MINUTES OF A REGULAR MEETING OF THE FORT PIERCE UTILITIES AUTHORITY, TUESDAY, October 2, 2018, 4:00 P.M., CITY COMMISSION CHAMBERS.

Members Present: Chairman Daniel DeIulio; Vice Chairman Darryl Thomas-Bey; Deputy Secretary Glynda Cavalcanti; Mayor Linda Hudson; and Nick Mimms, Ex-Officio Member/City Manager.

Others present: John K. Tompeck, Director of Utilities; Rupert N. Koblegard, III, FPUA Attorney; Nina Penick, Director of Financial Services; Paul Jakubczak, Director of Electric & Gas Systems; Bo Hutchinson, Director of Water/Wastewater Systems; and Javier Cisneros, Director of Utility Support Services.

The meeting was called to order by Chairman Daniel DeIulio.

Opening Prayer was by Jason Mittler of Electric & Gas Engineering.

The Pledge of Allegiance was recited.

The roll was called and a quorum declared.

Swearing in of new Board Member, Charlie Frank Matthews, by Linda Cox, City Clerk. Mr. Matthews held up his right hand and swore under oath the following: "I, Charlie Frank Matthews, a citizen of the State of Florida and of the United States of America, and being employed by or an officer of the City of Fort Pierce, a recipient of public funds as such employee or officer, do hereby solemnly swear or affirm that I will support the Constitution of the United States and of the State of Florida."

Mrs. Cox had him sign the oath and congratulated him. The Board also congratulated him.

RECALL THE ROLL.

Members Present: Chairman Darryl Thomas-Bey; Vice Chairman Glynda Cavalcanti; Secretary Daniel DeIulio; Deputy Secretary Charlie Frank Matthews; and Mayor Linda Hudson.

Tom Fryar, ITS Services Manager, presented the Florida Local Government Information Systems Association (FLGISA) 10-Year Service Award given to FPUA. He said FLCISA is an organization for information technology management decision makers in the state's local government agencies. They were formed in 1976 for the purpose of fostering professionalism for its members and sharing its ideas and experiences. FPUA has taken part of the technology and information cooperation, innovation, and communication for the benefit of our community since November 2007. The network of experts working together has saved on consulting costs and hundreds of hours of research.

A motion was made by Ms. Cavalcanti, seconded by Mayor Hudson, and unanimously carried to approve the set agenda.

A motion was made by Mayor Hudson and seconded by Ms. Cavalcanti to approve the Minutes of the Regular Meeting of September 18, 2018. Those voting for approval were Ms. Cavalcanti, Mr. Bey, Mayor Hudson, and Mr. DeIulio; Mr. Matthews abstained because he was not at the meeting.

Rick Reed of Fort Pierce congratulated Mr. Matthews for his appointment and thanked former Board Member, Mike Perri, for his distinguished service on the Board. He said for eight years Mr. Perri championed the cause for the rate payer and for the employees. The night before his last day, there was a water outage at Sweeties and about 11:30 at night he looked up and here comes Mr. Perri checking on the guys and making sure everyone was okay. For years Mr. Perri always cared sincerely about the men and women that worked at FPUA and he was and is very proud of them and always cared about the rate payer. Mr. Reed said at the last Board meeting when he saw that personal opinions were infused and the man was denied a proclamation and as Commissioner Alexander said last night at the City Commission meeting, the Commissioners are elected by the people and the Commission appoints this Board and serve the people and rate payers of the City of Fort Pierce. To watch Board Members infuse their personal vendetta against a fellow Board Member for whatever reason was tacky and classless. Mr. Reed said you did not do service to the people you work for, did not do service to the men and women of this Utility Authority and to the people of Fort Pierce. He said when he watched it and the old saying that you thought you had seen everything, he realized he had not seen anything at all. In view of who did it, he was not surprised, class will tell. Mr. Reed again congratulated Mr. Matthews and thanked Mr. Perri for a job well done.

A motion was made by Mayor Hudson, seconded by Ms. Bey, and unanimously carried to approve the Consent Agenda items.

1. Approve the following nominations: Mr. Darryl T. Bey, Chairman; Ms. Glynda W. Cavalcanti, Vice Chairman; Mr. Mr. Daniel M. DeIulio, Secretary; Mr. Charlie Frank Matthews, Deputy Secretary; and Mrs. Linda Hudson, Mayor/Member.

2. Bid No. 18-61: Approve award of Bid for the purchase of 60 enclosures and 80 handholes from Electric Supply of Tampa, Inc. dba Electric Supply, Inc. of Tampa, Florida, in an amount not to exceed $43,692 annually. The initial term of the PO Contract will be from October 3, 2018 to October 2, 2019 with four one-year renewal options.

3. POA 16-40: Approve the Contract with Membrane Treatment Services LLC, of Fort Pierce, Florida, in an amount not to exceed $105,000, for the single source purchase of PLC and SCADA Network Programming and Maintenance Services. The term of this contract will be from October 3, 2018 to October 2, 2021.

4. Approve Post Budgeted Project/Budget Request in the amount of $40,000 to replace FPUA's gas main in order to relocate it, for the City's Mayflower Canal Phase III project.

5. POA 14-53: Approve the sole source purchase of specialty sewer line camera equipment and repairs for existing TV equipment from ELXSI Corporation dba Cues, of Orlando, Florida, in an amount not to exceed $30,000 annually.

Mr. Bey assumed the role of Chairman and took over the gavel from Mr. DeIulio.

