

CITY COUNCIL WORK SESSION

DECEMBER 11, 1980

CITIZENS NATIONAL BANK
402 CYPRESS

BOARD ROOM
THIRD FLOOR

9:00 A.M.

Update And Discussion On Following Projects:

- Strategies for Responsible Growth
- Mapping, Monumentation, and Map Digitization
- Comprehensive Community Energy Management Program
- 1981 Bond Sale
- Possible Landfill Sites
- Floodwater Management Program
- Long-Range Water Supply & Raw Water Delivery System
- Public Information Program

CERTIFICATE

I hereby certify that the above notice of meeting was posted on the bulletin board at the City Hall of the City of Abilene, Texas, on the 15th day of December, 1980, at 8:45 a.m., o'clock.

Kelley Brewer, Asst
City Secretary

CITIZENS NATIONAL BANK BOARD ROOM
402 CYPRESS, THE CITY OF ABILENE, TEXAS.

The City Council of the City of Abilene, Texas, met for a work session, Thursday, December 11, 1980, at 9:00 a.m., with Mayor Oliver Howard present and presiding. Councilmen Dick Bowen, Leo F. Scott, S. M. Moore, Jr., L. D. Hilton and Councilwoman Kathy Webster were present. Councilman Seaton Higginbotham was absent. City Manager Ed Seegmiller, Assistant City Attorney Gary Landers and City Secretary Ruth Hodgkin, present.

Invocation by Councilman Leo F. Scott.

Bob Whitehead, Director of Public Works, explained that members of Freese & Nichols, Inc., were present and would brief the Council on the proposed Floodwater Management Plan.

Anthony Reid, Freese & Nichols, Inc., introduced others from his staff who would be talking on the proposed Floodwater Management Plan. They were Jerry Fleming and Ron Tamada. He also introduced Joe Verdoorn, Myrick-Newman-Dalberg, who is assisting Freese & Nichols with the study.

Mr. Reid discussed flood hydrology which is concerned with the determination of the magnitude and frequency of flood flows. The magnitude of flood flows is the statement of the quantity of flow that results from a given storm. The magnitude at a given point in the watershed is influenced by many factors. When a storm event occurs, the flow at a given point in the watershed will vary with time. This variation in the flow is typically expressed as a hydrograph. The shape of the hydrograph is influenced by the watershed characteristics. One very important influencing factor is urbanization. Urbanization can increase both the rate and quantity of runoff. The frequency of flood flows is the statement of the average interval of occurrence of a flood. Typical frequencies used in floodwater management studies are 10-year, 50-year, 100-year & 500-year. A 100-year flood is one having an average frequency of once in 100-years, although the flood may occur in any year. It is based on statistical analyses of streamflow records available for the watershed and analyses of rainfall and runoff characteristics in the general region of the watershed.

Mr. Reid explained that Flood Hydraulics is concerned with the determination of the maximum stage of elevation reached by the waters of a flood at a given location. A flood is said to have occurred when the maximum stage or elevation results in an overflow of lands, not normally covered by water, that are used or usable by man. He said that floods have two essential characteristics: the inundation of land is temporary, and the land is adjacent to and inundated by overflow from a river or stream or standing body of water. The flood flows through the main channel of the stream and the overbank. The overbank flow is the broad, shallow overland flood flows outside the main channel. This region is the area where most of the significant adverse effects of a flood occur.

Mr. Reid said that the maximum stage or elevation is influenced by several factors. With greater roughness in both the channel and the overbank caused by the quantity of natural vegetation, the elevation will be higher. Bridge and other manmade structures in the flooded area act as obstructions to the floodflows through the creation of a damming effect and increase the stage. Encroachment on flood plains, such as artificial fill, reduces the flood carrying capacity, increases the flood heights of streams, and increases flood hazards in areas beyond the encroachment itself. One aspect of flood plain management involves balancing the economic gain from flood plain management against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, the concept of a floodway is used as a tool to assist local communities in this aspect of flood plain management. Under this concept, the area of the 100-year flood is divided into a floodway and a floodway fringe. The floodway is the channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment in order that the 100-year flood may be carried without substantial increases in flood heights. Minimum standards of the FIA limit such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced.

Mr. Reid discussed several proposals which could be done to help alleviate the flooding. One of the reports set forth several plans which consisted of combinations of flood control reservoirs, channel improvement works; and floodway improvements consisting of channel improvements, levees, interior drainage facilities, and overbank fill areas. The plan selected, Plan C (channels only) generally proposed to direct flood waters from Elm & Catclaw Creeks eastward to an improved Cedar Creek Channel by means of a diversion channel. Remaining flood water would be handled by channel improvements on Little Elm, Elm & Catclaw Creeks.

