

MINUTES OF CALLED WORKSHOP OF THE CITY COUNCIL OF THE CITY OF
LUFKIN, TEXAS, HELD ON THE
30TH DAY OF SEPTEMBER, 1998 AT 10:00 A. M.

On the 30th day of September, 1998 the City Council of the City of Lufkin, Texas, convened in a regular meeting in the Council Chambers of City Hall with the following members thereof, to wit:

Louis A. Bronaugh	Mayor
Jack Gorden, Jr.	Mayor pro tem
R. L. Kuykendall	Councilmember, Ward No. 1
Don Boyd	Councilmember, Ward No. 2
Betty Jones	Councilmember, Ward No. 3
Tucker Weems	Councilmember, Ward No. 6
C. G. Maclin	City Manager
James Hager	Asst. City Manager
Atha Stokes	City Secretary
Keith Wright	City Engineer
Kenneth Williams	Director of Public Works

being present, and

Bob Bowman	Councilmember, Ward No. 4
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being absent when the following business was transacted.

1. Meeting was opened with prayer by City Manager C. G. Maclin.

2. REPORT ON ANGELINA COUNTY REGIONAL WATER STUDY BY GOODWIN AND LASITER

Mayor Bronaugh stated that Council had met to hear a report on the Angelina County Regional Water Study by Goodwin-Lasiter.

City Manager Maclin stated that it was brought to the City's attention several months ago that the Texas Water Development Board, and prior to that the State Legislation through Senate Bill 1, were going to be looking to develop a long range plan for the State of Texas. City Manager Maclin stated that since that time there have been regional committees that have been formed, and Lufkin is in Region I, a group that has been meeting regularly for several months now. City Manager Maclin stated that this group has the task of developing a water plan for all of the East Texas area. City Manager Maclin stated that staff felt like it was important that we be timely in taking an updated look at the regional water study for Angelina County that was performed in 1989-1991. City Manager Maclin stated that it was staff's opinion that some of the numbers in terms of growth and consumption had changed dramatically, and an update was essential to insure an understanding of what it would take to have an adequate water supply for Lufkin and Angelina County in the future. City Manager Maclin stated that Council authorized staff then to pursue preparation of an update to our regional water study and Goodwin-Lasiter was retained to perform that study.

Keith Wright, City Engineer, stated that staff had observed over the years several things about the City's water system that led them to this point to develop this study. Mr. Wright stated that there was a very large increase in industrial use of water that was unexpected. Mr. Wright stated that there had been an increase in the number of connections, approximately 100 per year every year for the past few years that is increasing the water demands. Mr. Wright stated that there have been water shortages in the past two or three years, which have been based on mechanical failures. Mr. Wright stated that in this same time period the City has drilled two new wells and are proposing another well for this year in order to provide the backup that is necessary to meet the demand in case of some type of failure. Mr.

Wright stated that there have been dropping water levels with one of the wells over the past 10 years to a level of 23 feet, which means that the ability of the aquifer to recharge is limited and that the City is exceeding its ability to keep up. Mr. Wright stated that there has been a drop in water quality. Mr. Wright stated that when he first began working with the City through an engineering firm the City was using less than 500 pounds a day of chlorine and now we are in excess of 3,000 pounds of chlorine, and that is just to meet the demand that is put on the system by the hydrogen sulfite. Mr. Wright stated that, in his opinion, this is related to the amount of water that the City is drawing from the aquifer. Mr. Wright stated that with Senate Bill 1 there is a real prospect in that process of inter-basin transfers of water, and the City of Lufkin needs to show to the community and the State that we have a real need for the water rights that we have at Sam Rayburn, and that we are seriously exercising those rights in the future. Mr. Wright stated that another consideration is the economic growth that has taken place in the City over the past several years, and the potential for future economic growth does not seem to be decreasing and the City needs to be prepared. Mr. Wright stated that another problem that is possibly a little far fetched, but is not improbable, is depending on one source of water and in the event of any type of contamination to that source. Mr. Wright stated that he has some real concerns with chemical injection wells and things that are north of us but go through our aquifer. Mr. Wright stated that, in his opinion, the City needs to seriously consider being prepared for a second source of water.