Paul Jakubczak, Director of Electric and Gas Systems presented the FPUA Electric Reliability update for August 2018. He said this is the 12-month reliability and your packet shows July 2018, but this presentation will be for August 2018. The first number to look at is SAIFI, which is System Average Interruption Frequency Index and this is the number interruptions a customer can expect to see based on our prior history. FPUA is at .996 and we will get to why that number is important on the last slide and goes a little bit to the strategic planning. Mr. Jakubczak said the table displayed is a comparison of how FPUA looks to the other municipalities in the State of Florida as well as a combination of the ones based on size, which is shown on the bottom. He said FPUA falls just around the middle, a little bit better than the large systems and a little bit worse than the medium systems in the state. FPUA has a little bit more than 28,000 customers so we are kind of right on the edge of medium and large. The next number is the CAIDI – Customer Average Interruption Duration Index and this will tell you the average duration outage of those affected by that particular outage. Right now, if you experience an outage, you can expect your power would be restored within 55.4 minutes. FPUA's response time is a lot better than that, we are normally on site troubleshooting within 15 to 20 minutes of that time. By the time we look to find out if it is a squirrel, frog, or a limb, that is why the additional time is on there. The next table displayed shows how FPUA compares with the rest of the state and we are right around the average, a little bit better than the medium and about the same for the large utilities. Mr. Jakubczak said the last reliability statistic is the SAIDI – System Average Interruption Duration Index, which you take the total average number and divide it by our total customer count. He said FPUA is roughly at 55.22 minutes, which is a little bit less than the SAIFI numbers or CAIDI numbers and that is because the divisor is a little bit more, the bottom number. The chart displayed shows how FPUA compares state-wide. Our SAIDI numbers show we are better than the medium and large utilities as a whole throughout the state. The 2017 number has not changed and shows how FPUA compares to the rest of the state including FPL, TECO, Duke, the IOUs and some of the co-ops as well. The next slide shows strategic goals for SAIFI to be between .5 and 1 outage per customer and the reason it is shown is yellow is because we are getting close

to 1. It is .996 and it gives us something to look at and strive to avoid being above 1. The CAIDI and SAIDI are the same thing where we are below our strategic goal of 60 minutes being at 55.4 and 55.22.

Mayor Hudson asked if squirrels cause a lot of outages.

Mr. Jakubczak said squirrels cause a lot of outages and that he has a new worst enemy, which is frogs. He said you would never have thought it, but we have a lot of frogs that crawl up on the transformers and switches. From what he has been told, you knock them down and they just hop away.

Mayor Hudson said what she is saying, is there anybody working on a way from preventing squirrels from doing that. She asked if there is any kind of closure.

Mr. Jakubczak said they are currently looking at different methods called animal mitigation. He said they have actually deployed this in some of their worst performing laterals and it seems to be working well. They are going to continue deploying it as they go throughout the year and try to eliminate some of those contact outages from squirrels.

Mayor Hudson said it is her understanding many utilities have the same issue.

Mr. Jakubczak said yes most of the utility companies are not squirrel friendly, they do not like squirrels. He said this is because they cause quite a few outages.

Lois Wolfe, Human Resources Manager, and Kathleen Meola presented the 2019 Employee Benefit Plan Overview and recommendations. Mrs. Wolfe said they are here to review FPUA's 2019 Employee Benefit renewal period. She said FPUA is self-insured for our health insurance through Florida Blue and there are four particular items we are looking for and renewal on tonight. It is approval of the overall benefit plan as prepared by Relation Insurance Services of Florida presented by Kathleen Meola from Relation Insurance; acceptance of the Stop Loss Proposal that FPUA has had for the last several years through Highmark, a subsidiary of Florida Blue; approval of payment of the administrative fees FPUA is charged by Florida Blue for administering our claims under a self-insured program; as well as approval and signature on the Master Agreement for our Medicare Supplement Plans. Mrs. Wolfe said Kathleen is going to go over the overview of the benefit plan as she as prepared.

Ms. Meola said the Board has in their packet the 2019 Employee Benefit Plan Overview and recommendations document. She is going to use that to summarize what is happening with FPUA's benefit program for next year. The document starts with the enrollment of the medical program and the administration services that are offered through Florida Blue, which is Blue Cross Blue Shield of Florida. FPUA is under a multi-year agreement with them for the administrative costs, which started on January 1, 2018. Those fees will not be changing for 2019,

they will remain at $63.28 per employee per month. That fee will remain the same until January 1, 2020. There will be a slight increase to $65.05 and as part of the contract FPUA has with Florida Blue, they do offer wellness money that can be used for all of the wellness program activities and incentives at FPUA. For 2019, FPUA will be getting an additional $15,000 for that cost. The annual costs of the administrative fees is currently $207,305, will remain the same for 2019, and it does fluctuate with enrollment. As FPUA's enrollment goes up, the fee will change, but the rate is still remaining the same. FPUA still remains completely compliant with Health Care Reform and FPUA has a Grandfathered Health Plan as it relates to healthcare reform and they are recommending the grandfather status be maintained for 2019. Ms. Meola said as Lois mentioned, the Stop Loss Insurance is something they are asking for the Board's approval. She said they went out to market and solicited quotes from seven carriers including the incumbent, which is Highmark. The most competitive offers were presented by Optum and Voya, however after going through a preliminary disclosure review, there are a couple of claimants of concern. One of particular that would have a laser of $280,000 to $300,000 if we were to change carriers and that difference took away all the premium savings that would have been made when making a change in carrier. They are recommending FPUA renew its coverage with HM and continue the stop loss specific deductible at $125,000. That is the self-insured health plan's liability. FPUA takes on $125,000 of liability per claimant and anything beyond that is reimbursed by the stop loss carrier. On the next page it goes through those costs are for Stop Loss Insurance and as mentioned, it is $125,000 deductible, which covers both medical and prescription claims. There is an unlimited lifetime maximum and the premiums FPUA pays are listed at $112.06 for single going to $117.56 and for family $253.51 to $279.58. The aggregate coverage, which protects the group as a whole is $8.40 currently per employee per month and that will be increasing to $8.91. There is the aggregate claim factors that is basically the overall liability for the self-insured health plan claims. The single and family factors which calculate to an aggregate maximum liability of $4.8 million currently and will go to $5,055.74 based on current enrollment. The annual Stop Loss Premiums calculate to $717,617 for 2019 based on current enrollment. Ms. Meola said these terms are firm and usually when she comes to the Board at this time, we have a preliminary Stop Loss offer, which is subject to updated claims experience through September or October. She said this year, they negotiated a firm renewal with Highmark as long as they receive a signed offer by October 3, tomorrow, and they are willing to lock in these terms for 2019. The advantage of that is it does not matter what happens with FPUA's claims experience from now through the next couple of months, you are locked in regardless of what happens and what materialized with claims. The overall total medical costs in the middle of the page shows the specific and aggregate stop loss premium at $717,517, administrative fees paid to Florida Blue for claims administration as well as the health care reform fees FPUA is required to pay equate to $208,694. There is the annual expected claims at $4,044,595 and when we total all of those figures, it becomes an annual expected cost of $4,970,906. Those numbers are impacted by enrollment, which is noted as well.

