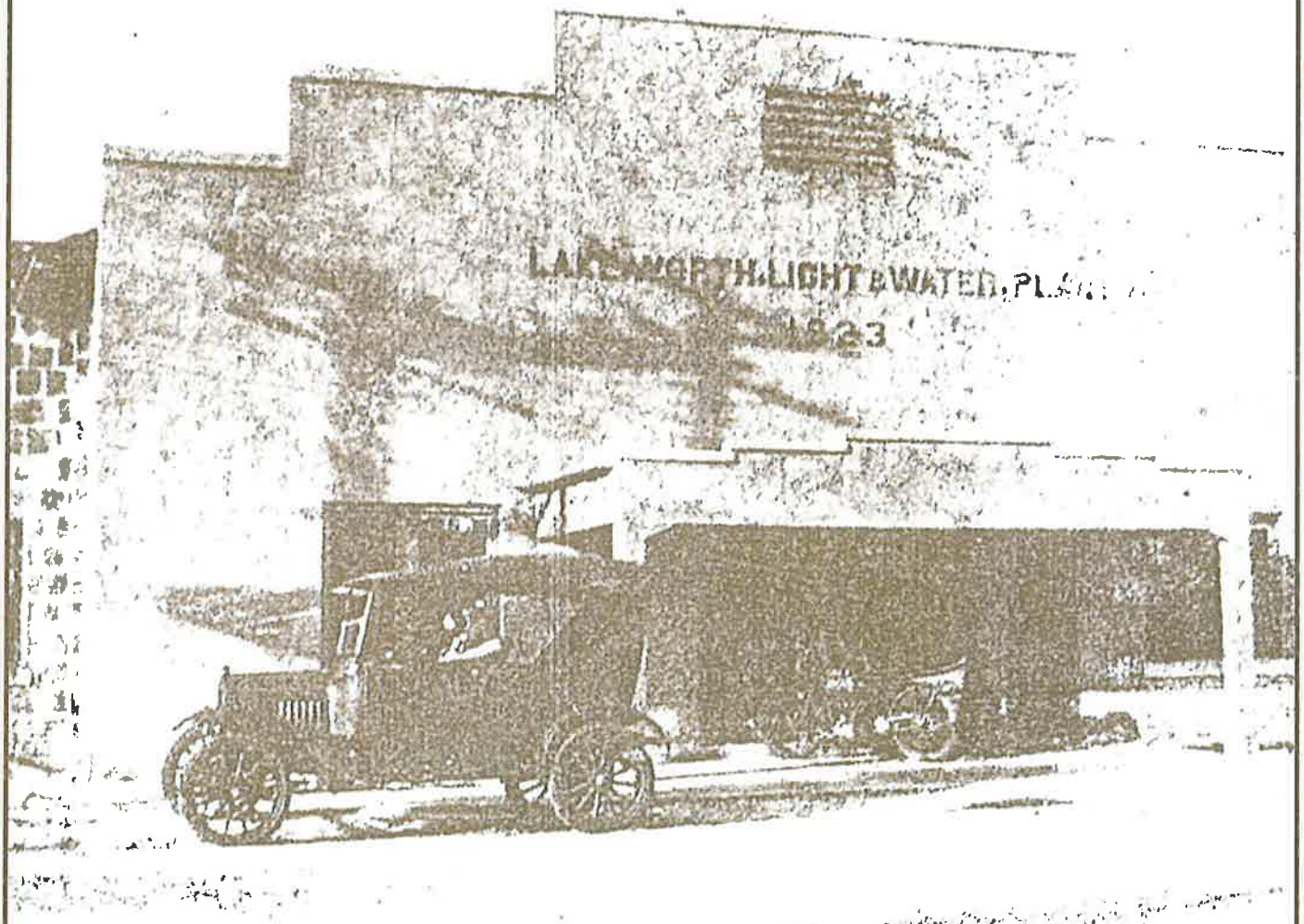
The City of Lake Worth, Florida
Utilities Department

A Brief History of the First 100 Years
Your Utility
from 1914 to 2014



We should all enjoy and learn from our history, both good and bad, so that we can re-create the circumstances that brought us success while preventing the mistakes of the past. This is not a detailed history but just a quick glimpse of the past 100 years (plus a few preceding years). This document is a collection of information found through multiple sources. While it would be difficult to credit all the sources as many have been republished over the years, a quick thank you is granted to the following where much of this history was garnered:

Newspaper articles from:

1) The Palm Beach Post
2) The Lake Worth Herald (Predecessor to the Palm Beach Post)
3) The Lake Worth Leader
4) The St Petersburg Times
5) The Tropical Sun

Historical photos and records from:

1) The Lake Worth Historical Museum
2) The City of Lake Worth Archival Files
3) Electric and Water Annual Reports
4) State Archives of Florida
5) Library of Congress
6) The National Archives
7) The Florida Memory Project

On May 18, 1914, excited pioneers of Lake Worth gathered to celebrate the turning on of the lights. Of all the departments of the City, the Utilities Department has experienced the pain and glory of being part of the city and shall be forever linked to its history. Wrought with good and bad, our history is like a quagmire of dreams collected over the years. So as we celebrate our platinum jubilee, hopefully within these pages you will garner a better understanding of your Utilities Department that truly serves you 24 hours a day, 365 days a year.

The utility's official birth was on October 28, 1913, when the Palm Beach Farm Company created the solely owned subsidiary, the Lake Worth Light, Water and Ice Company. The power project was considered an additional inducement to potential residents. The officers of the utility were remarkably the same as the officers of the Palm Beach Farm Company:
President – Percy Hagerman
Vice President William A Otis
Sec Treas Clarence E. Titus
General Manager/Engineer Orin Randolph
Superintendent W. Gandolph

A small building was constructed that year near the site of the present Florida East Coast Railroad station. Charles Senior was hired as the first superintendent and Orin Randolph as Engineer, and in 1914 the first engine was installed, a 40 kW, 60 hp DeLavergne diesel unit. Interesting that the specifications listed with the Federal Government for the well pump was a 60-hp diesel, so apparently that was the main load intended for this installation.

As a side note, Orin Randolph originally came to Florida in 1912 to carry out a drainage and agricultural development project for the Palm Beach Farms Company. He also became the chief engineer for the Lake Worth Drainage District and was involved in its land reclamation projects. Randolph became president of the Palm Beach Bank and Trust Company and president of the Bank of Lake Worth. He organized the Northwood Development Company, and between 1923 and 1926 served as vice president of the Pinewood Development Company. Randolph also served on the West Palm Beach City Planning Board.

Pioneer Life and the Utilities:

Lake Worth did not consist of much in these days, mostly tents and wooden shacks. In 1913 concentrated efforts were being made to organize the Lake Worth Light, Water and Ice Company. The necessity for street lighting became so great that the people didn't want to wait for electric service and kerosene lamps were provided on Lake Avenue from the railroad tracks to the lakefront between 17th Avenue and 6th Avenue.

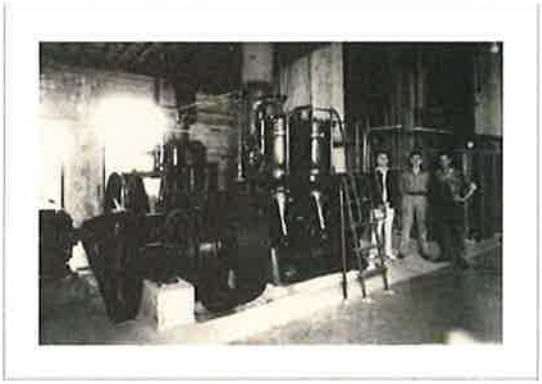
While some homes had wells, these tent facilities did not have any water service in them. A community water tank was constructed on the northwest side of the

location where the original clubhouse was located in Pioneer Park (current City Hall location) were residents could come with their buckets an barrels and fill them at the tank.

Dedication Ceremony of Clubhouse in Pioneer Park Showing Water Tank

The Night the Lights Came On:

Soon, Lake Worth built its own power plant. It was May 18, 1914, and a string of lights ran from the Lake Worth Water, Light and Ice Co. down Lake Avenue. The "TURNING ON OF THE LIGHTS" which took place at 6 p.m. that day. This date has been used to determine "ORIGINAL PIONEERS." The electric current echoed in a new era. The first Electric Plant was located on Lake Avenue and the Florida East Coast Railroad. (Where the shuffleboard courts are today) Lake Worth had modernized and the kerosene street lamp was relegated to the past, though most buildings still used oil lamps. The power plant mainly served street lights and the sign over Lake Avenue. It was not until November 1918, that Lake Worth would have 24 hour electric service.



Original generator

With this new power the city of Lake Worth pumped water through the Mains for the very first time on June 18, 1914. The water system consisted of a single well (6-inch diameter well about 72 ft deep) that fed one triplex 648,000 gallon 60 hp pump. The pump filled a 85 ft elevated tank (100,000 gallon capacity) There were 2 miles of pipes ranging in size from 4-inch to 12-inch that supplied 5 fire hydrants and 45 service connections in the downtown area. (Ludlow meters). Water pressure was maintained between 30 and 37 psi. The initial water rate was $0.18/1000 gallons. Based on a 3% cost of living index, that equates to $3.60 per 1000 gallons in today's dollars.

As the City was being platted, representatives from Palm Beach Farms were negotiating with the Florida East Coast Railway to provide transportation facilities. The location of the water facilities was crucial to the FEC which needed to be able to fill its steam engines on a regular basis as they went up and down the coast.