Larry Lasiter of Goodwin-Lasiter stated that the high points of the problem statement in the study are: A continued drop in aquifer levels; continued growth in residential and industrial connections for City as well as County-wide; Seasonal peak demands exceeding production capacity have caused shortages for Lufkin and other agencies; historical growth has been 3.0% for Lufkin and 3.3% County-wide. Mr. Lasiter stated that other factors such as the Interstate construction could impact growth rates significantly. Mr. Lasiter stated that the main ground water source is from the Carrizo Aquifer, the only water supply at this point. Mr. Lasiter stated that Lufkin and other water supply agencies have plans to install additional Carrizo wells within the next two years.

Mike Walker stated that the Texas Water Development Board Report 110, which was prepared for Angelina/Nacogdoches Counties, states that the estimated total safe yield for the Carrizo Aquifer is 32 MGD. The actual estimated average production as of 1997 is 20 MGD. Mr. Walker stated that the seasonal peak production is estimated at 27-28 MGD. Mr. Walker stated that Champion/Donohoe still uses roughly 10 1/2 MGD from the Carrizo. Mr. Walker stated that based on the 3% growth rate, over a 20 year period estimating each well at 85% of an annual rated capacity, the City would require seven additional Carrizo wells assuming there is no loss in the present production. Mr. Walker stated that each time the City adds a well it is further out, and there are limited areas for future well development. Mr. Walker stated that most of the wells owned by the City and Champion are relatively close together and what that does is create a downdip in the Aquifer in those regions. Mr. Walker stated that there are limits where additional wells could be developed.

Mr. Lasiter stated that the next chart shows the gross projections starting at 1998 and looking forward to the year 2018. Mr. Lasiter stated that Lufkin's capacity is based on 85% of the actual pumping capacity. Mr. Lasiter stated that TNRCC recognizes that as the point at which you need to plan for additional water supply. Mr. Lasiter stated that if the City of Lufkin drills a well every year and a half based on the projections we can continue to get water out of the present wells. Mr. Lasiter stated that the chart also reflects proposed construction of a surface water source or an additional source of water, which at this point, the only other source that we know of besides the Carrizo is the lake water at Sam Rayburn. Mr. Lasiter stated that this is a 10 MGD facility with the facilities to get the water back to the City. Mr. Lasiter stated that disregarding the County's needs, and just looking at Lufkin, if this production capability is continued on out, the first step in building 10 MGD of

surface water capacity would take the City of Lufkin, based on these projections, out 20 years and beyond. Mr. Lasiter stated that the unknown element in this is how big a part the other water users in the County might play in seeking water supply from the City of Lufkin. Mr. Lasiter stated that this would be something that the City of Lufkin would take the lead in with public meetings with other cities and try to pursue if there is interest and what interest level there is.

Mr. Walker stated that the next slide shows some scenarios of where possibly would be available points to get the surface water supply. Mr. Walker stated that the further south or the closer to the dam that you get the more clarifying effect you have in the reservoir, the better the water gets that you take from the reservoir itself, and the less you will have to treat it to get it to drinking water standards. Mr. Walker stated that in the study performed in 1991 there was some sampling done in the Hanks Creek area. Mr. Walker stated that the City owns the rights to surface water in the Sam Rayburn Reservoir in the amount of 25 MGD.

Councilmember Jones asked when looking at the water quality, what extent is the water analyzed for effluence and things like that that are being discharged by industry or other entities that goes into the streams and lakes. Councilmember Jones how do we know the basic water quality of the lake. Mr. Walker stated that testing was performed in the previous study for six months to a year and what they were looking at was primarily heavy metals, pesticides, the things that would be real hard to treat. Mr. Walker stated that the basic drinking water standards as far as what individual industries and waste water systems, etc. are putting in the lake, they are generally monitored by the Angelina Neches River Authority and the surroundings of the lake for certain standards for what they discharge. Mr. Walker stated that there have been some problems with the lake water in the last couple of years, especially there have been some announcements about not eating the fish. Mr. Walker stated that one of the main things is that a part of any treatment systems is to disinfect to make sure that the fecal bacteria and those sorts of things are not going to be in the water.