Ms. Meola said the next section is the funding and because FPUA is self-insured the funding rate is set by FPUA and are premium equivalents. She said the 2017, two years ago, was the first time FPUA had increase funding in seven years. In 2018, last year, they were increased by 6.9%, which

is pretty phenomenal given that medical trend is about 10% to 12% per year over that same time period. Florida Blue trend for 2019 is projected at 10.6% and although FPUA's plan has done better than trend for that time period, it is necessary to make adjustments periodically in the funding of the program. They are recommending this year the rates go up just under trend at 10.25%. As usual, because FPUA is self-insured this has to be monitored throughout the year and staff will be monitoring that on a monthly basis and will amend the funding as needed up or down throughout the year based on the actual activity. The 10.25% rates are shown on the bottom of page two where this is a four-tier program, the employee, the employee + spouse, employee + children, and employee + family. Those are the total rates that includes both what FPUA provides as well as what comes out of employee contributions. On the next page shows the impact to the employee portion, which comes out through payroll deductions. The 10.25% recommendation is that is shared equally between FPUA and the employees so everyone's rates go up by the 10.25%. The per pay rate will go from $12.35 for single coverage to $13.61, which is the difference per pay of $1.26. For those that have employee + spouse will go from $103.88 to $114.53, a difference of $10.65. For employee + child will go from $83.78 to $92.37, a difference of $8.59 and for employee + family, it will go from $174.04 to $191.88, a difference of $17.84. Ms. Meola said the next section reviews the other coverages and there are no changes to those coverages. She said the Employee Assistance Program through Etna Resources is under rate guarantee through December 31, 2020. The Flexible Spending Account program is remaining with TASC and their administrative fees are provided 45 days prior to the affected date so we will see that fee change in mid-November. Dental services are still being provided on a self-insured basis through Florida Combined Life and their administrative fee is $6.05, which is guaranteed through December 2019. The dental funding is adequate for the self-insured dental program so no changes are being recommended at this time. For dental coverage, the current and proposed amounts are the same for the employee contribution and the monthly amount the employees pay is $0 for single coverage, $11.90 for employee + 1, and $24.98 for full family. Ms. Meola said the Life, AD&D Long Term Disability Insurance coverages were renewed last year and they are guaranteed for three years so those contracts will not expire until December 2020. Vision remains with EyeMed and is under a rate guarantee through December 2019. The Voluntary Worksite Benefits, which are Trustmark and Allstate has no change on coverage or premium. The BlueMedicare program is for the retirees 65+ years where they can take a Medicare Advantage Plan outside the self-insured life plan that provides a less expensive premium, significantly less. The coverage is as good as or better than Medicare. The renewal just came in as a decrease across the board for all the retiree rates, which is really great news. The PPO1Rx1 plan premium is decreasing almost 19%, PPO2Rx2 plan is going down 17.5%, and the PPO2Rx3 plan is going down .6%. Ms. Meola said they rarely see a decrease in health insurance so that is really positive news. She said the Rx1 plan is when the retiree perhaps has Medicare A & B and only want a drug program to cover a Part D scenario and those premiums are going down about .6%. There is an annual contract the FPUA has to sign for the Blue Medicare Program and that is also in the packet.

Ms. Meola said as a reminder as to what requires the Board's approval is the Stop Loss Coverage needs to be renewed with HM, Florida Blue with a $125,000 specific deductible. She said

approval is needed of the continuation of the administrative fees to Florida Blue at the current rate and approve the BlueMedicare Master Agreement with the reduced premiums as indicated.

Mr. Matthews said all of his life he spent a little time around personnel in most of the jobs he has been in. He asked Mr. Mimms if the City carries this same insurance.

Mr. Mimms said no.

Mr. Matthews said suppose an employee transfers over from the City to the Utility and he asked where would they fit in a situation like that. He said if a City employee wanted to work for the Utility.

Ms. Meola said the benefit programs are a little bit different and said she believes the City has five different plan options.

Mr. Mimms said the City has several different plan options, plus he does not know the number. He said Barbara is shaking her head yes and that they have a consortium they deal with called Public Risk Management and through that they have a list of options. He does not know what they are off the top of his head.

Ms. Meola said the City, as part of that consortium, almost operates as a fully insured program. She said FPUA has one plan and it is self-insured, which means they are kind of controlling their own destiny as it relates to their experience and reward. It would be quite a bit different, the employees would still have the same types of coverages available. Medical, dental, vision, and those types of things would be available, it would be different benefits and choices because of the self-insured versus the fully insured programs.

Mr. Matthews said the Authority has longevity employees somewhere along the line of five to seven years that would probably be retiring for good reasons and not for bad. He asked if there is a plan to keep them on with a reasonable rate.

Ms. Meola said the State of Florida requires a government entity like the City and the UA provide retiree coverage and the statute requires they provide the same choices to retirees as active so they can continue the current program. She said the state does not require there be any contribution towards retiree coverage so the retiree would have to pay the full premium. If you look at page number 2 on the bottom, it shows the proposed funding amounts. For employee only, it shows $826.06, if a retiree wanted to continue this program, they would have to pay that amount for the coverage. If they are 65 or older and Medicare eligible, they would also have the Medicare Advantage plans that are noted on page 3 at the bottom, which is a far less premium, nearly one half of discount for that program. Ms. Meola said the answer to your question is yes, they can continue the current, they just have to pay for it.

Mayor Hudson asked if the 10.25% increase is based on the experience of FPUA only.

Ms. Meola said yes it is and basically it breaks down that Relation and Staff looked at the current premiums and the renewal. She said the renewal impact was about 5%/year and they looked at how FPUA was funding to expected costs. That is the goal to fund what you expect your costs to be in a given year and then we looked at medical trend, which is running at 10.6%. When we combined all of those items together, the recommendation is 10.25%.

Mayor Hudson said that reflects our company only.

Ms. Meola said that is correct because FPUA is self-insured so their destiny is controlled within their own program, good, bad, or otherwise.

Mayor Hudson asked if our previous experience was less.

Ms. Meola said yes that is noted on page two under Funding, in 2017 the rates were increased by 10% and for 2018 they were increased by 6.9%. She said prior to that, they had remained flat for seven years.

Mr. Bey asked if we are voting on the stop loss coverage and the increase of the funding tiers separately or is it one vote.

