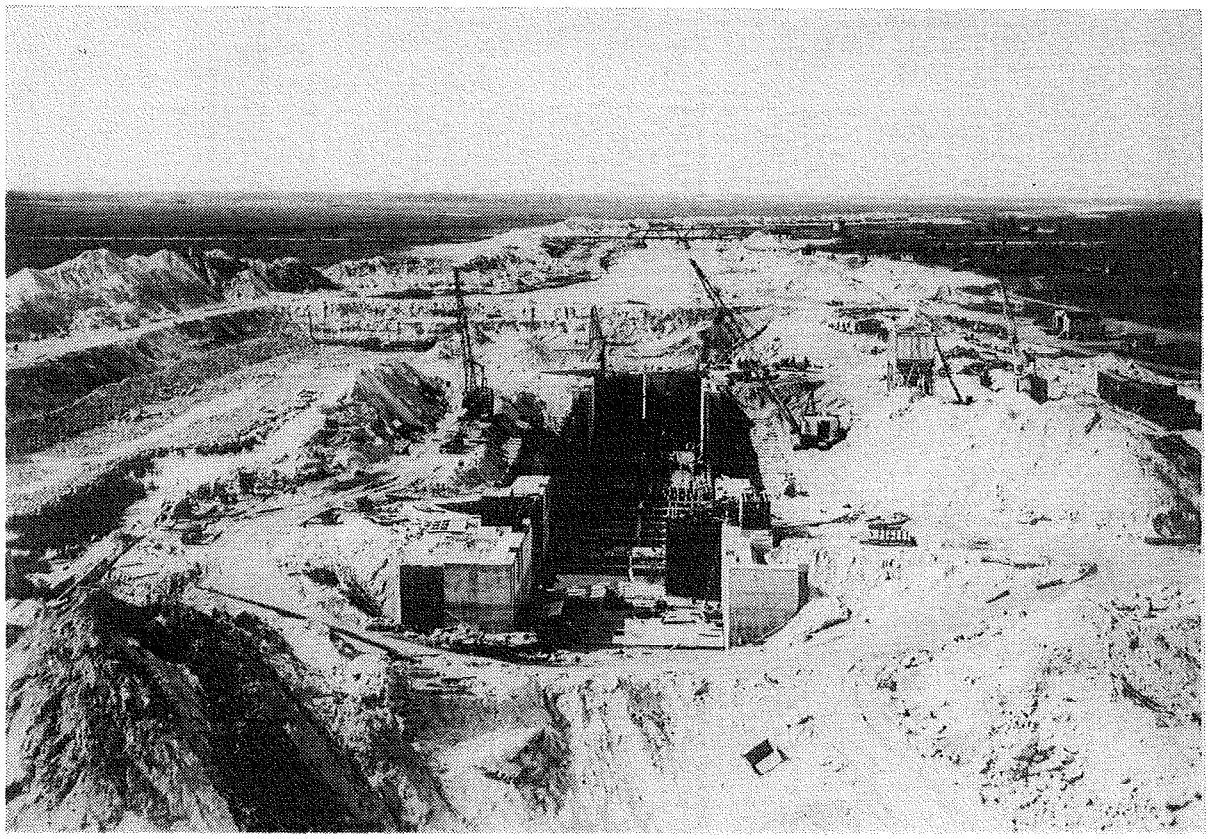
"Lock No. 2 Ortona. Caloosahatchee River and Lake Okeechobee Drainage Areas, Florida. U.S. Engineer Office, Jacksonville, Florida." March 1935.

Source: U.S. Army Corps of Engineers, Jacksonville District



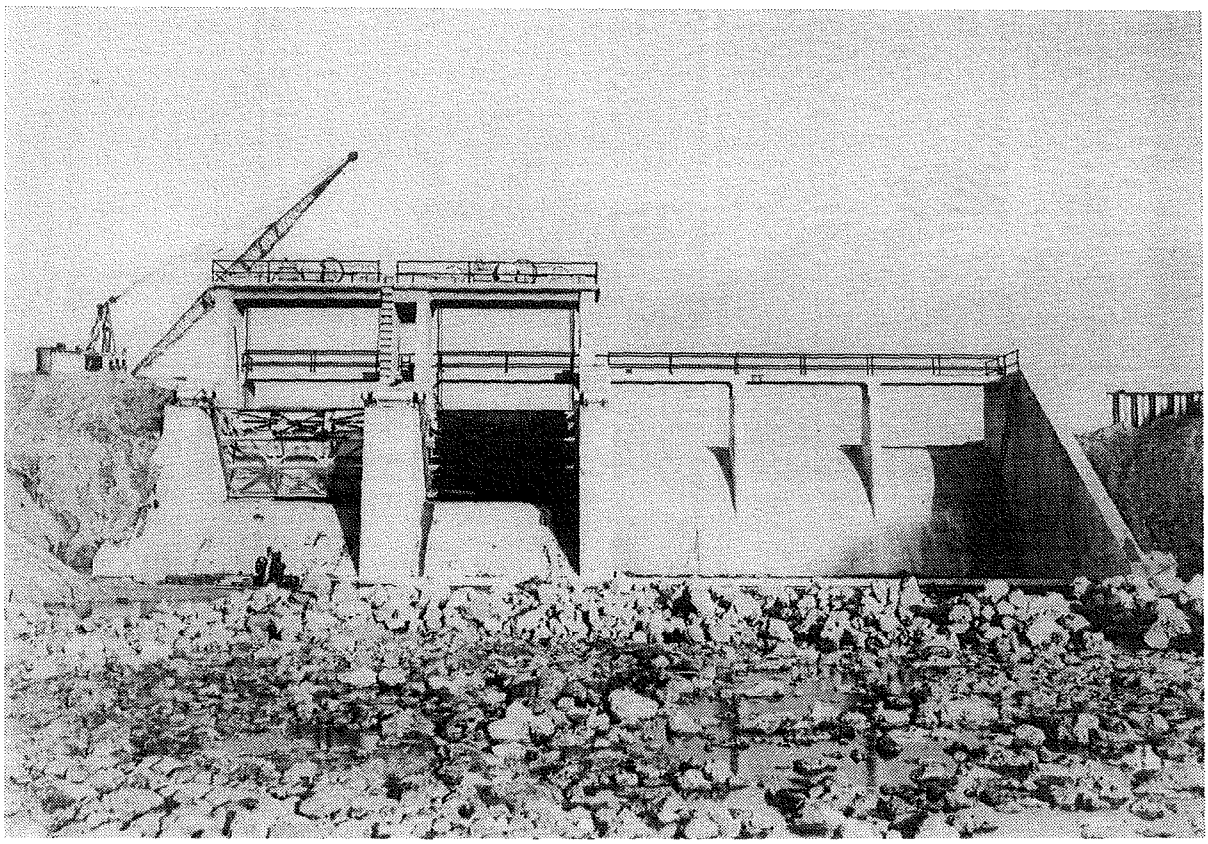
Aerial view of Ortona Lock and Spillway- Two of the four former lock attendant's quarters are present. These houses were removed after 1989. The vast undeveloped landscape is visible in the background. A recreational park has been added and is seen in the lower right foreground. View is to the northeast.

Source: Central and Southern Florida Flood Control District Office (West Palm Beach, Florida)



Constructing Ortona's Lock Chamber, mid-1930s.

Source: War Department photograph courtesy of Mr. Ray Thielan



Spillway under construction, 1937.

Source: War Department photograph obtained by Mr. Ray Thielan, former lock master of Ortona and Moore Haven Lock & Dams, and copied with his permission.