Mr. Lasiter stated that in order to implement water surface supply, the task that it would take would be to construct the intake structure out at the reservoir, construct the treatment plant, construct a trunk line to transport the water from the treatment plant back to the City's booster plant, and storage and rechlorination and pumping facilities that will be located near the City of Lufkin.

Mr. Walker stated that in terms of having the route in this manner, and as far as their study to develop the surface water supply, the idea they were going on was to treat the water at the lake, have treated water in the line coming back to the City of Lufkin and that would give the flexibility to sell water to multiple entities, such as Zavalla, Four Way, City of Huntington, and Angelina Water Supply. Mr. Walker stated that the idea being that if they take treated water from the water line then they will have their own pressure maintenance, rechlorination and booster pumping facilities through a meter. Mr. Walker stated that that would be the benefit of having the treatment at the lake rather than pumping raw water; anybody that wanted to get water would have to have their own treatment plant. Mr. Walker stated that their initial phase was to provide 10 MGD for the average daily demands with the peaks being picked up by the existing well supply. Mr. Walker stated that as far as the future stages, they were looking at 5 MGD of treatment capacity increased at each stage. Mr. Walker stated that if the growth is not there, and the City had the 10 MGD, you wouldn't necessarily go back every five years and add five million gallons.

Mr. Lasiter stated that the cost estimates for Phase I improvements is estimated at today's costs at \$32,280,800 for a complete facility including the plant, transmission lines and intake pumping facilities. Mr. Lasiter stated that the total estimated cost by the actual time that a facility could be constructed, four to five years from the time the City decides to go to the lake, the construction costs would escalate to \$37,422,300, based on an escalation rate of 3% per year.

Mr. Lasiter stated that Phase II projected at today's costs would be \$7,296,000, with escalated costs if the construction occurred 10 years from now, at \$9,805,200.

Mr. Lasiter stated that the Phase III construction is projected at 15 years and would cost \$20,464,000 today, with escalated costs at \$31,882,200.

Mr. Lasiter stated that the final phase, which would be Phase IV, and would be adding an additional five MGD is estimated at \$7,296,000, with projects costs at 20 years, \$13,177,400.

Mr. Lasiter stated that if the City started construction today they could have surface water in five years. Mr. Lasiter stated that based on these projections of doing the Phase I construction and completing it in five years, the total cost would be \$37,422,300 with an amortization rate of 5%, with a 30 year bond, and the monthly payments would be \$200,891. Mr. Lasiter stated that interest costs would be \$34,898,458.53, and total payments, including principal and interest, would be \$72,320,758.53.

Mr. Lasiter stated that the impact to the average residential customers for the initial phase is estimated at \$7.11 if the equal rate for residential/commercial use is employed. Mr. Lasiter stated that this does not include O&M costs for the facility.

Mr. Lasiter stated that furnishing water to other suppliers would reduce this cost, and this is the unknown, because they are not sure to what extent the City will be able to sell water or bring other entities on line to use the surface water.

Mr. Lasiter stated that it is his recommendation to refine the study, to refine what the actual costs will be, and start nailing down possible locations for plant sites. Mr. Lasiter stated that there are many other things happening in the dynamic of this project such as TxDOT plans to construct major facilities on the east side of Lufkin, US 69 is being developed and improved for an evacuation route, and the water transmission line would fall along the same route as the evacuation route. Mr. Lasiter stated that TxDOT has acquired some railroad right-of-way that is available and possibly the City could work with TxDOT on trying to secure rights to be able to lay a water line along that route. Mr. Lasiter stated that, in his opinion, some of these issues should start happening very soon. Mr. Lasiter stated that whether or not the City decides to pursue the construction of the facility this year or next year or five years from now, those types of issues need to be addressed because the City has the opportunity to acquire the rights-of-way now, whereas if we wait five or ten years it might already be committed for some other use.