Mrs. Wolfe said it is one vote.

Mr. Matthews asked what the total amount was.

Ms. Meola asked if he was talking about the Stop/Loss.

Mr. Matthews asked if we were voting on it separately.

Mr. Bey said we are voting on it as one.

Mr. Matthews asked how much the total is.

Ms. Meola said it is broken up into different components. She said on page two, the Stop Loss premiums are going from $659,421 to $717,617 and the overall expected costs are going from $4.7 million to $4.97 million so that takes care of the stop loss piece. The funding rates would be 10.25% over current, the administrative fees are exactly the same as they were last year, which is $207,000 and the BlueMedicare that is part of the vote is decreasing, but that is not a part of FPUA's expense. It is something the retiree pays.

A motion was made by Mayor Hudson, seconded by Mr. DeIulio, and unanimously carried to approve POA 18-17: **a)** Approve the 2019 Employee Benefit Plan Overview and Recommendations prepared by Relation Insurance Services of Florida, Inc., of Stuart, Florida. **b)**

Accept the Stop Loss Proposal from Blue Cross and Blue Shield of Florida, Inc. dba Florida Blue, of Jacksonville, Florida, and administered by HM Life Insurance Company, of Pittsburgh, Pennsylvania, for stop loss insurance coverage effective January 1, 2019 through December 31, 2019, and approval of premium funding of $717,617. **c)** Approve payment of administrative fees to Blue Cross and Blue Shield of Florida, Inc. dba Florida Blue, of Jacksonville, Florida, in the amount of $63.28 per employee per month estimated to be $207,305 based upon enrollment of 273 members, subject to enrollment fluctuations, for the period from January 1, 2019 through December 31, 2019. **d)** Approve the BlueMedicare Group Master Agreement with Blue Cross and Blue Shield of Florida, Inc. dba Florida Blue, of Jacksonville, Florida, for the provision of Medicare Supplement plans to the retirees of FPUA. The premiums for these plans are fully paid by the retiree, and are not expected to exceed $45,000 annually. The term of this agreement will be from January 1, 2019 through December 31, 2019, with unlimited automatic one-year renewal options.

Mr. Tompeck said the next item is a follow up from our last Board meeting on the subject of deep injection wells. He said Bo Hutchinson, Director of Water/Wastewater Systems and Dave McNabb of McNabb Hydrogeological Consulting will make the presentation on FPUA's deep injection wells.

Mr. Hutchinson introduced Dave McNabb who is the president of McNabb Hydrogeological Consulting. He has both a Master's and a Bachelor's degree in geology and has worked exclusively with deep injection wells for over 25 years, part of which was with the Department of Environmental Protection. That is very helpful for FPUA because Mr. McNabb is very familiar with the permitting and regulatory requirements. He has worked for FPUA as our deep injection well consultant for over 18 years and is the subject matter expert of our area. If you have anything to do with a deep injection well either building one or working on one, you either hire Dave McNabb or another consultant that then hires Dave McNabb. FPUA is very happy to have him on board with us. Mr. Hutchinson said he will take a few slides and then turn it over to Dave to give a little education on deep injection wells in general. FPUA has a long and successful history with deep injection wells with our first one being installed in 1994 at the Island Water Reclamation Facility (IWRF) to eliminate the treated effluent from going into the Indian River. After that, FPUA has installed three other wells at various locations. On the map displayed it shows the three different locations for the deep injection wells, the IWRF, one at the Water Treatment Plant, and there are two at the Mainland Water Reclamation Facility (MWRF) site. Mr. Hutchinson said FPUA's largest well is at the IWRF and has a permitted capacity of a little less than 15 MGD. He said that is a daily average and is not typically a number we get to, however we are able to go above and beyond certain times like during a hurricane or a heavy storm event. FPUA is able to physically pump about 17.5 MGD down in that well, which is very important during storms. The only use for this well is the treated effluent and there is nothing else we can do with it over there. This particular well is a little more than 3,300 feet deep and it is 24" in diameter. The second deep injection well was installed at the Water Plant in 2003 as part of our Reverse-Osmosis (RO) expansion. It is a component of the RO process and is currently permitted

for 2.8 MGD and that is a much smaller well. They get incrementally more expensive as they get larger so we try to keep them as small as we can. This is a 12" well and as you can see there is a lot of stainless steel that stops all the corrosion from happening inside of the pipes. As well as disposing of the concentrate from the RO, we also partner with a local industry, Allied Chemicals, to also inject their brine or process water down into the well as well. It is basically a heavy salt water that is very similar in chemical composition to what our RO concentrate is as well. Whenever you can find an industry to partner like that, it is beneficial for us because this is a small well, cost of about $4.5 million. Whenever there is that kind of investment, if you are able to utilize it elsewhere with an industry partner, then we can recover some of those funds. Allied currently pays around $65,000/year to utilize this facility. Mr. Hutchinson said the last two wells are at the MWRF site. He said the picture is of the active well, we have one active and one not active as of right now. The primary driver for building these wells was for the future sewer plant at that location. In the meantime, it serves as the primary disposal for the cooling tower blowdown water from the Treasure Coast Energy Center (TCEC). We also allow St. Lucie County to pump some leachate from the landfill down there on occasion, again this is another industry partner that helps us offset some of the costs. The permitted capacity of this well is only 2.7 MGD, although it is technically the same size of the well at the IWRF, it is a 24" well. In the future when the plant site is moved to that location, we will have to get a new permit to use the well. It can go all the way up to 18.6 MGD, each of the wells can. Those were both put into service in 2008.