Watermian installation on Lake Ave - 1914

The First Bond Projects:

Bonds were sold to extend and improve the systems of water and lights. The first bonds were prepared on December 1, 1914. On November 18, 1915, the City provided separate bonds for Electric Plant ($15,000) and the Water Plant ($20,000).

7500 "Waterworks and Electric Light Bonds" were issued for $10 each under authority of an ordinance passed on the 15th day of December, 1914. The bond money to be issued for the purpose of purchasing, constructing extending and improving a waterworks plant and an electric light plant

In March 1916: The Lake Worth Light, Water & Ice Co. advertised a request for bids to install a new internal-combustion engine, generator and exciter, with switchboard. They also planned to construct 21 miles of distribution lines to supply electricity to homes and businesses.

A view of the old and new tanks in 1914

Advertising the New Town.

In 1915, the first lighted sign was installed across Lake Avenue and Dixie Highway. Its job was to advertise the City of Lake Worth, but it had one minor error - Lake Worth was spelled "LAKEWORTH" in one word. The first stop light was installed in 1925 at Lake Avenue and Dixie Highway.

1916 photo of Lake Ave showing power poles and illuminated LAKEWORTH sign

Lake Worth Purchases the Utility:

A 30-year franchise had been given to the Light, Water and Ice Company in 1913. Though it had an attached agreement stipulating "the city would have the right to purchase all the company's assets on or at any time before expiration of seven years from expiration date." On March 20, 1916, the City elected to purchase both the Water and Light systems. 1500 bonds were sold at $10 a share and 6¢ annual interest with a 1934 maturity date. Final value $10.60. The sale and transfer became final by resolution on June 13, 1916. While the warranty deed was filed on May 1, 1916 for a price of $38,230.91, the final bill-of-sale, which was not processed until February 19, 1920, was for $11,140.19. Interesting how 1920 was exactly 7-years form when the franchise was issued. All but 392 of the shares were redeemed which were finally cancelled in 1971.

Original Utility Plant

Anson F. Senior became the first city employee to be superintendent of the Lake Worth Water, Light and Ice Company in 1916. Senior was one of the highest paid employees of the city, making $250 dollars a month. But, Senior retired only a year later in 1917. 30-year old Ward Randolph replaced Senior on August 28, 1917. His contract called for a monthly salary of $300 dollars per month. In 1918 Randolph signed, an unheard of, ten year contract with the City.

The first electric meters were installed on February 18, 1919.

Growing a Young Utility:

When City officials bought out the established Lake Worth Light, Water and Ice Company the electric plant consisted of a single 40-kW generator. To put this in perspective, the average portable generator purchased for hurricane use is 7 to 10 kW. A second generator unit,-another DeLavergne 60 kw, 100 hp, was purchased between 1916 and 1918. During the next few years the growth of the Light and Water Plant was remarkable. A 250 kw, 400 hp DeLavergne was added in 1923 and in 1924, using these three generating units, the total capacity was 500 kW. By January 1923 almost 2000 light and water bills were being issued every month. Two McIntosh-Seymours, each rated

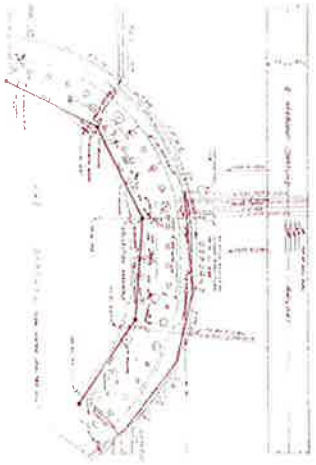
at 550 kw, 750 hp, in 1926 and 1927; and a 650 kw, 1000 hp DeLaval in 1939. Despite the depression of the 1930's, the power plant contributed more than 50 percent of its annual revenue to the general fund.

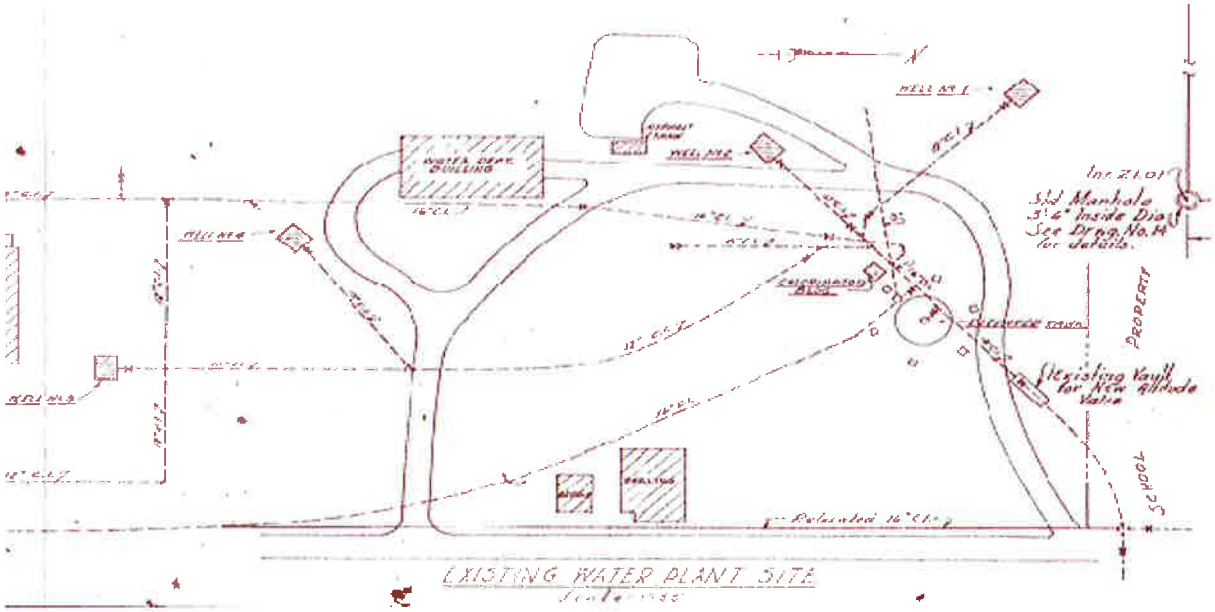
1926, the City and the water utility expand:

In 1926 the Pioneer Investment Company platted and built Worthmore Park just north of the then city limits. As part of their construction they installed water distribution piping. The city incorporated this area and purchased the distribution system for $15,000 which was the amount of taxes the city collected over the next five years for the properties. The final payment was made in 1930 for $6000 by then Commissioner Hammond, who was the only person besides the mayor authorized to sign checks. Commissioner Hammond was a stock holder in Pioneer Investment and the City's treasurer was their secretary at the time.

The Waterworks move west:

Due to the high sulfur content and rusty color of the water from the original municipal well it was decided to move the waterworks. In the late 20's a new waterworks was opened on "the hill" west of A Street on the east side of the Seaboard Airlines Railroad. The land was originally owned by the SBRR and was going to be a large storage yard for goods shipped via the railroad, but the SBRR decided the station they had between 4th Ave N and 7th Ave N was all they needed to serve Lake Worth and the land was sold to the City. The City bought 15 acres on the hill south of the high school for $100,000 cash and lake worth drilled the wells here. The waterworks was just a collection of wells around the site, and a water tower. A second tower was also erected in Worthmore Heights at the north end of the City. The water was tested each week by E. L. Ellby of the State Board of Health, and reported of good quality and without fermentation or contamination.





The Old High School Water Tower

However, the water was not satisfactory to users, especially in the northern part of the city. The iron content is hugely evident and a trace of algae has brought many complaints. The water was provided via a 1000-foot-long perforated pipe that was installed just inside the shoreline curved along the east bank of the lake. The intake structure, connected to an 18-inch reinforced-concrete pipe, sits in about six feet of water. This water then flowed across Lake Osborne Dr and sent to the plant across the tracks via a 16-inch reinforced-concrete pipe that lead to the pumping facility. It has been suggested to use the wells on the hill for fire protection and use water from the old rock strata at the city power plant for general use. This is said to be under consideration. In 1938 chlorination was added at the waterworks to treat for disinfection against bacteria.

City uses ice plant well and pump on North Dixie to give relief:

Back in 1930 the complaints from residents of College Park and other northern sections of the city have become a sore spot with city officials who realized patrons were suffering in these northern sections. There was a private ice plant (New Electric Ice Company) that was located at then 28th Ave and Dixie Highway. 28th Ave is now 18th Ave N on North Dixie Highway. The city signed a contract with the owner to use the water from the New Electric Ice Company's well. This plant was used to provide water for a short time in 1926 but a dispute quickly ended that connection. Now in 1930 details were worked out by the city engineer and Manager E. M. Andrews of the Ice Plant whereby the City purchased the motor and the pumping equipment of the company and pump the overflow from the well at the plant and pumped it into the water mains. The quality of water considerably bettered until a new treatment plant could be built.

1930's and the Depression hits:

How did the City of Lake Worth fare during the Great Depression back in the 1930's? Practically the only cash money the City received came from the Light and Water operation. In 1933, 84% of the General Fund was provided by contribution from L&W Fund, in 1934 it was 80%, and in 1935 it was 77%.

