

# Water & Sewer Board

## November 1, 1999

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Grace Gouveia Building, 24 Alden St, Provincetown, MA  
Approved 12/6/99

In Attendance:

Custodio J. Silva, Jr. Chairman  
David Perry  
Giovanni Cicero  
James Buckingham  
Keith Bergman  
David Guertin  
Craig Wiegand  
Gary Palmer, Truro Board of Health  
R.W. Breault, Truro Town Administrator  
Warren Alexander, Building Commissioner  
Rex Peterson, Permit Coordinator

Members of the Public and Press (see attached sign-in sheet) This meeting was tape recorded.

The meeting was called to order by Custodio J. Silva, Jr. at 1:13 p.m.

### **Public Statements:**

Custodio Silva asked for any public statements explaining that this meeting would be a worksession and anyone wishing to speak should do so at this opportunity. No public statements were made.

### **43 Shore Road Emergency Application:**

Custodio asked the Board to consider diverting from Roberts Rules of Order in order to consider an application by a North Truro applicant which has been considered an emergency by the Truro Board of Health Chairman, Mr. Gary Palmer. The applicant's well has been declared contaminated and the owner wants a hook-up to the Provincetown system as soon as possible so that the Town of Truro will grant a septic system permit and work can continue on their home. David Perry made a **motion** to approve the hook-up of the single family home at 43 Shore Road in North Truro. The motion was seconded by Giovanni (John) Cicero. Vote in favor of the hook-up for 43 Shore Road Approved 4-0.

### **Report by the Water Superintendent:**

Craig Wiegand, Water Superintendent, addressed the Board on the condition of our water distribution system. The system is capable of pumping 1150 gallons per minute or 1.6 million gallons per day at the peak of its physical limits. DEP is currently requesting that all systems become redundant. A redundant system is one which is capable of pumping at least the daily water demand of the system through an alternative means or site. This regulation is based on the premise that during an emergency shut down of one or all your pumping wellfields, the system can have an alternative system on standby that will meet the demand for water. The Provincetown water system currently does not have an alternative pumping site capable of meeting the demand during an emergency shutdown.

Although our system was designed to pump 600,000 gallons per 8 hour day, we have been pumping 1.6 MGD( million gallons per day) during the peak summer months. We can be asked to pump between 1.7 MGD and 1.9 MGD on peak

days. This translates to a shortfall of approximately 200,000 gallons per day during the peak summer months. Currently our pumps are required to run 24 hours per day 7 days per week to meet this peak summer demand. During the summer weeks (Monday through Thursday) we will pump an average of 1.4 MGD while on the weekends we will pump more to meet the demand. Our physical plant equipment is not designed to run 24 hours per day. The stress and wear on our equipment will lead to eventual breakdown of the system. More importantly, however, over pumping the wells could lead to saltwater intrusion into the wellfields. Once we break through the delicate fresh water lens into the saltwater, the wellfield is lost forever.

Our current storage capacity is 7.5 million gallons at our three storage tanks. Winslow Street has two tanks one at 1.1 million gallons and the other is 3.8 million gallons. Mt. Gilboa storage tank has a capacity of 2.6 million gallons. The storage slowly diminishes as the summer progresses and if we should encounter a large fire (such as the Crown and Anchor fire) during peak season, our system would not recoup this loss until mid October at present pumping rates and capabilities. We need an alternative water source to meet these current demands and in order to plan adequately for the future of both communities. We are at a critical junction in the system right now and planning for the future is imperative.

We are currently addressing the water situation by locating and repairing leaks, replacing water meters, instituting new conservation measures, educating the general public, exploring alternative sites in the Pilgrim lens and working on a hydraulic model of the entire system.

The water service replacement program along Shore Road in North Truro has been more extensive than originally anticipated with approximately 85 water services having been replaced. Of these services replaced, 80 – 85% were leaking moderately to significantly. This will undoubtedly go a long way toward accounting for our “unaccounted for” water. Through September of this year our pumpage is down over 7,000,000 gallons for the year. Any strides we make in locating and repairing leaks will lead us closer to understanding what our true use demand is.