Mr. Wright stated that based on what he has heard from the discussion so far he would like to point out three things. Mr. Wright stated that there is no guarantee of continued use of our water wells. Mr. Wright stated that TNRCC is looking at regulating the withdrawal of ground water from the aquifers with the continued drop in water surface elevations. Mr. Wright stated that the study does not take into account the benefit of growth, as in a lot of cases, the City avoided tax increases due to the growth, and in the future you could avoid possibly increases of these high levels to water users as far as the residential costs based on our growth. Mr. Wright stated that this did not take into account the 100 connections per year or depending on what happens in the future. Mr. Wright stated that that growth could be factored in, and the costs to the consumer would be reduced by that amount. Mr. Wright stated that the other thing that he cannot emphasize enough is the time frame that something like this takes to implement. Mr. Wright stated that the City Council that decided to purchase the water surface rights had a lot of foresight in what they were doing, and what the City does today will take stepping boldly forward and looking into the future since it will take several years to actually build a facility. Mr. Wright stated that when the time comes that the City has to have this facility, we will not be able to get it quickly. Mr. Wright stated that these projects take environmental concerns, just dealing with the Corps of Engineers and

constructing the intake in the lake will go through massive amounts of engineering time, attorney fees, and biologists, and overcoming the environmental issues that we will face. Mr. Wright stated that what he would like to propose to the Council, not today, but for them to think about, is moving forward with a detailed engineering analysis of the possibility of constructing a treatment plant. Mr. Wright stated that this would entail looking at where the land would actually be acquired, look at the actual intake point, contact the Corps of Engineers, contact the Lower Neches River Authority, look into the things that the City will have to go through with the Corps to get the actual permits to build the plant to draw the water, do detailed engineering design on the plant, do detailed engineering design on the trunk line back to the City. Mr. Wright stated that this is the first step the City needs to take to implement the process. Mr. Wright stated that the cost for this will be somewhere between \$80,000-\$100,000 to implement the engineering study so that the City will have some detailed plans to move forward with in the future. Mr. Wright stated that, in his opinion, this study could be funded through the Utility Fund balance based on the recommendations of the City Manager and Asst. City Manager the amount needed for fund balance that Council approved.

In response to question by Councilmember Gorden, Mr. Walker stated that the original report was done in 1970, and they are since out of print and unavailable from the Texas Water Development Board. Mr. Walker stated that there is a newer report that just came out in 1997, but it is very general in nature and covers the whole State, and is not specific to the Carrizo or the aquifer. Mr. Walker stated that the report does not mention the 32 MGD safe yield, but it does document the draw down in the aquifer. Mr. Walker stated that the report has never been updated or revised.

In response to question by Councilmember Gorden, City Manager Maclin stated that the 1991 engineering study was done by EGA.

Mr. Walker stated that the 3% growth rate was based on water use for the City of Lufkin, including industrial and commercial connections.

In response to question by Councilmember Gorden, City Manager Maclin stated that there was a good write up in the Wall Street Journal a week go about the Ozarka lawsuit, and the speculation by the writer of the article is since the Supreme Court of the State of Texas has agreed to hear the case on appeal from the Appellate Court that would indicate the Supreme Court's willingness to consider change in what has been a 94 year old rule in terms of ground water rights.

Councilmember Gorden stated that, in his opinion, the City should move forward with Mr. Wright's recommendations.

In response to question by Councilmember Jones, City Manager Maclin stated that he received mixed feedback from the other entities who were contacted about participating in the regional water study. City Manager Maclin stated that some of the suppliers, including big users like Temple-Inland and Donohoe, actually helped participate in the cost of this study by providing financial participation. City Manager Maclin stated that when the City participated in the regional study from 1989-1991 that EGA did, things went along pretty good in terms of cooperation by everyone until it got to the point of "if you want to reserve capacity in a regional supply you will have to pay "x" dollars per percentage capacity, or per millions gallons you will need for the future". City Manager Maclin stated that staff found that most of the 15 entities who sell water in Angelina County were not in a position at that point where they were in dire need of water and without the need in the immediate future they could not come to grips with paying money to guarantee the future. Councilmember Jones stated that some of the entities were probably just getting started at that time and there was a lot of start up costs for the wells they were putting down. Councilmember Jones stated that she was familiar with the Pollok/Red Town supply and knew that they haven't had the revenue to look into acquiring future water rights. City Manager Maclin stated that several of the

