

**MINUTES OF THE RECESSED MEETING  
OF JUNE 12, 2007 OF THE TOWN COUNCIL  
TOWN OF CAROLINA BEACH**

**June 15, 2007**

The Town Council of the Town of Carolina Beach reconvened on June 15, 2007 at 10:00 a.m. in the Training Room at the Municipal Administration Building, 1121 N. Lake Park Blvd., Carolina Beach, North Carolina. The following were present: Mayor, Bill Clark; Mayor Pro Tem, Alan Gilbert; Councilwoman, Pat Efird; Councilman Jerry Johnson; and Councilman Joel Macon. Also present was Town Manager, Tim Owens and Town Clerk, Lynn Prusa.

Mayor Clark called the meeting to order.

Mayor Clark reported that he and Mayor Fuller attended the Wrightsville Beach Alderman meeting last night and they voted unanimously to help support the funding for the Carolina Beach Inlet.

**SCOPE OF WORK/ENGINEERING AGREEMENT FOR 3 MILLION GALLON GROUND STORAGE TANK**

According to Tim Owens, the purpose of this meeting is to talk about some alternatives, make some recommendations, and decide how we need to move forward with our water allowance.

Dr. Richard Spruill and Chris Foldesi were solicited to do a ground water analysis. They are geologists who specialize in ground water resources in the coastal plain of North Carolina. Dr. Spruill began his presentation by saying we looked at where your wells are, learned as much about the wells as we could, and developed a data base. Next we develop a framework and then we try to find all the data we can on the quality of water in the well.

We've come up with proposed pumping schedules for you to work with your engineers that are based on theoretical 12 hours on and 12 hours off, which we call the day and night schedule. For the day schedule, you pump 2, 5, 6, 7 out to 14 and you would get 1.04 million gallons a day. At night, you pump 1, 3, 8, 9, 10 and you get .96 million gallons a day. This is to optimize the pumping schedule so we can reduce the amount of water level decline. The more we can reduce that change in water level, the more we can stop the salt water from coming up.

Our major recommendation is the ground water resource in this coastal environment is limited and it's limited for lots of different reasons: 1) it's not a very large area and 2) to the east, west, and south of you is salt water. The salt water dramatically limits the resource. The aquifer is very shallow; and in my opinion, it's influenced by recharge from the Cape Fear River where it's salty. If it was deeper, it might be less influenced by the Cape Fear River but to the west we can clearly demonstrate that salt water is entering the aquifer system of choice for Carolina Beach. There are lots of ways with dealing with this issue.

There needs to be a water resource management strategy and our strategy has several different points:

- 1) Increase pumping in areas with lower chlorides and decrease pumping in areas with higher chlorides.
- 2) Optimize withdrawals from the existing fresh ground water system:
  - a) have another well or two where it's fresh mainly up to the north;
  - b) revise the pumping schedules and look at them closely as we go forward;
  - c) think about the long term goal of moving away from the areas where the chlorides are higher as much as we can
- 3) Find additional ground water supply because growth is going to continue:
  - a) look at fresh supply first mostly to the north
  - b) pump at reasonable schedules
  - c) tap the PD aquifer in the north
  - d) look at brackish water, pump it out, and treat it

Aqua Storage and Recovery (ASR) is a management strategy for managing our water resources. We can create some barriers to salt water intrusion that is going on in the aquifer. We're not going to run out of water; it just needs to be managed properly. ASR is a way of not having to build a large water treatment plant but to utilize the off peak water, having a place to store it, and having a place to recover it from where it doesn't need a lot of treatment.

At this time, Mr. Owens announced there will be a ten minute break

After a short break, Mayor Clark called the meeting back to order.

The next presenter, Harry Dail, stated our community has only a few days in the year (typically the first week of July) where it's a real problem to service the water and we've been building the entire system to handle those few days. We believe your capacity at this point is somewhere around 69,000-70,000 gallons.

Next Mr. Dail said he went back to the 1995 CAMA report and extracted data. It is our opinion that if you look at the same two day period in July that your build out capacity would be just over 3 million, which is about one million gallons of additional supply from where you are right now. One of the reasons for that is the number of full time residents are going up.

I look at the 3 million gallon ground storage tank and the ASR system as a way to peak shave the high flow periods out of this equation because it will give us a lower number that we have to supply. We can invite GMA to continue with an ASR study because there is more to this than just drilling a well. We need to know more about how the water goes in the ground, what happens to it once it gets in there, and how much of what we put in there is going to get back out before we have the same problem. We're in the process of looking at some Life Cycle Costs. ASR and Reverse Osmosis (RO) are one of them. The connection to Wilmington is part of it. Another recommendation is eliminate or fix the Cape Fear plant. Mr. Dail showed a chart for well system flows that included 15H which represents potential changes for future flows. We

also need more surface irrigation. The time frame from start to finish is 15 to 18 months for the 3 million gallon ground storage tank.

**Councilwoman Efirm made a motion to adopt Resolution No. 07-895 (Exhibit 1). MOTION CARRIED UNANIMOUSLY.**

### ***LIFT STATION #1***

Brian Cox said I have been asked by the town to design a new station to replace Lift Station #1. We want to increase the pump capacity to meet the future demands. Seventy-five percent of the town's flow comes through Lift Station #1. We want to improve the reliability, increase the wet well storage, improve the building aesthetics to accommodate the business district area, provide screening and enclosure for the trash compactor, provide on-site stand-by emergency power, and provide odor control. The estimated construction cost is \$800,000. There is a need for wet well storage to accommodate the increase in pump size and horsepower requirements. An additional building area is needed to store your electrical controls in order to run the pumps. If this project goes forward, completion would be probably September 2008.

This presentation was given to give an update of where the station was going to be, what it would look like when it is completed, and to get Council's input.

### ***WILMINGTON BEACH STREET PAVING AND DRAINAGE***

Before holding a public meeting regarding Wilmington Beach, Mr. Owens wanted direction from the board.

Brian Cox said the scope of work for Wilmington Beach project is pave all the unpaved streets, pipe open ditches, concrete curb and gutter, sidewalks on the east and west streets, and improve the storm drainage in this area. We are now working on getting all of our permits.

We have had several meetings with the Corps of Engineers. Spot Lane does not have any utilities in it and the wetlands in this area covers the entire right-of-way; it's about a ½ acre of impact inside the town right-of-way. They verbally voiced the challenges with Spot Lane and keeping it inside this permit and they basically told us they would probably not approve the application with Spot Lane included.

The storm water treatment is another challenge. There are 467 properties in this project and some involve wetland areas. The streets can be paved in two different phases. In Phase 1, you don't need to get a Corps permit but you do need to get the other permits. In Phase 2, you have open ditches and they will have to remain as they are today. You will then have a paved road without curb and gutter, sidewalks, and existing open ditches.

Mr. Cox said what I'm hearing is you want to see this plan and the original plan as a total scope, refine the timeline on that, and get the project costs. Mr. Owens stated I think we need a plan without curb and gutter too.

Mayor Pro Tem Gilbert offered we definitely need an open house to get input from the residents and property owners before we can make any further recommendations.

***ADJOURN***

**There being no further business, Councilwoman Efirm made a motion to adjourn.  
MOTION CARRIED UNANIMOUSLY.**

Respectfully submitted,

Lynn N. Prusa  
Town Clerk

Approved: \_\_\_\_\_