The New Deal:

The Public Works Administration (PWA), part of the New Deal of 1933, was a large-scale public works construction agency created by the National Industrial Recovery Act in June 1933 in response to the Great Depression. It built large-scale public works. Its goals were to spend $3.3 billion in the first year, and $6

billion in all, to provide employment, stabilize purchasing power, and help revive the economy. Originally called the Federal Emergency Administration of Public Works, it was renamed the Public Works Administration in 1939 and shut down in 1943.

In 1937 the old wooden bridge that connected the mainland to the beach was replaced by a concrete bridge. At the same time this bridge was being constructed a 6-inch cast iron water main was installed on this bridge. This 6-inch main ran up the old route of Lake Avenue into the Casino property and then down the west side along what I now the western part of the loop road. This line provided water service until 1973 when FDOT was replacing the old concrete bridge with the current Bastille bridge. Because of the latter the water line that crossed the old bridge needed to be abandoned. By this time there was another source of water along the barrier island that was operated by West Palm Beach which supplied water down to South Palm Beach. This is when the City connected the beach property to that system.

The electric plant was reconstructed as part of a PWA project The Light and Water Department's administrative offices were housed in City Hall that was now located at 414 Lake Avenue in what was previously the Second School.

1938 view of power plant from Lake Ave and the FEC tracks.

Power Plant seen in upper left hand corner behind Auditorium (City Hall)

Operators of the Lake Worth Power Plant, 1942
From left to right: Louis Carroll, Jim Vinapoole, Red Duggar, Harold Eller, John Giles, Archie Herbst, Jerry Wingate (Chief)

Sanitary Sewers and Septic Tanks:

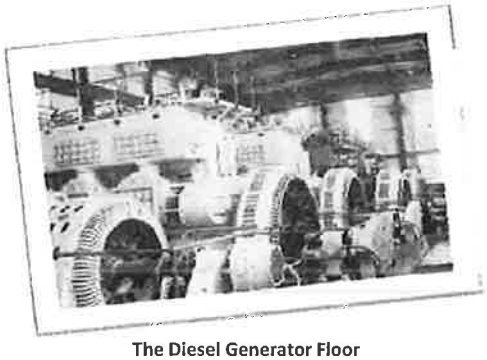
Lake Worth's original sanitary sewer system was constructed in the mid 1920's and early 1930's. This early system consisted of 8-inch gravity sanitary sewers, larger trunk lines and interceptors, and a series of. The collection system consisted of 8-inch to 15-inch vitrified tile gravity sewers, brick manholes, six reinforced concrete septic tanks and cast iron outfall pipes that emptied into the Lake Worth Lagoon, now known as the Intracoastal Waterway. The original focus of sewage disposal was to convey the raw sewage to the massive septic tanks where the solids would be decomposed. The fluids would carry over from the tank into Lake Worth where it would be diluted and dissipated. The septic tanks were each located in street right-of way about 300 feet from the edge of the Intracoastal with the exception of District 3, which was at the entrance to the Golf Course and had a outfall pipe that ran across the course. The tanks in order of their district were at 3rd Ave N, 2nd Ave S, 7th Ave N, 6th Ave S, 11th Ave N, and 10th Ave S. Flushing manholes were installed at the start of each sewer branch. These manholes would hold water (rainwater or from a hydrant) until almost full, then a flapper valve, like in your toilet, would open and send a slug of water down the sewer scouring anything that was lying in the pipe. This likely overloaded the septic tanks during major rains and send solids into the Intracoastal. While expanded on, this system remained in use as the City's only wastewater facility until approximately 1957.

Post World War II Growth and a new Power Plant:

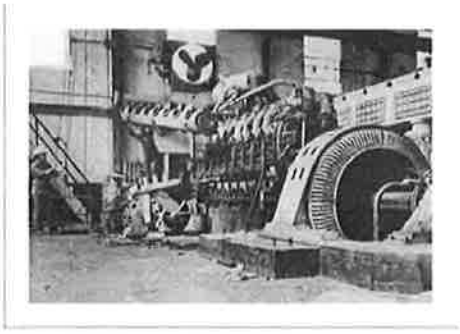
After the end of World War II, Lake Worth experienced a phenomenal surge of growth and to cope with the electric demand, three more diesel units were purchased between 1947 and 1949.

They were two Busch-Sulzer generators each rated at 1439 kW, 2040 hp, and a 1100 kw, 1700 hp General Motors unit. All this additional equipment taxed the facilities at the old building and plans were drawn for a new power plant on College St.

The Power plant that housed the new diesels



The Diesel Generator Floor



Maintenance Crews work on a diesel.

The "Light and Water Company" serves the General Fund:

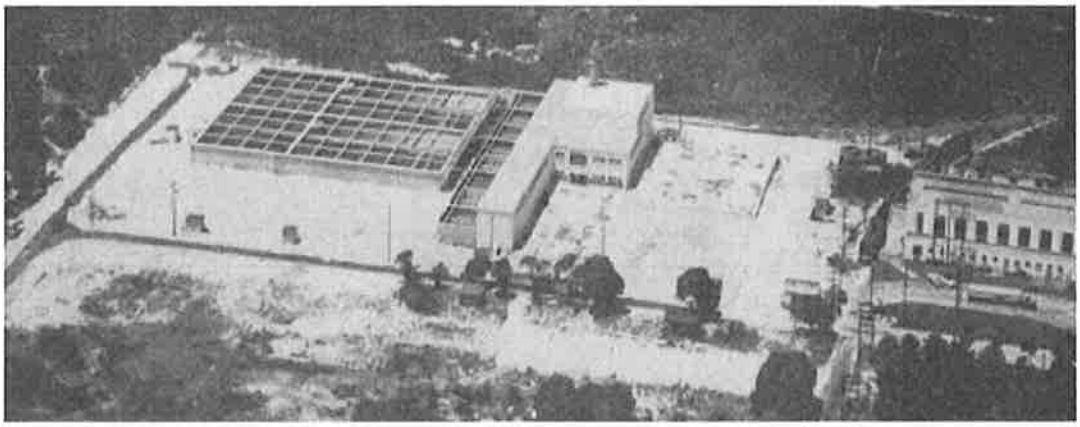
In the 1950 annual report from City Manager Frank Clark, it stated "The Light and Water Company had a nept profit of $332,935.96, which distribution was made in the following manner: To capital $59,376.08, advance in recreational revenue funds $10,000; debt reduction $30,000; surplus and reserves, $70,248.33 and to operation of the general fund of the city , $145,311.55." So, over 43.5% of the net revenues went to fund the rest of the city, while another 3% was given to the recreation department.

The City builds a Water Softening Plant:

In August 1952, as part of a planned $1,775,000.00 water and light expansion program, the City Commission decided to advertise for bids for the construction of a $200,000 water treatment and storage plant to be located just south of the new Municipal Power Plant. This project included a 1,000,000 gallon concrete reservoir, purifying and cooling facilities and pumping equipment. As with most major Lake Worth projects it didn't get awarded until 1957 after numerous changes. During this time there were proponents arguing that Lake Worth Water should just merge their system with West Palm Beach instead of building a new plant. In September 1957 the Commission authorized the issuance of $1,630,000 in electric/water certificates (bonds) to build the new 12 MGD water treatment facility.

The City broke ground on the project in 1957 and completed it 18 months later in March 1959, when the City officially started the new lime softening (coagulation) treatment plant at 301 College Street. Constructed at a cost of $1.6 million, much more than the original $200,000 estimate eight years earlier, the new facility was designed to serve the city for the next 10 to 15 years with its original capacity of 12 mgd (about 3.5 MGD used at the start). Treatment consists of rapid mixing, flocculation, sedimentation, recarbonation and filtration. The two combination flocculation-sedimentation-recarbonation units are each divided into two sections to avoid an extremely long structure. Each section is 40 feet wide by 240 feet long, with an average water depth of 12 feet.

Water was provided by 11 wells, varying in depth from 92 to 144 feet. These wells tapped the Tamiami aquifer (now known as the Surficial Aquifer), a porous limestone formation lying along the Florida East Coast. The water, although potable, is hard and in some cases highly discolored. A second



source not being used but available at a moment's notice was the Lake Osborne line located along the western edge of the city about a quarter-mile from the plant.

While the capacity could have been increased to 16 mgd with planned additions at relatively little cost, this was never done. This was for two reasons. First that planned capacity was based on the City annexing lands out to the Florida Turnpike which did not occur, and later on, withdrawal restrictions from the Surficial Aquifer made this plant exceed the capacity of water that could be sent to it for treatment. This plant won the 1960 award for Florida Board of Health award for best plant in the Coagulation and Filtration 10 MGD to 25 MGD category.

David B. Lee, Director and Chief Engineer of the Bureau of Sanitary Engineering with the State Board of Health, was the special guest at the dedication ceremony

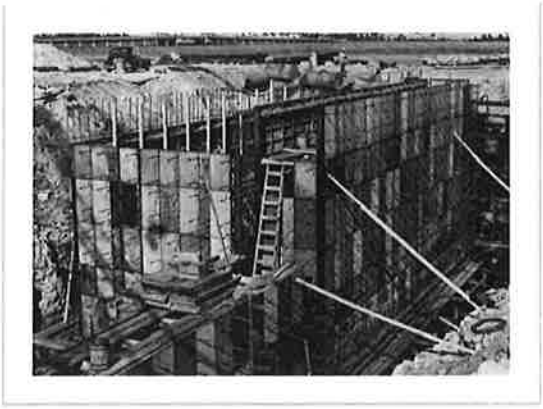
David B. Lee at WTP Dedication (1960)

The Federal Water Pollution Control Act of 1948 Changes Lake Worth Sewers:

A Significant expansion of the City's collection system occurred connecting homes from the C-51 canal all the way south to 18th Avenue South. This, as in many other parts of the Country was causing health and odor problems in the receiving waters. The Water Pollution Control Act, authorized the Surgeon General, in cooperation with other Federal, state and local entities, to prepare comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries and improving the sanitary condition of surface and underground waters. During the development of such plans, due regard was to be given to improvements necessary to conserve waters for public water supplies, propagation of fish and aquatic life, recreational purposes, and agricultural and industrial uses. it became apparent that, due to excessive discharges of raw sewage, the pollution problems in Lake Worth Lagoon had reached unacceptable levels and the City began plans to stop the sewers from going into the Intracoastal.