Mr. McNabb said he will be talking about deep injection wells 101 and what they are used for. He said we use them in Florida for disposal of treated municipal wastewater as well as industrial wastewater, which includes reverse osmosis concentrates. Lately the power industry has embraced it for disposal of cooler tower blowdown. In Florida, the Class 1 injection wells discharge into a zone that is at a depth of about 3,000 feet below land service called the Boulder Zone. It is very transmissive and there are very few geologic formations like this in the world that can accept the kind of volumes of fluid we are talking about. Most injection wells around the country are happy to get rid of 800 GPM. Mr. McNabb said our injection wells are a dud unless we have the ability to get rid of 10,000 GPM, our geology is very different than the rest of the nation. He said we are lucky to have that formation so we take advantage of the boulder zone. There are currently 215 Class 1 active injection wells in the state and over 515 nationwide. We have a lot because of the boulder zone. There are high capacity wells here in Florida and there are permitted capacities up to 22 MGD and that is a lot of water to get down one well in one day. Mr. McNabb said he expects in the future the capacities will increase. He said the regulator, FDEP, seems to be getting more comfortable with the larger diameter wells, which means higher capacity. The typical deep injection well system diagram displayed shows the basic concept of deep injection wells. At the top is the surficial aquifer which for most people is their water supply and it is fresh high quality water. The confining unit is called the hawthorn group that separates our surficial aquifer from the Floridan aquifer. FPUA has Floridan aquifer production wells and are in the Upper Floridan aquifer zone, which is a brackish high quality water and is the source for the RO plant. Moving down on the diagram is a dash line, which is the base of the underground source of drinking water. Waters above that dash line have a portable resolve

concentration of 10,000 milligrams per liter or less. Those waters are what the state is charged with protecting. It is viewed as a potential water source or future potential water source. At the bottom of the diagram is the boulder zone, which is the zone that accepts the fluid that is injected down the injection wells. It is highly transmissive water that is injected in that boulder zone, moves laterally within that transmissive zone. He would vision it as a submerged caped system and ultimately it discharges to the ocean after thousands of years of filtering through the subsurface. Mr. McNabb said just overlying that boulder zone, the confining unit prevents migration and is the key to the whole system. He said the fluids FPUA injects, they want to keep in the boulder zone and do not want it moving up or migrating upward into that underground source of drinking water. We rely on the confining unit, which is a low permeability limestone and dolomitic limestone. The fluids FPUA injects need to stay in the boulder zone. The dual-zone monitoring well is a key part of the injection well system required by the state. The state requires we have a dual-zone monitoring well located within 150 feet of an injection well. The purpose is we have two zones we can sample on the dual-zone monitoring well, the lower zone is located right at the top of our confining unit. We are sampling it on a monthly basis looking for any signs of migration or signs of fluid we have already injected. We are making sure our confining unit is working and we do not want to see any signs of any injected fluids. There is an upper monitoring zone that is located at the base of the underground source of drinking water and if we start seeing migration of fluid, then we have violated the rules and the regulators are coming after us. Luckily FPUA has four wells at three sites and all three sites have great confinement and the systems have been working for a very long time and been working in compliance with the rules. There has not been any signs of migration at any of FPUA's facilities.

Mr. McNabb said the program is highly regulated and the Underground Injection Control (UIC) program was developed under the Safe Drinking Water Act. He said the UIC program regulates deep injection wells. Florida uses Rule 528 for the Injection Well Rule and in those rules they require every five years we test every Class 1 injection well looking for leaks. That is called Mechanical Integrity Testing (MIT) and it is several days of testing to demonstrate it does indeed maintain mechanical integrity and has not leaked or has any fluids migrating. The results of that testing is submitted to the State along with five years of monitoring data graphed demonstrating we have stable water quality and no signs of migration. In addition to that we have to renew the operating permit every five years and it is a very vigorous program. We are on a 5-year program because they do not want to go more than five years without reviewing the data again, taking a close look at everything to make sure all is working properly. The dual zone is monitored for signs of migration. One of our current industry challenges is misinformation, there is a good amount of misinformation about deep injection. It is one of the biggest challenges we have. Most of the failures are associated with the oil and gas industry, which are completely different wells. They are the Class 2 wells versus the Class 1 wells that FPUA deals with. The Class 2 are associated with the hydrocarbon industry and Texas has a bunch of them. There has been on the news shows graphs of what the landscape looks like in some areas of Texas. That is not what he is talking about when talking about Class 1 injection wells, those are a total different animal. Mr. McNabb said the fracking is where some of the misinformation is out there. He said people hear about the fracking that has done some damage in some places, but it cannot be applied here.

First of all, there is no fracking going on here, those are different kinds of wells completely and they are injecting thousands of PSI. FPUA is injecting a maximum of 60 PSI. They want the thousands of PSI to purposely go in and fracture the subsurface to create back waste for the gas and oil to flow through. FPUA is purposely making sure we do not create any pathways for things to flow, it is a very different animal. Another thing about injection wells is there is not a whole lot of alternatives. A lot of times it is one of a few alternatives that the regulators down south with the ocean outfalls, they are all going to injection wells. Reuse is a wonderful option especially in a new community, but even with reuse when it starts raining, people close those valves. The water from the wastewater treatment plant needs to go somewhere and a deep injection well is the alternative.

Mr. Mimms said his question is more specifically for our wells that are here in Fort Pierce. He knows St. Lucie County had historically some kind of relationship with FPUA in regards to the leachate. Leachate has cost the County residents some additional fees and Mr. Mimms asked if we are aggressively attacking the leachate type of relationship so we can help St. Lucie County with the fees and cost associated with this.

Mr. Hutchinson said we absolutely are. He said FPUA and St. Lucie County have had an agreement for several years now to discharge their leachate into our deep injection well. There is a technical problem with it because the leachate interacts with the blowdown water and it creates a precipitant in the well and starts to slowly clog the well. There is only so much time we can allow that leachate to go down into the deep injection well before the pressure starts to climb up and we would potentially have a problem being able to serve the power plant. Mr. Hutchinson said CDM had done a significant amount of research on this about one year ago trying to find some kind of solution. He said they talked about effectively a large softener they could put on the blowdown water that would stop the chemical reaction from happening. We have also installed sediment filters, more accurately St. Lucie County has done that as well to try to stop anything we could to help them out for sure. St. Lucie County spends about $1 million a year disposing that leachate and they have to truck it over to Okeechobee. They actually take some to their South Beach pump and it is a big problem. It affects everybody that pays taxes and we all produce garbage so we are all pretty much paying for it. FPUA's deal with St. Lucie County, if we are able to allow them to pump, it is a fraction of that amount. We have actually, on our own, our Pre-Treatment Coordinator is looking into some other alternatives as well to try to pre-treat the leachate to a point where it can primarily go back into the waste stream and back into the plant as opposed to down the deep injection well. An option if we had a bad batch, it would still be able to go down the deep injection well. Mr. Hutchinson said we are actively pursuing a solution for that for them and for us. He said it is a source of income.

