

MINUTES OF THE MEETING

October 19, 2009.

Present: DR. Barbara Roth-Schechter, Chairperson; DR. Joseph Musto, Member; DR. Harvey George,

Member: Joe Fryer, Agent for Wells; Mike Angieri, Agent for Septic Systems;

List of attendees can be found in Board of Health Office

Meeting Called to Order at 7:00 PM

- 1) 6 Crest Drive West. Unanimously approved and signed deed restriction prohibiting garbage grinder installation.
- 2) 40 Donnelly Drive. Unanimously approved and signed deed restriction limiting the house to 4 bedrooms.
- 3) Lot 41 Morningside Drive. Opened public hearing at the request of Linda Carney (property owner) requesting variance from the Dover Board of Health regulations (217-3(11)). This regulation prohibits the construction of a septic system for new construction on a lot where the ground water is determined to be 36 inches or less below existing ground surface. The application was considered complete and the applicant's engineer, Joe Nihill of GLM presented the Board with the notices sent to abutters by certified mail. All abutters signed the return cards except Kevin Hayes of 158 Farm Street as he did not receive the notice, but heard of the meeting from his neighbors and called me to confirm the meeting and he was present.
 - A. Attorney Vincent O'Brien presented an overview of the project including: site location, Title V regulations, the Dover Regulations, the Town of Dover's report by ESS and the applicant's report by Carr Research, and presented a hand-out Item A (includes: Carney Deed; taxes paid list; assessors information; comparison of wastewater regulations for new England states; Carr Report dated August 10, 2009; Hantush Model info; Carr's review of ESS report (attachment 2)). The Carney's purchased the land (about 2 acres in the Donnelly estate subdivision) in 1985 for about \$145,000 from Regina (Glomeau) Adams (abutter at 162 Farm Street). The Carney's have owned the land since then and have paid taxes at the rate the town charges for a "buildable parcel of land." He explained that the owner wanted to develop the land as a single family house lot (only use zoning allows) and hired GLM to do the soils analysis work to support the septic system design and address wetland issues. Carr research was hired to evaluate hydro geological features of the site to determine ground water movement and mounding of treated septage due to ground water level being less

than 36 inches as required by Board Regulations. He also explained that strict application of the Board's Regulation was not justified (according to Carr Research's work) and manifestly unjust as the design proposed provide adequate treatment as required by Title V and the Board's Regulations.

- B. Joe Nihill of GLM discussed the proposed site development and septic system as shown on his plan dated Dec. 8, 2008 and revised 9/15/09. The plan shows a new house containing 5 bedrooms with garbage grinder and other necessary site features (drain, grading, retaining walls, driveway, wetlands, well location, set-back dimensions, septic system, etc.). The house will have a 2000 gallon septic tank, 1500 gallon pump chamber, force main, leaching trenches (based on a percolation rate of 18 MPI, less than the Board's 25 minute per 1 inch drop (MPI) maximum rate, all to accommodate 5 bedrooms as required by Title V and Board Regulations.
- C. Dr. Jerome Carr presented an overview of his firms work and its relation to the Board's ESS report. He explained that the ESS report was used by the Board to establish regulations limiting the use of land for septic systems for houses. ESS considered the effects of high ground water (ground water at 12 inches deep), percolation rate 25 MPI (maximum Dover regulation), 25 year rainfall event, Class III soils (silt-clay soils, generally slowly permeable to water flow in the soils), ground slope essentially flat, about 1% (1 foot change in 100 feet) and a 4 foot thick layer of permeable soil. The hydro geologic flow model ESS used (MODFLOW) combined these factors and resulted in septage from a mounded leaching system breaking out onto the ground surface and creating a health hazard. Based on this report, the Board enacted a regulation requiring ground water levels be over 36 inches below existing ground and percolation rate be not more than 25 MPI for new construction.

Dr. Carr explained that his company monitored ground water elevations to predict flow direction across the area of the proposed septic system. They conclude that ground water flowed towards the street and then off site and did not contribute to water in the isolated wetlands on the property. Thus the wetland would not be impacted.

Dr. Carr described the result of his ground water mounding (Hantush model) as compared to the Board's model and the results. In his model, he used actual site conditions: slope about 5 %; seasonal high ground water at 24 inches; percolation rate of 18 MPI; permeable soil layer over 4 feet thick and no 25 year rainfall event as this typically does not occur in the spring when high water conditions exist (see item C). The results of his modeling showed that sewage would not break-out from a mounded system and would remain about 0.8 feet below grade.

Dr. Carr concluded that by using actual site conditions and not "generic assumptions of the ESS report" this site would not present a health hazard if a septic system were allowed to be built.