The meter replacement program continues since the spring with the Department’s goal being to replace meters on a five year cyclic program.

The 1997 MCDBG grant allowed the Department to purchase 1000 conservation kits, which are being distributed to low and moderate income households in Provincetown. The kits include a toilet dam, aerators and showerheads.

The Department plans several educational presentations for the public including working with the local schools in Provincetown and Truro to educate the general public on water supply issues and conservation.

Our hydraulic model has been completed for the southern leg of the system in Truro and we hope to proceed with this project during the months ahead until a full hydraulic model for the entire water distribution system is accomplished.

Although the \$750,000 grant for reconstruction of the Daley and Knowles Crossing wellfields was not funded, we continue to seek funding for rehabilitating and refurbishing of the remaining five wells at the Daley wellfield. The goal is to eventually change the present vacuum system of wells to submersible wells which will be gentler on the tender water lens allowing us to alternate pumping of the individual wells.

We are currently revisiting the feasibility of developing the Atkins-Mayo water site in Provincetown in the Pilgrim lens. Old test data is being re-evaluated and pump tests are currently being run on the site. We intend to pump all four test wells and do a continuous round of testing for iron and manganese. A complete round of sampling will be submitted to Barnstable for salinity, dissolved solids, conductivity, pH and other water quality parameters. When these results are received, we can better project the cost and degree of treatment that may be needed to utilize this site. It is too soon to tell if this is a cost-effective alternative site for future development. The spaghetti strip across the road from this site is also going to be tested as a possible location for well development.

It is important that land bank funds be considered for possible wellfield purchases either in Provincetown or elsewhere if a potential site is identified.

## **General Questions:**

At this point in the meeting, Custodio asked the Board's permission to open the meeting for questions from the general public. There were no objections.

A question was asked as to the location of the Atkins-Mayo site and the spaghetti strip. Craig identified the locations of both sites.

David Perry asked how much saltwater intrusion is allowed by DEP? Craig answered that DEP likes to see no more than 20 ppm but that standard is hard to meet in this area. At the end of our summer season, chloride levels were recorded at as high as 120 ppm. It will be awhile before we can determine if any damage was done to the wellfield by pumping at this high rate.

Jim Buckingham asked if the capacity of the wellfield could be increased by going to the submersible well system? Craig responded that it could result in a higher yield, but tests would have to be done first to see what a safe withdrawal rate would be.

John Cicero stated that he appreciated having a clearer understanding of the water system in general but the conclusion must be drawn that:

1. We need more water.
2. We need to increase our storage capacity.

It is our business to supply our customers with water but we need the help of our selectmen. We have the power to say no, you can't have any water and yet, it is our duty to supply water to our customers. How can we accomplish this without the help of the Selectmen? We are not part of the process.

Keith Bergman responded that the area which you do have control over is your budget through the enterprise funding mechanism. You can set your strategy through the budget process by asking for money for a new source, maintenance of the existing wellfields and new storage capacity. The bottom line appears to be that even if we stay absolutely still, the equipment will decline and our sources could be threatened. The water permitting process also allows another mechanism by encouraging us to become a redundant system. This can only be accomplished by finding a new source.

Custodio Silva voiced his concern that we could destroy our equipment at the present summer pumping levels and possibly destroy the source. Our options seem to be:

1. Ask Truro to help us find another source
2. Limit the number of water hook-ups to the system.

Also directing a question to Warren Alexander and Rex Peterson, does the current permitting process address any water use except Title V? The answer from Warren was that we do have water use calculations for Title V which basically is 330 gallons per day for each 3 bedrooms permitted. However, there are large areas which are not governed by these permits such as restaurant seating expansion and other changes of use for a facility.