suppliers are reaching the point to where they will have to have additional wells, obviously since we had a dry summer like we did, and in some cases going to mandatory rationing by some of the rural districts or voluntary rationing as the City did. City Manager Maclin stated that, in his opinion, the atmosphere in 1998 would be much different than it was in 1991 simply because people are beginning to recognize that there is an end to the current water supplies and that they will need to drill additional wells if they are going to keep up with the demand of their customers. City Manager Maclin stated that the study points out that there is a 3.3% growth in the County as evidenced by the new subdivisions cropping up in Hudson, Central and Huntington, etc. City Manager Maclin stated that it might be that the timing now might be more open by some of the rural water supplies because of cost effectiveness. Mr. Wright stated that another problem is the autonomy that the original study had, and now we are going to take that away. Mr. Wright stated that you would have a regional water supply corporation that was under the ANRA umbrella, which a lot of people were scared of. Mr. Wright stated that this would leave everybody autonomous, you would purchase water from the City of Lufkin, but still maintain your own entity as far as a system. Mr. Wright stated that this is a lot more friendly approach to these entities and they are a lot more comfortable with that notion than creating some type of umbrella that they would all be under. City Manager Maclin stated that actually the City tried both in 1991, but the big difference is demand for additional water, and in 1991 that looked like it was a long way off for a lot of the rural water supplies. City Manager Maclin stated that 1998 changed the point of view in terms of the time frame for need for additional water supply.

Councilmember Jones stated that one thing the City might consider is having a presentation like this to the boards of the other water districts, perhaps in one meeting. Councilmember Jones stated that there are probably new boards and new directors now at these water districts who need to hear this presentation.

Councilmember Gorden stated that he wanted to go on record as saying that he wants to sell the other water districts water and try to create a pool of water for this whole county to grow, but doesn't want the City to get bogged down in trying to create another entity that everybody is part of. Councilmember Gorden stated that he is personally saying that he wants the City of Lufkin to move forward and be the leader in this project.

City Manager Maclin stated that one of the things that will come to pass in the next eight to ten months is what plant improvements Donohoe will make to determine what their future water needs will be. City Manager Maclin stated that once that decision is made that will have a big bearing on whether or not Donohoe is interested or not interested in purchasing raw water.

Mayor Bronaugh stated that the cost of the treatment plant at the lake will be borne by the City. Mr. Lasiter agreed. Mayor Bronaugh stated that the use of that treated water will be at the mercy of Zavalla, Huntington, Four Way, M & M, and if they do not wish to purchase water from the City, then that expense of that water treatment plant will fall directly on the taxpayers of the City of Lufkin. Mr. Wright stated that looking at the whole scheme of things, the quantity of water they use versus what we use is not much. Mr. Lasiter stated that the one slide indicated that the County used about 25% outside of the City of Lufkin and Lufkin is using 75%, so that if we sold water to everybody else in the County, that is only 25% of the cost that the City would be sharing over the whole County, and the likelihood of the whole County participating is pretty slim.

City Manager Maclin stated that EGA did not take into consideration in the 1989 study that Pilgrim's Pride would double their capacity, which is the single biggest factor, because it is an extra million gallons a day that was not a part of those studies.

Councilmember Boyd stated that he agreed with Mr. Wright that it would be better to build the plant on the lake because if not the other cities in the rural

communities would have to build their own treatment plants, so we would have one big treatment plant and could sell the water at a better rate treated than we could untreated.

City Manager Maclin stated that one thing about the depth factor that really makes a difference in the cost per thousand to treat is monitoring the different levels of the lake. City Manager Maclin stated that the lakes have a hypolimnion and epilimnion, and these are different stratas of water. City Manager Maclin stated that lakes go through a turnover where the stuff on the bottom rises and the stuff on the top goes down and the lake does a turnover and when that happens you usually get a stench. City Manager Maclin stated that if you have a deeper intake structure then you can change the elevation in the depth of the water from which you get your intake and sometimes actually save a lot in what it costs you to treat it. City Manager Maclin stated that if you are stuck with an intake level where the bad layer of the water is, your treatment costs will be a lot higher, and this can be monitored.

Mr. Wright stated that another possible savings is the utilization of the old railroad right-of-way to avoid acquisition costs. Mr. Wright stated that the study will tell us if that will benefit us or not. Councilmember Jones stated that that is one of the points of urgency in this is that there are plans for the utilization of those corridors and we need to get our name in the hat. City Manager Maclin stated that under best case scenario, if TxDOT were to cooperate with us, there is the potential of hundreds of thousands of dollars in savings in right-of-way acquisition costs.