In 1955 construction of a master sewer pump station and ocean outfall pipe began. The station was at the location of the District 2 septic tank and two 36-inch interceptor sewers were constructed on the west side of Bryant Park and the Golf Course to disconnect the remaining districts from their septic tanks and tie them into the pump station. A pressure main (outfall) was then constructed across the intracoastal and up the north side of the fishing pier at the beach to a final discharge location approximately 5,300 feet into the Atlantic Ocean, at a depth of approximately 90 feet. The Municipal Fishing Pier was actually constructed to serve as a construction pier and staging point for the barges and materials for the ocean outfall installation. If it weren't for that pipe there may not have been a pier.

Master Pump Station (1957)



What was above ground was just a portion of the station

Man, it's COLD out there:

The power plant met all challenges of continued accelerated demands until the unprecedented, record breaking cold winter of 1957-58. Even then, it produced to capacity - 14,230 kW, but as demand exceeded capacity, rolling black-outs were implemented to protect the equipment. The City Commission met in emergency session in early 1958 and authorized purchase of two 1000 kW, 1400 hp Electromotive portable rail units. They proved so economically feasible and efficient that two more were acquired in 1959 to assist with peak loads.

Installation of Outfall under Intracoastal

First portable diesel arrives at power plant

The First Privatization Attempt and FPL:

In May 15, 1958 the Florida Power & Light Company made a proposal to the City for a 30-year lease of the electric system. The City had a comparative analysis done to look at continued municipal electric system operations vs. operations by FPL.

In July the City had a comparative study done to determine the proposal's viability. The aim of the projection was to develop the total net return to the City per year derived from the lease agreement and from the operation of the water system. Under the proposal, the City would have relinquished its rights to produce and distribute power for a monetary consideration and receive a fixed yearly income to compensate for the loss in City capital investment. The projection, which included operation of the water system, as well as the power system, indicated that the utilities would return an average of $585,775.00 per year to the general funds over the 30-year period, or a total of approximately $17,000,000 while operation by FPL would return an average of $185,720 per year to the City over the 30-year period or a total of approximately $5,400,000. It also stated that the City's retained interest in the electric system at the end of the 30-year lease period under FPL operations would be negligible while if it remained under municipal ownership, the City will have assets approximating $12,000,000. A note should be made here that the payment by the Utilities to the general fund is currently over 9-million dollars a year. If the system had been leased to FPL the City would have lost a large portion of its revenue for services that are furnished the general public, and the City would have needed to supplement the income by some form of taxation.

In July 24th 1958 Lake Worth held a special election to determine if the City should enter into a 30-year lease and have FPL take over the municipally owned power plant. Despite attempts by the JayCee's and other groups, the referendum failed due to a lack of participation of voters in the election. This was because even though the yes votes were over 5 to 1 over the no's, a clause in the charter required a 60-percent participation of registered voters which just wasn't met. The City Commissioner's opposed the lease as the City would have lost their cash cow. As a result of the referendum, a petition to recall all four commissioners was filed.

Electric Generation Moves to Steam:

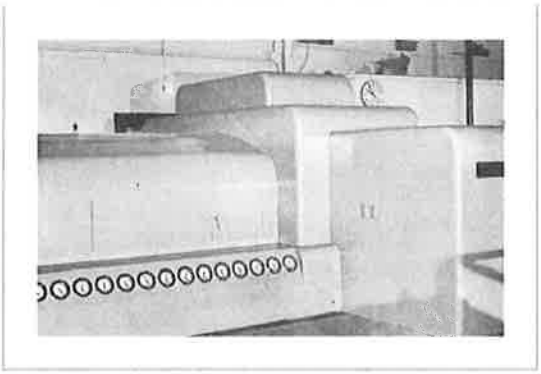
A 100 percent population increase from 1950 to 1960 caused a steady, constant rise in consumer requests for service. Summer months, once considered slack periods, had emerged into full time operations. New homes for permanent residents (with accompanying installations of modernized electrical equipment) were reflected at the plant, and officials recognized the urgent need for expansion.

For its first 45 years Lake Worth used diesel engines to generate all of its electrical power. Now steam takes over a good share of the load. This does not mean the diesels are through for the city still has-and needs-them for peaking power.

Plans for a new plant using steam generation were presented to the City Commission. The officials approved of the idea and called for a referendum vote as required by the charter. The $2,100,000 revenue certificate issue was passed and contracts for the new steam plant were awarded in Nov. 1959. Ground was broken in Feb. 1960. On August 25, 1961 the City dedicated the new 7500

kilowatt Steam Power Plant. Superheated steam goes from the boiler into a turbine at 600 psig and 825 °F. The new plant, was built is adjacent to the diesel operation, an advantage since the boiler will operate either on natural gas or black oil. The two story building is fabricated from structural steel dipped in lead paint with exposed brick masonry front and a roof of five ply tar and gravel. The interior has reinforced concrete walls, beams and floors as well as separate columns of concrete piers supporting the turbines. A 25 ton overhead sliding crane is accessible to the turbine or boiler. The basement was excavated to a 20 foot depth.

You can tell when these boilers are running as the cooling tower circulates approximately 10,000 gpm of water as a cloud of steam heads out the top. Although water is used from the water treatment plant, additional demineralization is necessary because of the precision equipment. A double line 2 bed demineralization and silica removal system is furnished with separate cation and anion tanks. Each unit is capable of producing demineralized water up to a rate of 15 gpm.



Our neighbors ask for HELP! Lake Worth begins providing sewer disposal for surrounding communities:

The Ocean Outfall was a significant addition to the Lake Worth Sewer System. The Federal Water Pollution Control Act had placed new regulations to protect the public waters and this method was at the time considered one of the better solutions as it was felt at the time that mother nature could properly treat the dispersed sewage out in the ocean. However for each community to build an ocean outfall would be overly expensive.

- On December 17th, 1962 the Town of Lantana entered into an agreement to connect to the City's system they were planning to construct to the Lake Worth system to provide for disposal of sewage through the City's outfall.

- On November 23rd, 1964 South Palm Beach entered into an agreement to connect to the Lake Worth system to provide for disposal of sewage

through the City's outfall. South Palm Beach voted to connect their potable water to WPB and sewer to Lake Worth. This was after Lantana apparently notified SPB they no longer wished to provide said services.

- On June 22, 1965 both the City of Atlantis and Palm Beach Junior College entered into agreements to connect to the City's system to provide for disposal of sewage generated by Atlantis through the City's outfall. Forcemains connecting them were installed in 1963.

Testing at Construction Completion for Lift Station 12, PBJC

- On December 5th, 1968 the Village of Palm Springs entered into an agreement to connect to the Lake Worth system to provide for disposal of sewage through the City's outfall.

- Due to the overloading of their system the Town of Palm Beach outfall plant would not be able to handle flows expected in the area from Sloan's curve to the town's southern limit. So on April 24, 1970 the Palm Beach Town Council authorized the Town Manager, Engineer and Public Works Committee to negotiate for partial use of the Lake Worth ocean outfall. Palm Beach proposed to Lake Worth Utilities Authority that it be allowed to reserve 10% of the LWUA outfall capacity with an option for 15%. It is interesting that the same town that had to get in would later do everything to get out.

- On September 27, 1972 the Town of Manalapan Council passed an agreement with Lake Worth to connect the South Palm Beach force main that sent its sewage Atlantis through the City's outfall.

Original Plant Relegated to history:

The original light and water plant located by the FEC tracks went into paper history in 1965 when the facility that included the power plant city garage and water tower was converted into a recreation center ansd shuffleboard courts. The power plant's foundation is under the parking lot, anf the water tower was demolished so the courts could be put in. The building was refurbished from Public Works/garage offices into the recreation center.

Lake Worth expands Sewer Collection System:

In the mid 60's Lake Worth took on a massive expansion of its sewer collection system. Sewer pipes were installed to service the areas west of A Street and south of 12th Avenue S. A pump station was also installed inside the Golf Course by 11th Ave N to repump flow from the areas west of Dixie into the interceptor main in the north part of the City.

The Utilities Department Becomes an Authority:

The Lake Worth Utilities Authority was created Special Legislative act of the State of Florida Chapter69-1215 placed into law on May 26, 1969. At the time, it common place for the Commission spend the utility's maintenance and capital monies on other uses around the city. The bill was designed to place the City's power and water plants in the hands of a "non-political" board of directors. The new Lake Worth Utility Authority's charter was modeled after the Orlando Utilities Commission (OUC). The act was approved by the voters in the November election that year and the board was appointed by the Commission and became active in December 1969.

Mayor Kenneth Bradley envisioned that both the city and the utilities would be best served by divorcing the two unto separate units. He led the fight to have the Authority established and won the support of the citizens of the city.