- D. Vincent O'Brien summarized issues related to the Board's report and their modeling results. Mottling as found at the site is the best method for ground water determination which Title V and the town recognize. The septic system proposed meets standards for treating sewage. The ESS modeling conditions do not exist at this site and their use to prevent building a septic system is wrong. Strict application of the Board's regulation is manifestly unjust as their proposed system meets Title V and Board regulations and there is no other use of the property which meets the intent of zoning as a single family house lot.
- E. Abutter Nick H. Tiss, 4 Morningside Drive. He lives across the street and had concerns about his well about 150 away. Could it be polluted by the septic system by flow entering cracks in bedrock and seep into his well? Could the wetland on the lot be polluted and ultimately water flow from the wetland? He also questioned the location of the system as too close to the road and would there be trees as a buffer?

Dr. Carr answered that the septic water would be treated by flowing through aerated soil before entering the ground water; treated septage water would flow away from the isolated wetland and have no impact; the system would have no impact on his well as sewage is treated in the soil and is over 100 feet from his well and the system meets Title V and Board regulations.

Joe Nihill explained that trees would remain along the street and there would be some screening. The mound height would be about 4 feet but no planting can be done on the mound, just around it.

Vincent O'Brien stated that the system meets current standards for well separation; the ESS report did not address issues other than break-out and the Board has stricter guidelines for new construction which are met.

- F. Abutter John Sutton, owns lot 40. He questioned: safety of mounded system: what happens with pump systems during power outages; where does wetland come from?

Joe Nihill: mounded systems are safe and meet Title V construction standards; Pump chamber has full 1 day storage capacity as required by Title V; isolated wetland is created by rainfall.

Dr. Barbara Roth-Schechter read a letter from the Sutton's (item C) into the record which described numerous un-successful attempts to perc the property in the past (Cheney's 1985 report.)

Vincent O'Brien again pointed out that the previous work did not address all site conditions as their work does.

- G. Abutters John and Regina (Glomeau) Adams, 162 Farm Street. Described her prior ownership of the property in the 1970's and selling the lot to Linda Carney in 1984. She did "not sell it as a buildable" and it had been purchased with several other lots from the previous owner who had not developed them. She stated that no one ever thought anything would be built on the site as it did not meet regulations and failed previous testing.
- H. Mr. Sutton noted that it was bought for about \$100,000 less than buildable lots. It was a speculative purchase and their claim denial was manifestly unjust was not true.
- I. Abutter Kevin Hayes, 158 Farm Street. Questioned the use of mounded systems for new construction. It is allowed and will happen whenever the ground water is less than about 5 feet below the surface. On a related matter it was pointed out to Kevin that he plans to build on a property he owns on Farm Street and the soils evaluation indicated that his new house would have a mounded septic system.
- J. Mr. Tiss asked about screening the mound from the street. No planting can be done on top but can be done around the system.
- K. Mr. Sutton asked about runoff. It was explained that infiltration systems were used and accepted by the town as a practical method.

There being no more questions and discussion. The Board requested the applicant agree to pay for Horsley and Whitten services (see item D) as a third party consultant to review the applicant submissions and recommend action to the Board. The applicant agreed to pay the estimated fee of \$5,000.00. The Board also asked the applicant to agree to extend the hearing until December 14, 2009 to allow for review and she agreed.

The applicant asked that the 45 day review time stated in Title V for variance review and answer by the Board would not start until after the close of the public hearing. This was to allow all issue to be full heard and reviewed by both parties without rushing to meet the 45 day deadline. Both parties agreed to this.

- 4) Joe Fryer, agent for water supply wells presented the Board with a list of polices to be reviewed and accept for wells to be used as part of ground water heat pump systems (geothermal wells).
 - a) Open Loop Systems.
 - 1) Wells used for heat pump systems shall not be used for domestic water use.
 - 2) Wells used for heat pump systems shall be a minimum of 100 feet from a domestic well.
 - 3) Wells used for heat pump systems shall be a minimum of 100 feet from a subsurface sewage disposal system.

- 4) Wells used for heat pump systems shall a minimum of 100 feet from any other geothermal well. There shall be no interconnection between a ground water heat pump water system and a domestic system.

The Board unanimously approved the recommended policy for Open Loop Systems.

- 5) The Board discussed the outreach Program. Barbara Roth-Schechter reported that she and Diane met with Chris Owens of the Sherborn Board of Health to discuss the program. He basically held his position that Sherborn would not fund the program as they did not understand its usefulness. He discussed Sherborn's issues:
 - a) Liability issues with program as presently conducted.
 - b) Need for a certified person to run the program.
 - c) Questioned why the Board of Health should run the program.
 - d) Did not know the guidance department's police regarding the program.

Harvey George answered that a) the person conducting the program was a "town contract employee" and covered by town's liability insurance; b) a certified person was not required; c) in other towns, different department run the program including the Board of Health; d) guidance department never took part in the program.

Next year only Dover student could use the program as only Dover was paying for the services.

- 6) Board had a brief discussion of the H1N1 vaccination program.
- 7) The minutes of the October 6, 2009 meeting would be reviewed and acted on at the November 9, 2009 meeting.

Meeting was adjourned at 9:05 PM

Mike Angieri