Councilmember Weems asked what would be the process to go ahead and start this at a regular meeting. City Manager Maclin stated that staff would like to ask the City Engineer to proceed with preparing a RFP and once he has completed that, bring those proposals with a recommendation and a cost back to be placed on the agenda for Council consideration, which would take a couple of months.

Motion was made by Councilmember Weems and seconded by Councilmember Boyd to proceed with writing the Request For Proposal by the engineers and the City staff to consider the existence of a creation of a system to remove the water out of Lake Rayburn and bring treated water forward to the City of Lufkin.

In response to question by Councilmember Weems if the City's contract with Rayburn was perpetual, City Manager Maclin stated that there is a 50 years note where the City pays a fee to Sam Rayburn, the Corps of Engineers and the Lower Neches River Authority for holding capacity. City Manager Maclin stated that the City picked up a second note of a shorter term when they built the spillway. Mr. Wright stated that there are two different contracts, one is with the Corps of Engineers and one is with the Lower Neches River Authority. Mr. Wright stated that the contract with the Corps is a storage contract for 43 acre feet of storage in the lake. Mr. Wright stated that the other contract where we actually pull water out of that storage is about 28 acre feet. Mr. Wright stated that from what he can read on the contract as long as the City pays its bill the rights will be there. Mr. Wright stated that the City is a little over 30 years into the Contract. Mr. Wright stated that the Corps has proposed another item to the City and that is to do a topographical survey of the lake bottom. Mr. Wright stated that in the future staff may be coming back to Council in order to participate in the cost of that survey.

A unanimous affirmative vote was recorded.

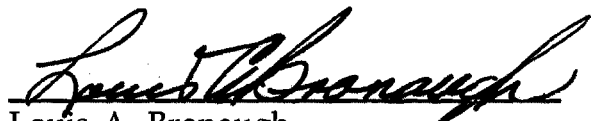
Mayor Bronaugh thanked Mr. Lasiter and Mr. Walker for their presentation.

In response to question by Mayor Bronaugh, City Manager Maclin stated that the City could request grant funds through the Texas Water Development Board for low interest loans. Mr. Wright stated that he understood that all the grants were being given to the regions through Senate Bill 1. Mayor Bronaugh stated that he would like to see the City continue to work with Senator McReynolds on his efforts.

3. COMMENTS

Keith Wright stated that as far as drainage, staff is moving forward with the acquisition of property on the Lotus Lane detention facility. Mr. Wright stated that there were some situations with appraisals and how they related to what we should pay for flood plain versus developable property, and they are being worked out at this time. Mr. Wright stated that we are moving forward on the Old Union facility. Mr. Wright stated that he has a preliminary set of engineering plans for the Lotus Lane facility, and once the property acquisition is finalized this project will move forward pretty rapidly. Mr. Wright stated that the construction start up on these two facilities is probably early spring. Mr. Wright stated that one thing that they were concerned about was the flood plain and flood way mapping that would be revised due to the submittal to FEMA and their approval. Mr. Wright stated that he had met with the Drainage Advisory Committee that the City had appointed and looked at some possibilities for channel improvements to improve the flood plain/flood way and will probably be coming back to Council with this in the future. Mr. Wright stated that in the Hurricane Creek study, the initial 100 year flood plain boundary has been completed and staff is looking at it now as far as it relates to actual flooding conditions that we have seen. Mr. Wright stated that staff has been holding some meetings with different Neighborhood Associations and addressing their questions and concerns about drainage. Mr. Wright stated that he has several proposed detention facilities for the Hurricane Creek watershed and they are smaller in general compared to the Cedar Creek facilities just because of limits and available land. Mr. Wright stated that he will probably recommend three different sites to Council depending on their impact to the watershed in developed areas, particularly in residential areas where they have experienced flooding. Mr. Wright stated that he is extending the estimated completion date and finalization to the end of December based on obtaining survey data. Mr. Wright stated that this also includes Mill Creek watershed, which is in the north Lufkin area draining towards Jones Park.

4. There being no further business for consideration, meeting adjourned at 11:15 a. m.


Louis A. Bronaugh
Mayor

ATTEST:


Atha Stokes - City Secretary