Custodio continued with although we have some mechanism in place in Provincetown we are being asked by Truro to permit hundreds of gallons per day for one facility in Truro. I don't think so. It shouldn't be happening that way.

Keith Bergman added that presently we do not permit by consumption so a change of use or increased economic activity does not enter into the growth management permitting process. Our investigations have shown that even though we have decreased the number of building permits from 28 to 23, the actual gallons used in these units is less than 330 gallons per day. We need a different approach than the Title V standard because there are whole categories of growth which are not presently covered under our growth management permitting system.

John Cicero expressed his concern that the Water & Sewer Board has not been made a part of the growth management process and discussions with the two towns as had been promised last year.

Keith responded that any of the Provincetown growth management meetings are open to attendance by the Water & Sewer Board. The by-law had not called for the Water & Sewer Board to meet every three years as part of the review under the Provincetown law.

Mr. Cicero suggested using water consumption projected increases as part of the permitting process.

Keith agreed that the idea of approaching the issue through water consumption has merit. You can not take people's right to use their property away from them however.

Mr. Cicero reiterated that the Water & Sewer Board should be part of the process and Custodio added that he reads the advertisements in the newspapers for scheduled meetings and, as an individual, makes a determination which meetings are important for him to attend as a member of the Water & Sewer Board.

David Guertin stated that we are not in a crisis at this time. It is a time to be cautionary. We are addressing this at the staff level and asking the Water & Sewer Board to actively approach the growth management process, review the rate structure as it reflects Department goals for new water supply, storage and maintenance of the system. This needs to be a multi-pronged attack on the problem of growth as it relates to our water resources.

David Perry added that storage and standpipes are of no use if we don't have the water supply necessary to fill them. If we can't pump anymore, the standpipe won't do us any good. The Water & Sewer Board can't be expected to raise the millions of dollars necessary for a new water source through water rates alone. The increase would be too dramatic. The Department needs cooperation from both towns.

Custodio asked how we will handle requests that come in tomorrow. My job is to protect the system. If the system goes down they will point to the Water & Sewer Board for not having done their job. DEP wants a backup source. We need a new source. Both communities will have to work to help us.

John Cicero gave credit to Craig for giving us a clearer picture on the status of the water system. I think we need to let the Selectmen & Boards know that this is the time to act.

David Guertin included that for short-term relief we are looking into a portable desalinization unit which could be used in an emergency. We need to determine how much it would cost to put on line. The leak repairs we have done are also freeing water for use by customers.

We can fix leaks but new buildings are still going up Custodio stated.

Craig added that the problem can also be addressed through education and conservation efforts. Sonja Soderberg interjected that the Women's Club she belonged to years ago issued the first conservation devices in Town and she agreed with this effort toward conservation and education.

David Perry asked Craig how much water in the water tanks is acceptable to him. Craig responded that it is best for the system to maintain at a full level in the tanks. David Guertin further clarified that we normally run the Winslow street tank at 100 feet. When it drops below 80 feet it is difficult to recover the water.

Mr. Cicero stated that we have storage capacity but not the ability to recoup. David Guertin agreed and explained that storage is a function of pumpage, hence we do need to pump more.

Jim Buckingham observed that even if we stay the same, we are going backwards. Since the cost of desalinization remains too great, we need to look for another source.

There was some general discussion regarding how long it takes to develop a new source even when one can be found. It may take ten years to get a new source on line.

Mr. Breault, the Truro Town Administrator, then informed the meeting that Truro will be holding a Special Town Meeting in two weeks and will be asking for the town to purchase a site in the Chequessette lens in South Truro for a wellfield for the water system.

Custodio expressed that this was the best news we have had for a long time. We need to work closely with Truro on this.

Some general discussion on growth management and the need to address amendments to the by-law were voiced before Custodio called for a **motion** to adjourn the meeting. David Perry made a motion to adjourn. Seconded by Jim Buckingham. Vote in favor of adjournment 4-0. Next meeting 1<sup>st</sup> Monday of December.