Clifford C Blaisdell Hired as Utilities Director May 1968

The Lake Worth Utilities Authority held their organizational session in the City Hall Conference Room on Monday, December 1, 1969. Present were Messrs. William V. Blumet, Ronald M. Finch, Jr., Marvin J. DeVos, Robert G. Small and Lawrence D. Wetmore; also Utilities Director Clifford Blaisdell, Finance Director J. A. Kunkel and Deputy City Clerk Evelyn Alexander. The Authority's officers were elected:

Chairman - Mr. William V. Blumer
Vice Chairman Mr. Marvin J. DeVos
Secretary - Mr. Wetmore

1970 finalizes switch from Surface to Ground Water:

Up until 1959 the water going into the water treatment plant that was located west of A Street was predominantly from Lake Osborne. While the City did have three groundwater wells next to the plant, these just augmented the Lake Osborne Flow. By the time the Lime Softening Plant was installed in 1959 there were 11 wells and the Lake Osborne flow was just for augmentation. However, bacteria levels in the lake had been measured six times above the maximum levels to permit water sports. Due to health concerns, additional wells were drilled and the plant was disconnected completely from lake water

Lake Worth to Build a Sewage Treatment Plant:

On December 24, 1970, the City of Lake Worth received a Notice and Order from the Florida Department of Air and Water Pollution Control, acting under authority granted through the recently enacted General Law 70-82, requiring at least secondary treatment (90% removal of wastewater solids and biochemical oxygen demand) to all sewage discharged through the Lake Worth ocean outfall. In compliance

The City of Lake Worth was to evaluate sewage treatment alternatives and design the appropriate treatment facilities

necessary to meet these new state pollution control standards. The conducted feasibility study is to analyze disposal solutions and to make a recommendation as to the most economically and environmentally acceptable choice for the City of Lake Worth. Subsequently, a temporary operating permit was issued to the Authority which provided for continued use of the ocean outfall disposal system provided the Authority would meet a compliance schedule which required 90% treatment of the effluent discharged into the ocean.

Two solutions were considered; connecting to the Palm Beach County or Lake Worth could independently construct a sewage treatment plant and discharge treated effluent through the existing ocean outfall. Three sites were evaluated for the latter.

For the County solution all raw sewage from Lake Worth would be collected at the existing ocean outfall pumping station and pumped to an interconnection with the Palm Beach County sewerage system from where all sewage will be transmitted to the proposed Palm Beach County Regional Treatment Plant.

As far as interconnection with the Palm Beach County Sewerage System is concerned, the most important consideration is the rate at which Lake Worth will be charged for disposal and processing of sewage. Brockway, Owen and Anderson Engineers, Incorporated, of West Palm Beach, have estimated that participating costs for sewer interconnection between the City of Lake Worth and the Palm Beach County Coastal Region Sewerage Program would be 44c/1000 gallons of sewage discharged for 1975, decreasing to 38c/1000 gallons in 1980, and 37c/1000 gallons in 1985.

The Palm Beach County solution called for Lake Worth Sewage to be collected in the wet well at the existing ocean outfall pumping station from where new high capacity high head sewage pumps would transfer all sewage through approximately 21,800 feet of force main to a Palm Beach County interconnection at Florida-Mango Road and Lateral 9.

For Lake Worth to build a plant three sites were considered. 1900 2nd Avenue North, the location of the current Utilities Administration, on city owned property adjacent to 1-95 at the West Palm Beach Canal which was the site of a City landfill, or out on land owned by the City on Davis Road.

This proposed facility would have provided secondary treatment through a modified activated sludge process. The plant was to be designed initially to treat up to 8 MGD of raw sewage with the ultimate capacity of the plant is projected to be 24 MGD.

The analysis determined that interconnection with the Palm Beach sewage system was much more costly for Lake Worth than building sewage treatment facilities and the 1900 2nd Ave North location was the preferred location.

The Davis Street and L-13 Canal was discarded as an option because the site did not offer sufficient buffer space around the plant once it was constructed.

The Authority submitted a grant application to the EPA expecting approval based on earlier discussions. Due to the short time period allotted by the order, the land for the plant was purchased and plans were created and a construction permit received in preparation to build the plant. The Area Planning Board was designated by the EPA

as responsible for implementation of treatment plans in the region and grant money would be awarded based on their recommendations. Their first decision was that Lake Worth should build a plant and accept sewage from the greater Lake Worth area bounded by Forest Hill Blvd, and Hypoluxo Road from the ocean to the Turnpike. This concept was, approved by the APB in December 1971 and the Florida Pollution Control Board on March 20, 1972. However, the County had other ideas as the County at the time had aspirations of taking over all water and sewer treatment in the County, similar to Miami-Dade. So they went to work on the Area Planning Board who then had second thoughts and later recommended the City connect to the County and become part of the East Central Utilities District in a report to the EPA. It required that a Regional Facility which could handle a larger areas treatment and disposal needs could be more cost-effective. However, this was for the entire area served by the region. The regional approach has the Entities to pool resources and benefit by economies of scale realized in the operation of one large, centrally-located facility. It was not based on the cost to Lake Worth customers. So after being $400,000 into the project the grant was denied, the Lake Worth Sewer Plant plan came to a halt, and the City now had to connect to the County main.

Sewer Goes Regional:

The Area Planning Board of Palm Beach County and the Environmental Protection Agency of the United States of America prepared the 201 Facility Plan and as a result, in 1973 Palm Beach County was divided into several Wastewater Treatment and Disposal Regions which required the Authority to transfer the sewage generated by its system to the City of West Palm Beach's Regional Plant for treatment and disposal. The city of West Palm Beach began providing treatment and disposal of wastes at this plant in 1977. Almost immediately, the plant was expanded from the original capacity of 20 mgd to 44 mgd, providing increased capacity to receive wastewater flows from Riviera Beach, Lake Worth, and portions of Palm Beach County. The regional facility is located on Earnest Drive, off Haverhill Road and adjacent to Florida's Turnpike, within the City limits of West Palm Beach.

This ended plans to build a Lake Worth plant The East Central Region of Palm Beach County Central 201 Facilities Plan includes seven large users known as entities. Five of these entities (City of West Palm Beach, City of Lake Worth, Town of Palm Beach, City of Riviera Beach, and Palm Beach County) entered into agreements resulting in the construction of the East Central Water Reclamation Facility (ECRWRF). The remaining municipalities within the East Central Region with wastewater collection systems are tributary systems of one of these five systems.

The ECRWRF uses activated sludge process in large aeration basins. Waste sludge is pumped to aerobic digesters, then to belt filter press dewatering units. Solids are trucked away to a sanitary landfill for disposal. The effluent from the plant is disinfected and disposed of via deep injection wells. A wetlands treatment and reuse system is utilized for approximately 10 MGD of the plant effluent to flow into adjacent created wetlands. However, due to the distance from Lake Worth, it is impractical to pump reclaimed water back to the City four our use.

In 1979, as part of the connecting up to the regional plant, a major reconstruction

project was commenced on the sewer system. A regional force main was installed that runs from the Master Pump Station to the intersection of Florida Mango Rd and the Lateral 9 canal where it connected to a County owned forcemain that continued to the treatment plant almost 14-miles from the Master Pump Station. The Master Pump Station was upgraded and the flow direction was sent through the new forcemain instead of to the ocean. A Repump station was also installed at 1910 2nd Ave N to maintain system flow until it reached the first County owned station north of the interconnection point. A 16-inch forcemain, was also installed to collect the beach (Casino, Town of Palm Beach, South Palm Beach and Manalapan) was run across the Intracoastal to connect these systems to the master Pump Station. At the same time a second electrical cable was also run parallel to the Forcemain to provide a redundant feed to the beach.

The County did not get control of the plant.

The Train Car Diesels go away:

In 1973 the three 1,000 kW rail mounted diesel driven generator units purchased in 1958 were declared surplus. The Authority successfully advertized and sold these units for a total price of $350,000.

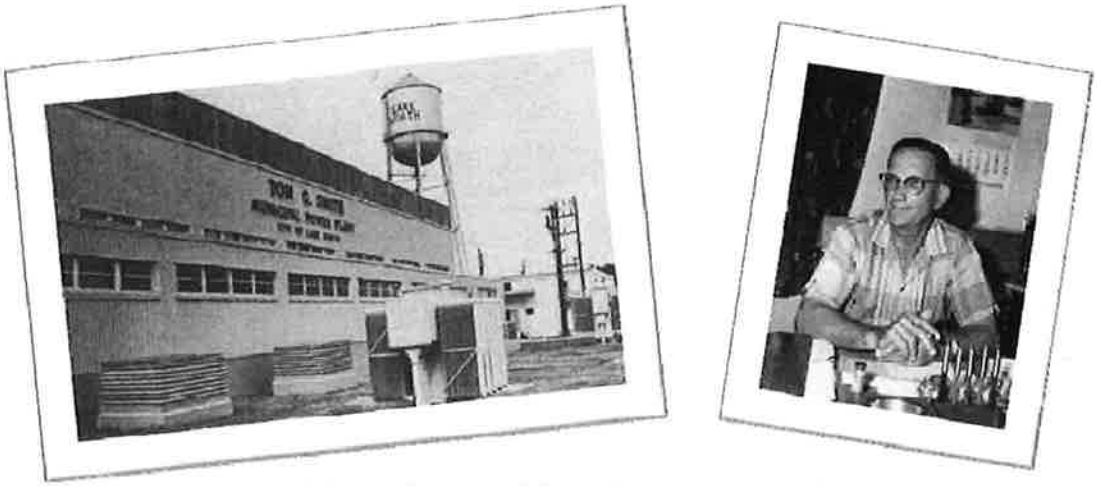
An Electric Expansion Program:

From 1967 to 1973 peak demands on the system increased 46%; Customer sales increased 62%; the average number of electric bills increased 29%; and the kilowatt sales per average electric bill increased 25%. By 1973 the Power Plant systems consisted of a combination of five diesel engines and a combustion gas turbine for peaking operations, and four steam turbine driven generating units, two for standby and two for daily use, with a total generation capability of 112,900 kW.