Mr. Mimms said he is not saying it is our problem, it is not FPUA or the City's problem, but it affects everybody in St. Lucie County.

Mr. Hutchinson said it absolutely does hit everybody's pocket.

Mr. Mimms asked about the permitting for the MWRF deep injection well. He said they are anticipating getting that plant off the island in the next five years, right Bo. Mr. Mimms said that is what John promised him.

Mr. Hutchinson said he does not think John promised Mr. Mimms that.

Mr. Mimms asked what the anticipating permitted times to get those wells ready in the case of construction of the new plant.

Mr. McNabb said as soon as you say go, they can get a permit in your hands in 10 months. He said with modification of the second well to line it, there would probably be four months in construction from soup to nuts.

Mr. Bey asked what exactly Leachate is.

Mr. Hutchinson said garbage coffee or juice. He said it is really bad and what makes it very difficult to pre-treat, is it is different all the time. It is based on what is in the hill. The water is collected in big bowls, it goes into lift stations, and then it goes into their ponds where they do some pre-treatment before they even truck it off. Basically it is garbage juice.

Ms. Cavalcanti said she thought we had another presentation on this and were told the discharge down into these deep injection wells was almost drinkable.

Mr. Hutchinson said the current standards for the effluent that goes down the deep injection well is pretty close. He said he would not pour a bottle of it without some extra treatment, but it is very close. They are getting stricter on that as well. It is in line with the irrigation water as far as the discharge quality.

Mr. McNabb asked if Bo was talking about the discharge at the Island plant.

Mr. Hutchinson said yes.

Mr. McNabb said he does not know what that discharge must meet, it is secondary effluent treatment and it is not far from drinking water.

Ms. Cavalcanti said then we also put leachate down.

Mr. McNabb said we put it down the other well.

Ms. Cavalcanti asked on the mainland.

Mr. Hutchinson said it is an interesting conundrum. He said we have to treat this wastewater to such an extremely high quality before we are allowed to put it down the well, but are able to take a very bad substance, which is leachate down another well.

Mr. McNabb said the difference being the one on the Island is classified as a municipal Class 1 injection well and out at the mainland, it is an industrial injection well because it is disposing that industrial waste stream, the cooling tower blowdown coming from TCEC.

Mr. Matthews asked if it is safe to say if his colleague were to drink safe water, it has to wait until it gets to the boulder zone.

Mr. Hutchinson said no they cannot drink that water.

Mayor Hudson said to the average rate payer that has water and wastewater from FPUA, what does this process mean to them? She asked if this means they can be assured the wastewater is not going to be discharged in the lagoon.

Mr. McNabb said that is what the injection well is doing currently.

Mayor Hudson said their drinking water because of this monitoring well and the way this is operating, we can assume the drinking water is always going to be from the top, which is very good drinking water.

Mr. McNabb said that is correct.

Mayor Hudson said just so the ratepayers probably do not care if there is a deep injection well, they do not lose sleep over if there is one or not. She said it would be very important if you have an audience here that they need to know why this is so important.

Mr. McNabb said the deep injection wells are the primary disposal.

Mayor Hudson said it will not go in the lagoon or in the drinking water.

Mr. McNabb said it keeps it out of surface waters and it keeps it from impacting wildlife by discharging into the surface water. He said it will not negatively impact our drinking water and by disposing of it into the boulder zone, we are protecting our drinking water.

Mayor Hudson said really there is no other alternative.

Mr. McNabb said there are alternatives, we could evaporate it all, but financially reasonable, no.

Mr. DeIulio asked if our drinking water comes from the surficial aquifer or the upper Floridan aquifer.

Mr. McNabb said both.

Mr. Hutchison said the Floridan aquifer water services the RO side of our process and the surficial aquifer serves the lime softening, the combined plant.

Ms. Cavalcanti asked if there has been any study on how long from the boulder zone until it goes out to the ocean.

Mr. McNabb said not really. He said right now there was a paper written on it in the 80's that suggested it is moving at about 100' a year. Right now the boulder zone is moving inland, gets to the middle of the state, warms up a little bit, migrates up into the Floridan and then out eastward to the ocean. It is sort of a gyred that is going on where it is moving inward at first, moves upward, and then outward.

Ms. Cavalcanti asked if there is a timeframe for that.

Mr. McNabb said roughly 100' per year. He has done some rough calculations for a well in Key West and it was looking like 30,000 to 40,000 years before it is discharging. What he has seen is when this Floridan is a mile away from where it is injected, it is not recognizable as being injected fluid, and it looks more like the native groundwater. That zone is full of saline or native groundwater and what we are putting in there is a drop in the bucket compared to a huge volume of water that is in that zone. It sounds like we are putting a lot of water in it, but it is a drop in a bucket. It is almost like pumping into the ocean.

Larry Lammers, Supervising Engineer for Electric & Gas Engineering, will give a drone presentation on the Hartman and Totten Substations. He said before he starts the drone video, he is going to give a little overview of the substations in general and particularly he will be talking about Hartman Substation. Substations are very important in our community because that is where all the power comes in through, kind of the gate keeper of the electricity for the City of Fort Pierce. The Hartman and Totten Substations are just north of Okeechobee Road on Hartman Road. There are three transmission lines that come into the substation, Midway lines 1 and 2 and the Emerson lines all owned by FPL. The power generally during normal operating conditions comes into our system through Midway lines 1 and 2 and then goes out on the Emerson line to one of FPL's substations. Inside the substation there are a lot of conductors called bus and this bus way travels along the substation. It is called bus if you think of it as a bus route and bus stops. This bus takes the power to various stops and drops it off along the way. Mr. Lammers said the red lines on the displayed slide presentation represents 138,000 volts and the orange lines represent 69,000 volts. He said where you see that transition is where we have transformers that transforms that voltage. There are two sub transmission lines coming out of the Hartman Substation, the 603 line and the 604 line. Those go to the Lawnwood Substation and the Savanah Substation. The Totten Substation is represented by the blue lines and where you see the orange

lines change to blue that means the voltage is going from 69,000 volts to 13,200 volts. That is the voltage we transmit the power around the City. The northern part of the property is Hartman Substation and shows our transmission substation. This is where the majority of the power comes into the City. Towards the bottom is the Totten Substation, which is our distribution substation. FPUA has six substations that are very similar to this. Mr. Lammers said the northern part of the station, FPUA owns it, but it is operated by FPL. He said that is important because it has two big implications for FPUA as far as government regulations. If FPUA was to operate that section of the substation, we would be pulled into a whole plethora of regulations that we currently do not have to be concerned with. There is significant costs associated with adhering to those kinds of regulations. He will be giving a presentation in November about NERC regulations and how it affects the City of Fort Pierce and that will be part of the discussion. The other part of the substation is owned and operated by FPUA.