Jerry Fleming, Freese & Nichols, Inc. discussed the structural applications that they are attempting to do regarding Floodwater Management. He pointed out the different ways in which to convey the water on through the city. He recommended cleaning and straightening channels & creeks in order to convey the water on through the city. He mentioned concrete lined channels which work good. Building storage ponds (large or small), which can reduce the downstream flow also works good in alleviate flooding in some instances.

Joe Verdoorn, Myrick-Newman-Dalberg, addressed the floodwater management, bringing out that locations which need to be corrected to allow better runoff, is usually on private property and the City is limited in what they can do. He said that zoning was one of the tools that the City could use successfully in helping with the Floodwater Management. He pointed out that zoning could help control the runoff in newly developed areas. He recommended as one way of control, would be to purchase land, to construct retention ponds, in order to control runoff. He pointed out that Lubbock had been using this method of controlling flooding for some time.

Mr. Reid conducted a question and answer period on identification of generally acceptable floodwater management techniques & policies.

Mr. John Cook, Freese & Nichols, explained that they needed to know the City Council's decision on whether they would like to plan to purchase land for flood retention structures, or straightening of creeks & channels, or diversion channels. He pointed out that even though the money is not available now for these projects, they could be kept in mind, in case they get some federal assistance of some kind.

Mr. Reid presented the Water Supply & Raw Water Delivery System Report. He said that the recommendations that came out of the meeting with the Council & the Water District was basically three which are: recommended that steps be taken to proceed with effective control could be developed for the apparent man-made pollution on the watershed of the Clear Fork of the Brazos River, a recommendation that additional steps be taken to coordinate with the Brazos River Authority & Corps of Engineers to determine whether some of the water from the Possum Kingdon Reservoir might be available for use and how the federal program for pollution control was proceeding and what their time schedule would be, a recommendation that these things be weighed and a definite decision be made on the future supply of water in about 1985.

Mr. Reid said that they needed to proceed with the water quality survey at the Cedar Ridge site. He said that they needed to define the scope of the survey and determine what needed to be done and the recommended date of this is January, 1981. Then after that step is behind us, to proceed with the implementation of a field program to collect the data. He said that this could be a joint Water District & City project, so that all interested parties would be involved.

Mr. Cook explained that a decision needed to be made as to who will find the man to carry out these duties.

Mr. Seegmiller said that he believed that the City must act very aggressively in making plans to get more water for the City of Abilene, but they needed guidance in what to do.

Mr. Victor Jaeggli, Water District Director, said that he felt that it was very important that the Clear Fork of the Brazos be cleaned up, because Ft. Phantom got a great deal of its water from it. He also said that Cedar Ridge location would be acceptable, only if the quality of water would be good enough for drinking.

Mr. Fred Sandlin, Member of the Technical Review Committee, said that he felt that the man to be hired should be hired by the Water District, because clean water was their business. A formal agreement is needed, he said.

Mr. Reid discussed the type of man which would be needed to do this research, saying that he would need to spend 100% of his time traveling through out the watershed in an attempt to locate the sources of man made pollution. He said that it would require an individual who is knowledgeable with the Railroad Commission and also the ability to work with people.

Mr. Seegmiller said that it was important that we have the right kind of man to do the work, because the City would have to pay for it, whether he worked for the District or the City.

After discussion, it was decided that the existing pumping lines from Hubbard Creek Reservoir was adequate for the minimum amount of water which the City now purchases from Hubbard which is 1,000 acre feet a month, until Lake Phantom Hill reaches the level of 16.24'. This is the recommendation from Freeze & Nichols, Inc. who conducted the water supply study. Mr. Reid said that the existing pipelines is adequate thru 1990 and probably 1995.

Mr. Cook said that the City needed to make a decision on improving its own water system. He pointed out that on peak days in the summer, the present facilities could not handle pumping the water to the public. He said that his Staff recommended the construction of a booster pump station between Ft. Phantom Hill and the treatment plant. This would cost an estimated \$906,000, with approximately \$263,000 to hook it up to the new water pumps.

Mr. Seegmiller assured the people we need and plan to use the contracted amount of water from Lake Hubbard.

The Long Range Water Supply Study which was made by Freeze & Nichols, makes the recommendation that until Ft. Phantom Hill Lake's level is down to 16.24', there is no need to take water from Lake Hubbard, but after it reaches this depth, it is their recommendation that the City purchase 1,000 acre feet per month. We will continue pumping from Hubbard, until about January, when we catch up, because of the fact that we had not been pumping from Lake Hubbard regularly. By using the guidelines presented by Freeze & Nichols, Inc. the City will have adequate water until 1995.

General conservation of water was also mentioned as being one of the important aspects of saving water. In changing the codes, they will come to the public with some measures serving as conservation.