In 1974 the City purchased land on the north side of Hypoluxo Road adjacent to the FPL substation. This site is where the City added a 138 kV electrical interconnection with the Florida Power and Light Company to provide interconnection capacity between the two systems for emergency and scheduled service. The purchased power from St. Lucie, Stanton power, and the sale of power to FMP A goes through this substation. This station has two sources of feed from FPL and one outgoing feeder to the Main Plant Substations. This is a switching substation and is not limited by transformer capacity. A 139 kV transmission line (3 miles long) then follows 1-95 North to 6th Avenue South where it turns East to the East boundary of the power plant site then North and proceeds to the North end of the Main Plant Substation.

In March of 1975 installation of a simple cycle combustion gas turbine facility rated 28 ,400 kW was completed. The old diesel plant from 1947 was finally demolished to make room for this gas turbine. The in-place cost of that installation was approximately $3,990,000. A Dispatch Center was also constructed to control system operations. Supervisory equipment to control and monitor six 5,000 kVA distribution substations and the 138 kV interconnection station have been installed in the Dispatch Center.

With this expansion the Electric Plant was renamed after Thomas G. Smith, a previous Mayor and then City Manager of Lake Worth



Expanded Power Plant renamed after ex City Manager Tom G. Smith

More Water Storage and a couple of booster stations:

In 1975 the Authority built two ground storage tanks at the north and south ends of the system. One was built in the NW Ballfields and the other was built at the south end of E Street at the entrance to the landfill site. Each location has a 500,000 gallon reinforced concrete tank installed along with a pumping station that could either allow the tank to be filled, or pump water out of the tanks to boost pressures in the area. This resulted in improved system pressures in the extremities of the system.

FMPA and the Integrated Dispatch And Operations Project:

The City, as part of the Energy Broker Network, Inc. (EBN) system, had been buying and selling energy with other Florida utilities under the Economy Interchange Service Schedules. Sales and purchases were arranged on an hourly basis to achieve the lowest supply cost. Savings from such power interchanges were allocated equally to both the buyer and the seller. Due to the short-term nature of these transactions and the uncertainty of their occurrence, savings were harder to obtain.

In 1987, FMPA evaluated a power supply concept, identified as the Integrated Dispatch and Operations (IDO). The concept involved combining the existing generation capacity and loads of a number of municipal utilities in Florida and operating the generation as if it were serving a single utility. In order to benefit from this transmission agreement, the City needed to join the "All Requirements Project". FMPA and the City's staff conducted studies that indicated that there were no savings at the time for the City to join the "All Requirements Project."

The City was also a member of the Florida Electric Power Alliance which sold power to utilities outside the State. While initially profitable, by 2000 sales had dried up and in 2001 FEPA was disbanded.

In 2000 FMPA re-evaluated Lake Worth joining the "All Requirements Project." On September 1, 2002 lake Worth joined the All Requirements Project. The Stanton project was absorbed into FMPA' generation units. The City remained financially responsible for the St Lucie purchase while the power will be part of Lake Worth's contribution to the SRP

More water storage comes to WTP:

In 1981 a 1.5-million gallon ground storage tank was built at the WTP. The tank constructed by CROM is a prestressed concrete design.

Lake Worth adds redundancy to it connection to electric grid:

A second transmission line was added to the Lake Worth system in 1985. The Canal Substation transmission line (2 miles long) leaves the Main Plant Substation and is on the same poles with the Hypoluxo line to 1-95 where it continues west to the Canal Substation. Unfortunately this is a line from nowhere. The connection to FPL has never been made at the Canal Substation and the second feed-in location therefore does not exist.

Lake Worth diversifies its power supply:

In 1983 Coal fired plants were being built in Putnam and orange counties. An investment was made in 6-MW of the 900-MW plant built by the Seminole Electric Corp in Putnam County and another 6-MW from the 415 MW Curtis R Stanton Power Plant built by OUC in Orange County. The Authority paid about $121-million in debt service to guarantee power availability once the plants were built. The contract was set up through the FMPA. The Seminole plant was to be completed in 1985 and the Orange plant in 1988. The addition of the two plants brought the city's capacity to 158 MW. The addition won't mean reduced rates or a savings for the authority, but it will decrease the Authority's dependence on foreign fuels such as oil and natural gas. At the time Lake Worth's electrical demand was 82 MW and was expected to grow to 125 MW by 2003. Ground was broken at the Stanton Plant on Oct 3, 1983.

Lake Worth, through the FMPA also entered into a purchase agreement for 24.87 percent of FMPA's 8.806 percent undivided ownership interest in St. Lucie 2 at the St. Lucie nuclear power plant. The plant is operated by FPL.

LWUA, to be or not to be:

The early 1980's was a tumultuous period for the LWUA. The Utilities generated more cash revenue than all other City departments, cash that can was used for tax relief and pet commission projects without regard for what the diversion of monies would do to the quality of electric service. This is why the people said in 1969 they wanted an Authority. Proponents of abolishing the authority talked about accountability, while those for the Authority would talk about political trickery to deny the authority board who owe their appointments to a faction now out of power at City Hall.

In January 1981: Commissioner Ron Exline requested that voters be asked to approve the recommendations of the Charter Review Committee and assume power over the Utility Authority. Soon a political war broke out with the LWUA Board battling the City Commission. In April and June, 1984, the city commission passed two emergency ordinances dissolving the authority. The first ordinance made the Special Legislative Act a City Ordinance to give the City home rule, and three of second declared said ordinance null and void, ending the Authority. The commissioners fired the authority's employees, including Director Thomas Forbes, changed the locks on the authority's office doors and took over its bank accounts and terminated the services of the Authorities attorney. The authority sued, asking that the City's action be void. The City

filed a motion to dismiss, asserting that the Authority was unconstitutional from its inception and that it was empowered to act as it did by the Municipal Home Rule Powers Act. The City extended its argument to assert that all similar utility authorities or commissions in the state were unconstitutional. Palm Beach County Circuit Judge Vaughn Rudnick ruled in 1984 that the legislative act that created the Authority was unconstitutional, because it placed too much power in the hands of unelected officials. This ruling created havoc for about 15 utilities and 500 special districts throughout the State as they had become utility authorities, including Fort Pierce and Orlando. These other Authorities scrambled to determine the impact on them and on their major projects that included three power plants since this ruling could have caused them to lose funding. The ruling was appealed and in February 1985 the ruling by Judge Rudnick was overturned by the Florida Supreme Court. This however did not stop the war. On March 26, 1985, just one month later, a special election was held and Lake Worth residents voted to abolish the LWUA with 2340 votes (59%). This resulted in a request going to the State Legislature to repeal the act creating the LWUA.

A Pseudo Sewer Authority Comes to Be:

In 1984 tensions rose between the various areas served by West Palm Beach's East Central Plant. The issue was the non-accountability of West Palm to the entities on costs and how they were spending the money. Because the County and cities are continuously battling over management of the ECR system a proposal was announced by the Senator Don Childers and backed by Representative Ray Liberti that all the water and sewer facilities within the area covered by the ECRWWTP should be combined into one autonomous utility authority. Under the proposal the authority would be headed by a five member board selected by the Governor. This proposal brought strong objections from West Palm Beach as they did not want to lose control of their utility.

In 1985 these battles culminated in the creation of a pseudo authority with a Board of Directors, made up of the entities being served, for the operation, maintenance and improvements to the ECRWRF. This was established through an interlocal agreement, and a "special utility district" was not created. Currently, the City of West Palm Beach still acts as the responsible entity (permit holder) on behalf of ECRWRF. West Palm Beach, Lake Worth, the Town of Palm Beach, Palm Beach County and Riviera Beach are responsible for operation and maintenance, and future improvements of the collection and transmission systems within their respective jurisdictions. Palm Beach County serves most of the unincorporated areas within the ECRWRF service area and any municipalities not presently a party to the sewer use agreements. As a number of other systems were already connected to the Lake Worth system, they were incorporated into the Lake Worth Sub-regional Sewer System. These include Lake Worth, Town of Lantana, City of Atlantis, Town of Manalapan, Town of Palm Beach, Town of South Palm Beach, Village of Palm Springs, and Palm Beach Community College. The sub-regional system transports the other entities' wastewater through the City's sub-regional system to the regional system.

Areas along Lantana Road and to the South connect to Potable Water:

Seminole Manor is on the west side of Congress just south of Lantana Road. The City of Lake Worth and the Town of Lake Clarke Shores worked together to provide

better potable water to the Town's water utility customers in Seminole Manor. In 1989 Lake Clarke Shores bought the system from Atlas Utilities as part of a master deal to take over the utilities in the Town.

Seminole Manor residents claimed many health problems that stemmed from drinking and bathing in the water from the old Atlas system that was now in disrepair and obsolete. These included asthma, vomiting, unexplained illnesses and skin conditions. They also complained that they couldn't wash their clothes in the murky water.