Mr. Lammers said he will now go into the phenomenal drone photography. He said this video was flown by the best drone pilot in our company, which is David Green, our FPUAnet Manager. We always work better when we work together and this corroboration is a good example of that. Displayed is a couple of FPUA's transmission lines, the first is Midway Line 1 and in the background is Midway Line 2. All of this equipment we are looking at right now is the equipment mentioned before, 138,000 volts, owned by FPUA, but operated and maintained by FPL. Flying east, the Midway 1 line is towards the bottom of the screen and it dead ends into the A-frame. That is one of lines that brings power into that substation, the line highlighted in the middle of the screen is the Emerson line, which is also owned by FPL. It leaves the substation and goes towards one of their substations. There is a lot of equipment under those transmission lines and a lot of engineering goes behind it. The line just highlighted is the Midway 2 line and when talking about power systems in general, you always want to have redundancy, a backup. Sometimes, depending on how important the facility is, you want to have a backup to the backup. In the middle of the Hartman Substation, way in the background there is a small building. That building is the control house and inside there are different devices that are constantly monitoring the state of our substation. If it identifies any problems it is going to automatically open up different circuit breakers and isolate the problem so there is little damage as possible. Faults happen and it is just an unwanted connection we have on the system. It is not so much a customer, it happens either because of failed equipment, an animal, a tree, and when those things happen, you want to isolate it as quickly as possible or there could be a lot of damage to the equipment. Talking about redundancy, displayed is a power transformer that takes all 138,000 volts and steps it down to 69,000 volts. Mr. Lammers said this particular equipment cost about $1.2 million and if something happened to it, it would take a minimum of two years to get a new one. He said obviously with that in mind, you do not want to be dependent on just that one piece of equipment for the whole city. There needs to be a backup of it so we do not put the city in that position where we are waiting on a piece of equipment for two years with no real recourse. On either side of most major equipment you will see switches or circuit breakers so we can isolate and maintain or replace different pieces of equipment without it being energized. Obviously it is much safer if you de-energize a piece of equipment while your personnel is maintaining it. Next shown is a circuit breaker and it turns off on certain lines. If this circuit breaker identifies there

is an issue or system operators needed to open up this line that this circuit breaker protects, then the open and closing would happen right there. This piece of equipment costs about $35,000 and we plan on replacing 12 of these over the next five years because they are nearing the end of their useful life. Yes, Madame Mayor it is in the budget. Travelling along the substation every time you see these lines, they are in groups of three, which is for efficiency purposes. Many people consider Milutin Tesla to be the father of power and electricity and he had this weird fetish with the number three. It is even said that he would not be in a hotel room unless it was divisible by three. Displayed along the substation now is a switch which is very important because it allows us to isolate different major pieces of equipment. We can de-energize them, do maintenance on them, or replace them if that needs to happen. The overview of the Totten Substation is a distribution substation, which is the type of substation that we have six of in our city. Two of the power distribution transformers are highlighted and there are two at every station and they cost about $500,000 each. We have in the budget to replace six of them over the next five years. Each transformer is designed to carry the whole load of the substation and that is important. Typically, each side of the substation is not tied together, but it is joined together with the circuit breaker and normally it is an open switch. If something happened like what happened at the Garden City Substation a couple of years ago, we would isolate this transformer, the switches are open on the other side, we would close this bus tie breaker so the customers would continue to get power from the other transformer that does not typically serve them. This is another example of how important redundancy is.

Mr. Lammers said the next circuit breaker highlighted is a feeder circuit breaker so every main line there is a circuit breaker at the beginning of it. He said that circuit breaker detects an animal problem, a tree limb, or a failed piece of equipment, that circuit breaker is going to open. It will then close back in a few seconds or few cycles depending on where it is on the open/close cycle and will do that four times. It does it four times because 70% of all faults on an overhead distribution system are temporary. If you open it up and a squirrel gets into the line, the squirrel gets fried and falls down, you close it back in and the customer is back in power. The customer may see a blink, but it was only temporary instead of having to send a truck out there. All of that magic happens right there at the circuit breaker. Highlighted now is where a bus connection happens and shows the bars that carries power from other buses. The last major piece of equipment to discuss is the regulators and this piece of equipment is very important because it regulates the voltage so it does not go too high or too low. A voltage that is too low, then the current at the customer's side is going to be really high and will burn up equipment, which we do not want that to happen. If it gets too high, then the customer could experience insulation failure, which overheats things and could potentially cause a fire, which we do not want that to happen either. The regulators on the system ensure the customer is getting a good voltage and that FPUA is providing them high quality power. Mr. Lammers said this is information only and he would love to answer any questions the Board may have.

Mayor Hudson said because we are in Florida and this is exposed, is it anymore affected by the weather more so than if we were in Michigan or a place like that.

Mr. Lammers said Florida is known as the lightning capital of the United States, so it is a big deal. He said we get a lot of temporary outages because of lightning and when there is a lightning strike on the line, it is mitigated by something called lightning arrestors. It takes all of that energy from the lightning strike and puts it into the ground instead of into equipment. Because we are in Florida, we try to make sure we have a set of lightning arrestors every third pole. We have started considering to make it every pole and there is cost associated with that. An analysis has to be done to see if we are going to save more money by avoiding equipment being blown up by lightning strikes or would it save more money on not spending it on lightning arrestors.

Mayor Hudson asked if the equipment Mr. Lammers just showed would ever be in an enclosure or a building or is it all out in the open.

Mr. Lammers said all of our equipment shown today is what we call open-air bus structure. He said there are some utilities and in certain conditions it is almost necessary that it is in an enclosure. There are some sub-stations that are all GIS gas insulated substations so the entire thing is in a room with insulated gas. Those are a lot more expensive and usually you would only see them in downtown or very densely populated areas where there is no real estate to have what we have.