Lee Roy George, Director of Planning & Community Development, reminded the Council of Mapping, Monumentation and Map Digitization which was started last year. He said that Brian Porr, Turner, Collie & Braden, Inc. was present and would explain the progress. He said that we entered into a contract with them for an Evaluation I, in November, 1979. The City has been subdivided into four various segments, basically north & south Treadaway would be one quadrant, Highway 80 east & west would be the other quadrant. Actually the City has been divided into four quadrants for the purpose of the mapping & monumentation program. We have the south one half of the City flown so far as aerial photographs are concerned, the city is now receiving some of the aerial photography from that. In June, 1980, Turner, Collie & Braden, Inc. was authorized to go into Evaluation II, which would tell us about the cost of putting all the information onto Interactive Graphic System. This would be a computerized mapping system, and at the time it was not known what the cost and benefits would be.

Mr. Porr explained in his proposal that it covers recommendations on the scope, format, and method of implementation of AIMS, a benefit cost analysis of implementing such a system and recommendations concerning other users/co-sponsors of the system.

Mr. Porr explained that as the city grows, more & more information, data, etc. will be collected within the City, which pertains to the same area. He said that there is currently much duplication in record keeping and much time spent by citizens and the Staff when information is requested. AIMS would allow Abilene to keep all geographically oriented municipal information - location of streets and the size or depth of water lines, for example - in a central, computerized source that would be available to all city departments.

He presented three options to the City after explaining that this evaluation is based on the City's procurement of a computer in 1982, and having use of portions of the data base as they are completed while paying computer charges for the development system.

Rather than purchasing a computer in 1982, the City could purchase two graphic work stations with hard-copy units (\$87,000) and connect them to the development computer by dedicated phone lines (\$21,000 per year) for access into the data base during the development period. This option would delay the remaining \$416,000 of hardware/software cost until 1985, but would incur an additional \$63,000 in cost for the phone lines.

If desired, City access into the data base could be delayed until the entire project was complete, with hard copy maps and data being provided as interim output. This would delay all hardware/software cost until 1985, and save the phone line charges. This would, however, restrict the benefits available during the development period.

A third alternative is that Turner, Collie & Braden, Inc. could lease the hardware for the duration of the data base development period. The City would reimburse the total lease cost in monthly installments over the length of the project. At the end of the lease period, the equipment would be available to the City at the then "fair market" value, usually 10% of the original cost. City Access into the data base during the development period would be via telephone lines described in Option I. Under this plan, costs shown as "Production Computer" would be applied against lease costs.

Council members suggested a possible "benchmark study" in which the system would be developed for a small part of town on a trial basis. They said that they do not have enough information now to commit Abilene to the complete recommended package which would cost \$2.7 million over a four year period.

Mr. Porr said that he would return in January with a proposal for the partial system, which would be applied to an area about one square mile in size with various types and density of development. He predicted the trial application would help identify potential savings that would result from the "Area Information Management System".

Bob Whitehead, Director of Public Works, presented a proposed site for a future landfill. It is a 420 acre site north of the present landfill. The present landfill has about another year before it will be filled, he said. He pointed out that there was much engineering work to be done, but that the location, size and soil presents a favorable concept. He requested the Council's approval to proceed with the project.

It was the consensus of the Council to proceed with the above described project.

Mr. George recognized several of the members of the Strategies for Responsible Growth committee, including Claudine Wooldridge, the Chairman. He pointed out that they were making some recommendations, on flood study, needed changes in the Pro Rata Ordinance, etc.

Mr. George said that the Energy Council had met and they were applying for a grant for an energy study of some public buildings.

Anita Russelman, Energy Coordinator, reviewed the progress made by the Energy office. She said that they were in the act of hiring an engineer that could survey the 8 buildings she wants to audit, and would make recommendations, pointing out low cost, or no cost savings. He will be training City Personnel as he does this, so that they can audit all the City Buildings.

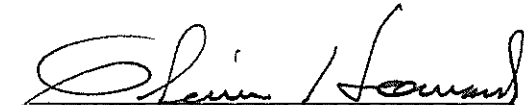
Roy McDaniel, Finance Director, said that there was a need to sell 4 to 4.5 million dollars in bonds for pending projects. But the high interest rates may prevent the City from selling any bonds until next spring. He said that the Council would have to decide how to fund \$2 million in projects already let for bids. He pointed out that the City should be careful not to overcommit on our reserves.

Faith Morley and Carol Foy presented a new City of Abilene "Logo" with several examples to the Council.

After discussion, it was the consensus of the Council to let two firms look at the proposed "Logo" and perhaps come up with something of their own, and bring back to the Council for their review.

There being no further business, Mayor Howard adjourned the meeting at 3:10 p.m.


CITY SECRETARY


MAYOR