Lake Clark Shores opens water connection

A new 16-inch water main was constructed down Congress Ave connecting mains on 6th Ave S and Lantana Road forming a looped system. From this a line was run west on Lantana Road and a master meter was put in to sell water to Lake Clark Shores at the entrance to Seminole Manor. This connection remained active until 2009 when after a request by the SFWMD, Seminole Manor was transferred over to the County water system to help ease withdrawal rates on our wellfield.

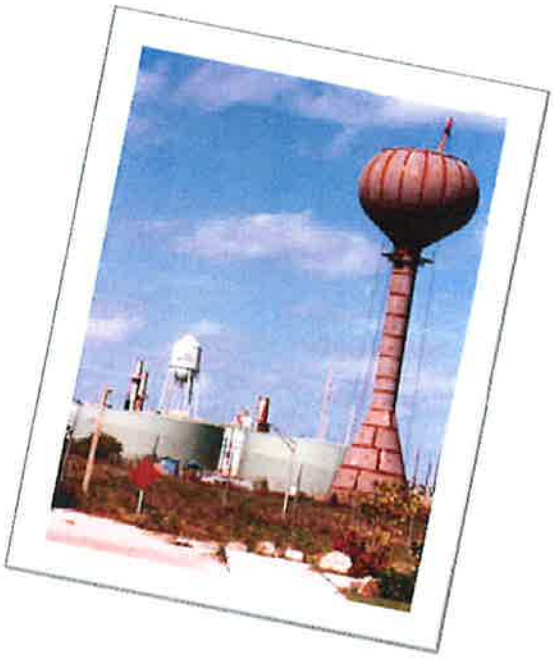
Floral Park, is a residential community on the north-east corner of Congress and Hypoluxo. In 1995, the county gave Lantana responsibility for servicing Floral Park and Island Estates. But more than 100 Floral Park residents complained to Lantana, saying they preferred Lake Worth's water because it was better and cheaper. Lantana agreed to sell its rights to Lake Worth for $78,000. So Floral Park was connected to the Lake Worth potable water system. A 12-inch line was run down Old Congress to Hypoluxo with a 6-inch distribution system installed in Floral Park. The estimated cost of the project was $1-million, which was paid back by the Floral Park homeowners over a 10-year assessment period.

The High School and the City swap land:

In the late 80's the Lake Worth High School needed to expand southward and needed land. Since the City's water tower which was immediately south of the school was in need of replacement anyway, a land swap was proposed where the City gave up some of its land on the north side of the Power Plan in return for the land occupied by the Junior High School, that was now closed. This also worked for the Utility who could then expand the power production eastward. An agreement was signed on July 20, 1989.

Its time for a new water tower:

As part of the land swap The Utility needed to tear down the water tower that had been standing since 1938 on the south side of the school. A new "lollypop" shaped elevated tank was built in 1991 just north of 6th Avenue South. This 300,000 gallon tank has the access ladder inside s no more senior pranks to repaint the water tower's tank would be an issue.



Construction of new elevated tank with old tank in background

The Second Privatization Attempt:

In 1992 the City Commission once again considered selling the electric utility. It heard proposals from four companies interested in taking over the city's electrical business. At the time, $4.4 million of the general city $20.4 million budget came from the power system, and the City would have to raise property taxes $4.39 higher than the $10 state cap per $1000 of assessed value. The tax rate was already is $8.66. Commissioners seemed to be properly skeptical. Mayor Ron Exline was quoted as saying "It's going to take an awfully good deal," and Commissioner Monte Mohr said "I really don't want to kill the goose that lays the golden eggs."

Once again FPL was leading the recommendations, offering to buy the Utility for $66-Million, FPL says it will serve Lake Worth customers with FPL's generation sources. The city would need to have an alternative use or otherwise be able to dispose of the project contracts with FMPA. The electric utility stayed a City asset. I it had to be responsible over the FMPA contractual agreements then the price was reduced to $38-million. Under both scenarios the City maintained the Capital debt created during the expansion of the plant.

Land deals don't last:

While a viable swap of land was done in 1989 with the High School. Soon the School Bard eyed getting that land back for recreational facilities, and the City Commission obliged. For $1 they gave the old Junior High land back to the High School leaving the Utility without room they planned to use to expand.

ECR Wastewater Reclamation Facility Expands:

In 1985 a major capacity expansion was performed at the ECR. This expansion was funded by a 1985 State of Florida Local Government loan and refunded in 1989 by City of Lake Worth Sewer System Refunding Revenue Bonds. The sub area entities served by Lake Worth also entered into contracts with Lake Worth in March of 1985 to expand the ECR Facility. While Lake Worth still owned the infrastructure that comprises the Subregional Transmission Facilities, the sub entities each now had a right to use a pro-rata share of the treatment capacity as reserved with their payments of debt service on the various bonds as well as with payments of their pro-rata share of the renewal and replacement requirements of the Subregional Transmission Facilties, the Palm Beach County Transmission Facilities, and the ECR Facility.

More Water System Expansion in the 1990's:

Island Estates is a residential area on the north side of Lantana Rd. Like Floral Park Lake Worth had planned to provide potable water to this area to get rid of the wells that were so close to Lake Osborne and also provide fire hydrants. This project seemed a necessity and Lake Worth sought Island Estates' approval to install water lines. Island Estates wasn't to be as easy as Floral Park. Residents claimed that Lake Worth only wanted to provide water so they could annex the area. But city and county officials told them that Lake Worth could not absorb Island Estates because state law forbids annexation of land that's not contiguous to a city. The first attempt at a consensus vote was thrown out by the Commission because of these concerns. A second consensus vote was made and the system was approved.

About this same time water quality issues in two unincorporated areas of the County; one along High Ridge Road from Lantana Road to Hypoluxo Road, and a second on the south side of 10th Avenue N from the Keller Canal to Congress Ave; caused the County to request lake Worth extend potable water into these areas and get these homes off of private well water. The Solid Waste Authority was building a major transfer station expansion at Lantana and I95 at the time and contributed a large amount of money into that project. The City extended facilities to Hypoluxo Road and looped this line west into the line serving Floral Park. A separate line was also run in 1999 to serve the 10th Ave N properties.

Lake Worth Generation Repowering Project:

In the late 90's Unit S-4 was placed on extended shutdown, and extensive repairs were required before this unit could be returned to service. With the capacity of Unit S-4 set at zero. Also Steam unit S-2 was retired in 1988. The City of Lake Worth Utilities Department requested proposals regarding the repowering of the Tom G. Smith Plant Unit S-4 in the summer of 1996. NorAm Energy Services submitted the only proposal and at a workshop in November 1996 the City Commission directed staff to investigate the development of a business plan for review and approval of the City Commission before funds would be spent on outside experts.

NorAm became Reliant Energy. Thermo Exotek Corporation arranged and negotiated buyout of development rights from Reliant Energy and created the Lake Worth Generation LLC to manage project development, contracts and local development activities. Thermo-Exoteck was owned by the AES Corporation. Dennis Bakke and Roger Sant had met at the Federal Energy Administration while deregulating the electric utility system. In 1981, intent on stimulating both conservation and energy production, they raised $1.2 million and formed AES.

In 1999 City signed an agreement with LWG and on December 29, 1999, Lake Worth Generation LLC, with its principal office c/o Thermo Ecotek Corporation, 245 Winter Street, Waltham, MA 02154, filed an application with the Department of Energy Commission for the determination of exempt wholesale generator status. LWG stated that it is a limited liability company organized under the laws of the State of Delaware. LWG will be engaged directly and exclusively in the business of owning and operating an approximately 217.5 MW electric generating facility located at 117 College Street, Lake Worth,

Florida. Electric energy produced by the facility will be sold at wholesale.

The Re-powering Project was to install a 210 MW combined cycle power plant on the existing Tom G. Smith plant site. Steam turbine-generator Unit #S-4 was to be replaced by LWG with a heat-recovery boiler to be installed with the new gas turbine. Electric power would be generated utilizing the existing steam turbine and auxiliary equipment within the S-4 Unit structure. When completed, the S-4 unit would have been rated at approximately 105 MW of capacity. The gas turbine generator was to be a General Electric Frame 7EA. The heat recovery boiler and would also allow steam to be purchased at a reduced cost for the operation of the Unit S-3. The City would have still run the S-3 boiler when the Re-powered Project is not operating. The existing S-4 unit was declared surplus and the boiler and turbine/generator unit were removed.

Concept drawing showing the LWG gas turbine. Notice the LARGE air tower

This project was to be fueled primarily by natural gas. LWG was to provide all of the capital to repair/modify the City's existing equipment and purchase and install all of the new equipment necessary to complete the project. LWG was to arrange natural gas for the City from the Florida Gas Transmission line for to the Smith Plant site. Lake is now responsible for this long term fuel contract though we do not utilize the gas.

Due to the size of the proposed 7FA gas turbine. Facilities had to be relocated. The Water Field Services Buildings, City Purchasing Department, two fuel tanks, and part of the public works paint shop had to be removed. The Municipal Complex at 1900 2nd Ave N was constructed in 1991 on the land originally bought for a WWTP. Utilities Administration and Purchasing were moved into this building and Water Field Services was moved into trailers by the Repump station in the rear where they still remain to

date, Later a second building was built on the site (1880 2nd Ave N) that houses the Sanitation and Streets departments.