Mr. Matthews said he had this wild thought that we have so much activity with terrorist and stuff and asked if our equipment is protected from something like that.

Mr. Lammers said there are a lot of talks about that and there is a whole set of standards that he will go into when he does the NERC presentation in November. He said there are whole set of standards about protecting critical infrastructure. There are a lot of different ideas and FPUA recently had a security study done for us and they even brought up the idea if you had walls around your substation and these type of things. Obviously there is a lot of costs associated with it and we have to figure out how likely it is, which is guess work, to try and determine how likely it is for this facility to be attacked. Will a terrorist choose our substations over a substation in Miami or New York City? How much money does FPUA want to invest into that and that is a big question mark.

Mr. Tompeck asked Mr. Lammers to talk briefly about the number feeders coming out of these substations. He said during the hurricane last year we talked about the main feeders and he believes there are six out of each substation with a couple of exceptions.

Mr. Lammers said every substation has six feeders coming out of them and typically each power distribution transformer feeds three of them. He said most of our power distribution transformers can serve all six coming out of the substations. There are six different distribution substations and the only one that does not have six feeders coming out of it would be the Causeway Substation. It is set up to have six, but because of the limited number of customers on the island, we only need four.

Mr. Tompeck said that is an important parameter during restoration on how fast we can get each one of those feeders back on line.

Mayor Hudson asked if that is where we had the salt problem.

Mr. Tompeck said the salt problem was actually on the main transmission lines, which did take out the King and Savannah Substations.

Mr. Lammers said the King and Causeway Substations.

Paul Jakubczak, Director of Electric & Gas Systems, introduced Resolution U.A. 2018-12 for FPUA Public Utility Week. He said he is just the messenger here to ask for Board approval for Resolution U.A. 2018-12 to recognize these fine men and women of Fort Pierce Utilities Authority for the tremendous work they do for the customer of FPUA as well as the citizens of Fort Pierce. He asked Mrs. Mazzarella to read the resolution by title or the whole thing as she wishes.

Florinda Mazzarella, Executive Assistant to Director of Utilities, read the title of the resolution into the record as follows: "Resolution U.A. 2018-12, a Resolution recognizing FPUA Public Utility Week, October 8-14, 2018, a week-long celebration of Fort Pierce Utilities Authority year-round service to the City of Fort Pierce."

Mr. Jakubczak said he would like to add that some of these men and women will also be attending Friday Fest this Friday. He said FPUA will have trucks and displays regarding what we do so the citizens will get a better idea of what we do to provide great service to them.

Mr. Bey asked if that is the only activity FPUA will be participating in.

Mr. Jakubczak said currently with the City is the Friday Fest, but he is sure we will be recognizing these individuals throughout the year. He said Public Utility Week is a way for the citizens and the Board to recognize FPUA, but we normally recognize ourselves for a good job that we do and also with our management, we make sure our employees know they are well thanked. Recently we have posted things on our internal website where we get a thank you from our citizens and our customers. It is great to see it is not just one department, it is all departments as a whole, as a family, we take that with gratitude.

Mayor Hudson said we appreciate you because the work you do is not seen, the product is but not that you are doing it. She said we very much appreciate our unsung heroes, thank you.

Mr. Mimms said since these individuals are being recognized, why don't we find out who they are, where they work, and what they do.

Mr. Bey said good idea.

Those present were: Trish Gilsinan, Electric Operations Utilities Services Supervisor; Trent Eury, Electric T&D Substation Relay SCADA Technician; Edward Patrick, Water Distribution Maintenance Foreman at FPUA for 15 years; Jim Schmitt, Gas Operations Service Technician; James Harris, Wastewater Mechanic III; Brandon Houle, Wastewater Mechanic; and Tony Price, Cross Connection Control Foreman.

The Board thanked everyone.

A motion was made by Ms. Cavalcanti, seconded by Mr. DeIulio, and unanimously carried to adopt FPUA Resolution U.A. 2018-12 - Proclamation for Public Utility Week 2018.

Mr. Tompeck officially welcomed Charlie Frank Matthews to the Board. He said Mr. Matthews had some indoctrination last week with Utility Support Services, Finance, and the Water/ Wastewater Facilities. We are going to try to get him up to speed with electric and gas Thursday.

Mr. Tompeck said he is preparing an update on Strategic Planning, which will be brought to the Board in November. He said we had it several months ago and he would like to able to show the Board the status and progress on the Key Results Areas discussed at that time.

Mr. Tompeck said he has already notified the Board about this, but wanted to mention it anyway. He said FERC approved FPL's filing on the Vero/FPUA 138kv transmission line for the full value of $2.4 million. He said this was the last official approval needed, so we are just waiting for the FPL/Vero deal to close and we will have our money in 20 to 30 days after the close.

Mayor Hudson said she would like to welcome Charlie Frank Matthews to the Board and looks forward to working with him.

Mr. Matthews thanked the Mayor. He said not to mess a good time, but he said he is looking at something that should probably be a protocol issue by the Board. At the last meeting he sat at as a citizen, there was turned down of a proclamation. His concern is something like a proclamation, service awards, and resolutions for someone that has been serving three years or more for the Authority to given of their time should be consideration to be automatically put in. It should not be done because of the like or dislike of somebody, it should automatically make the situation better and is a protocol issue. If you are going off the Board, retiring, or whatever, the Authority should not be caught up in personality. He is not looking for an answer now, but in the near future, we may need to put that as a round table discussion.

Mr. Bey welcomed Mr. Matthews to the Board and said if he can be of any help or assistance to him, short of violating the Sunshine, he would be more than happy to do so. He said a lot of the people that were here left and he was really excited when he came and saw a lot of people here.

Typically, besides employees and a couple of people that is all we have here. The meetings are important because it is an opportunity where we can assimilate a lot of important information about rates and things that happen in our company. Unfortunately, there is a lot of misnomers in the community about our rates and things we do in the company. By attending these meetings it is an opportunity to hear direct what is going on and we compare rates with other rates between Martin County and Indian River County. Mr. Bey said he understands it can be boring, but they are informative and they can also be used as a means of clearing up misinformation. He would appreciate if anyone knows some of the people that did not stay, let them know that coming to these meetings is important and informative to answer questions that people have about the Utility Authority.

There being no further business, the meeting was adjourned.

ATTEST:

SECRETARY

CHAIRMAN