David Deberry of WW Gay Mechanical working on the LWG Turbine

AES built power plants as fast as it could, borrowing whatever money it needed and was expanding at a breakneck pace. Its stock topped $70 in 2000 then plummeted to less than $1 when the company faced a liquidity crisis in 2002. The LWG project was scheduled for completion in 2002, but came to an abrupt halt when banks refused to lend to AES money after Enron failed. That was ironic because AES was, in many ways, the anti-Enron. It owned hard assets and avoided the energy-trading business and fraud that bankrupted Enron. But AES made mistakes of its own, like overinvesting in Latin America before the 2001 economic crisis. Most of all, AES assumed that it would always be able to borrow whatever money it needed, financing long-term assets with short-term debt. While LWG was not owned by Enron, the construction company, National Energy Production Corp (Nepco), was a former Enron subsidiary. Nepco was acquired by SNC - Lavalin GDS in May 2002. SNC announced it would complete construction on eight gas-fired thermal power plants in the United States that were started by Nepco. However LWG apparently wasn't one of them.

The failed LWG project prior to disassembly.

Its time to replace the Master Pump Station:

Starting in 2001 the City undertook several engineering studies to evaluate upgrading the master Pump Station and the Repump Station. Upgrading the station was needed due to the County deciding to reconfigure their pumping scheme. The County was converting station 5229 into an inline booster station and stations 5236 and 5241 were to be abandoned. The conclusion was the MPS should be replaced with a new station designed to pump the flow all the way to PBC station 5229 and the Repump Station abandoned.

Unfortunately a special audit done in 2005 raised questions concerning the R&R fund balance. Apparently these funds had been used to pay R&R charges to the ECR and were not billed back to the sub regional members. As a result net revenues were insufficient to build the project. The Municipalities have disputed the amounts claimed by Lake Worth to be owed to Lake Worth Thus began the legal wrangling that lasted until 2012 over the regional sewer system.

To get the project moving, Lake Worth borrowed $5-million on a bank loan and issued the construction contracts. The MPS replacement project was commenced in 2005 and completed in the middle of 2007.

New Master Pump Station

City plans to build a Reverse Osmosis Water Plant:

In 2003, the City Commission authorized the Utility to design, permit, and construct a reverse osmosis water plant that would utilize the brackish Floridan Aquifer, an alternative water source to the Surficial Aquifer, due to restrictions on water withdrawal from the Surficial Aquifer that were being implemented by the SFWMD. By 2007 the City had installed three wells 1500 feet deep into the Floridan Aquifer and constructed a raw water transmission main to carry said water to the treatment plant.

On August 23, 2007 bids were received by the City for the construction of the Reverse Osmosis Water Treatment Plant project. Approval of this plan became a hot topic and went to numerous meetings over the next four months. In January 2008 the City Commission decided not award the construction contract for the Reverse Osmosis Plant and directed staff to negotiate a contract with Palm Beach County to purchase off peak water.

The Reverse Osmosis Water Treatment Plant was built to produce 4.5 million gallon per day of treated drinking water from the Floridan aquifer. Plant expandability to 9 MGD was included in the design. This RO treated water is blended with lime softened water from the City's existing Water Treatment Plant prior to distribution to City customers. Addition of this ROWTP greatly decreased the City's dependence on the surficial aquifer and

reduced the potential for saltwater intrusion into the surficial aquifer wellfield. The plant would take 2-years to construct.

Crane falls across 138 kV transmission line

Lake Worth residents were left without power Tuesday Aug 26 2003, when a 35-ton crane carrying concrete barriers tipped over into the city's 138 kV transmission line that connects them with FPL. The accident has knocked out electricity to much of the city and also stopped Tri-Rail commuter train service, which ground to a halt. At approximately 2:30 p.m., the crane's 75-foot boom carrying a 6-ton concrete highway sound barrier fell into the power lines and across a set of railroad tracks, sparking a small brush fire and causing Lake Worth to lose power. Lake Worth crews situated near 12th Avenue South and I-95 waited nearly four hours for Florida Power & Light (FPL) crews to cut power to the down lines, after which the overturned crane and concrete barrier were removed from the downed power lines and railroad tracks. The crane operator was not injured. Electricity was restored to some residents and businesses by 8:30 p.m.

Interlocal Agreement signed with County to build a large interconnection:

Subsequently, an Inter-Local Agreement was negotiated with Palm Beach County whereby the County would provide Lake Worth with bulk purchase of Potable Water for resale to our retail customers. The Agreement then became effective upon approval by both the Lake Worth City Commission in April 2008 and the Palm Beach County Board of County Commissioners in May 2008.

In May 2009, as a capacity charge came due, the City Commission requested to exit, or renegotiate, the agreement with the County. This resulted in a City Commission vote to default on the County contract.

The default resulted in the County taking legal action against the City. A "163 Hearing" was held as part of this action which resulted in the two parties coming back to the table and negotiating a settlement agreement where the City paid $1.41-million for design services performed to date and agreed to purchase a minimum average of 750,000 gallons of potable water from the County for the next three years. This water offset the withdrawal requirements on the City's wellfield while a new RO water plant was constructed.

City revisits Reverse Osmosis:

A scenario for Lake Worth's future water supply was re-developed that once again provided a RO water treatment plant. On July 7 2009 the City Commission awarded an engineering design contract to repackage the RO Plant and re-bid the project. A fast paced grant application process was also implemented to get stimulus money from the Federal Government to help build the plant. The application was submitted, and in October 2009, with $6.5 million of grant and low interest loans awarded to the City they awarded a construction contract to build the ROWTP.

Lake Worth power upgrades lead to short and fewer outages:

Lake Worth Utilities has been performing a plan for upgrading its electric power distribution system since 2008 the investments are paying dividends by reducing the number and duration of power failures. The length of an average power outage for Lake Worth Utilities for 2011 was just more than 87 minutes. That's less than half the average length of a Florida Power & Light Co. outage and is lower than the average of 104 minutes for Florida's municipal power companies, according to a distribution reliability report by the Florida Municipal Power Agency. Lake Worth Utilities' average repair time last year, 58.6 minutes, was down from 72.5 minutes in 2007. Reliability statistics don't tell the whole story. The number and severity of outages tends to increase in years when bad weather knocks down power lines. Upgrades to the system have included increasing the number of transformers on power poles, meaning each transformer serves fewer customers and bears a lighter load. New breakers at the main yard near the Tom G. Smith Municipal Power Plant along with new breakers and switches installed this spring at the Hypoluxo Road station, where the Lake Worth power system ties into FPL's grid have improved reliability. A tree-trimming program has also helped to keep vegetation and animals away from Lake Worth's power lines.

Lake Worth sues sub area sewer entities:

With the dispute over regional sewer still going strong, in 2010, Lake Worth sued the sub entities to recover the funds claimed owed. As required by state law, the Parties convened a chapter 164 proceeding, which resulted in the preparation and issuance of the City of Lake Worth's Subregional Sewer System Operational Audit in July 2012, as completed by the State of Florida Auditor General. Rather than litigate, the Municipalities and Lake Worth have decided to settle their differences, and modify certain terms and conditions of the Subregional Contracts finaly closing this chapter in 2013.

ROWTP Grand Opening:

The City of Lake Worth dedicated its new Reverse Osmosis Water Treatment Plant on Saturday October 29, 2011.

Lake Worth votes to leave the All Requirements Project

Because Lake Worth owns a power generating plant we were eligible to be a part of the All Requirements Project, (ARP). All together, LWU can produce a total capacity of 91 MW. And, while these generators have been fairly well maintained, they are old and not terribly efficient when it comes to how much fuel it takes to run them. In less than ten years, several of these generators will just be obsolete and replacements parts will be simply unavailable. Seemed like a good idea at the time, unfortunately ARP has also become a financial burden due to fuel hedging done during the boom years from 2000 to 2007 FMPA got stuck with ridiculously high rates way above market rates.

The City of Lake Worth decided in 2009 to leave FMPA's All-Requirements Power Supply Project. There are presently 14 Project Participants in the ARP Project. These participants buy electric capacity and energy through the project. The City originally joined the ARP in 2002. Upon withdrawal from the All-Requirements Power Supply Project the reduction of its ARP electric capacity and energy service is subject to a Contract Rate of Delivery ("CROD") that limits the ARP service to zero MWs from FMPA in accordance with the All-Requirements Power Supply Contract. Now the City will have five years to negotiate a new bulk power agreement with another entity in order to ensure undisrupted electric service for the City.

A new bulk power supplier:

The City of Lake Worth requested proposals for long term wholesale power supply that would commence on January 1, 2014. Eleven companies responded to the initial RFP offering memorandum and have successfully completed the screening process. Eight power companies then submitted bids to provide Lake Worth Utilities. One of these companies pull out prior to ranking. The selection committee, which included the mayor, city commissioners, the finance director and the chairwoman of the Electric Utility Advisory Board, chose three finalists from a list of seven bidders. In 2012 City commissioners and other members of an electric power selection committee narrowed the list of future power providers to three finalists. Orlando Utilities Commission was selected to provide a short term solution. The new provider must be ready to deliver electricity to the Lake Worth Utilities grid on Jan. 1, 2014, when the city's power-supply agreement with the Florida Municipal Power Agency expires. The City Commission directed the utility to explore other long-term options for reducing the Utility's electric rates. Long-term options include the long term power supply contract, buying new generators for the city's power plant, or advertising the electric utility for sale.