

READINGTON TOWNSHIP BOARD OF HEALTH MEETING

October 18, 2006 7:00 pm

Chair William C. Nugent called the meeting to order at 7:16 pm and announced that all laws governing the Open Public Meetings Act have been met and that this meeting has been duly advertised.

Attendance Roll Call:

Christina Albrecht present Raymond Facinelli absent William C. Nugent present
Daniel Allen present Beatrice Muir present Wendy Sheay present
Jane Butula present

Also Present: Board of Health Engineer: Ferriero Engr., representative Mr. John Hansen
Board of Health Attorney: Ms. Marisa Taormina
Hunterdon County Health Department: Ms. Deb Vaccarella

A. APPROVAL OF THE MINUTES

1. Minutes of August 16, 2006. (-Albrecht, Nugent vote).

A **MOTION** was made by Ms. Butula to **approve** the minutes of August 16, 2006.

This motion was seconded by Ms. Sheay.

On roll call vote the following was recorded for approval of the 8/16/06 minutes:

Dr. Allen Aye Ms. Muir Aye
Ms. Butula Aye Ms. Sheay Aye

2. Minutes of September 20, 2006. (-Facinelli, Muir vote).

A **MOTION** was made by Ms. Butula to **approve** the minutes of September 20, 2006.

This motion was seconded by Ms. Albrecht.

On roll call vote the following was recorded for approval of the 9/20/06 minutes:

Ms. Albrecht Aye Ms. Sheay Aye
Dr. Allen Aye Chair Nugent Aye
Ms. Butula Aye

B. CORRESPONDENCE

1. NALBOH newsletter.

Chair Nugent noted on pg. 7 regarding the nail salons.

Chair Nugent noted on pg. 7 regarding the onsite wastewater collaboration in Ohio.

Ms. Butula noted on pg. 10 regarding the Med. Reserve Corps, this should be forwarded to Ms. Wheatley.

Ms. Sheay noted on pg. 10 the possible shortage of flu vaccine.

2. HCHD Memo dated 9/21/06 regarding Upcoming flu clinics. (*posted at Reception desk and bulletin board*).

Ms. Butula will include this with monthly update provided to churches.

Chair Nugent questioned the payment process.

Ms. Vaccarella noted that all residents are welcome to attend any flu clinic which is convenient to their time schedule. The method of payment is cash or check, credit cards are not accepted.

3. HCHD LINGS - dated 10/3/06 - Statewide flu campaign.

4. NJDHSS news release dated 10/3/06 "Get Flu Ready NJ" (*website www.niflupandemic.gov posted on township website*).

5. Suspected Hazardous Discharge Notification letter dated 9/7/06 regarding heating oil at 54 Lazy Brook Rd.

6. Suspected Hazardous Discharge Notification letter dated 9/22/06 regarding heating oil at 934 Route 523.

7. o Letter dated 10/3/06 from St. Hubert's regarding the impounding of dangerous dogs.
o Follow up letter dated 10/4/06 from owner.

8. Block 18/Lot 23 letter dated 9/29/06.

Ms. Butula asked if HCHD has inspected this.

Ms. Petzinger will follow up with Mr. Barczyk, Zoning.

9. Block 9/Lot 21 – NJDEP land use permit dated 9/22/06.

Ms. Butula asked who supervises this.

Mr. Hansen stated the applicants engineer is responsible for a certification that the work is done and the as built is performed. As part of the process, the paperwork is required by NJDEP.

10. NJDEP letter regarding Hess Station @ 720 Route 202.

Ms. Butula noted the length of time this resolution is taking.

Ms. Vaccarella stated if groundwater is contaminated it does take a while to resolve. Wells in that area are quarterly tested, and they are fine, this is just an annual review of the monitoring wells themselves.

11. NJDEP letter regarding Tunis Cox/Coddington Rd. contamination site.

Chair Nugent noted this was a letter to the residents requesting that they volunteer or grant permission for well sampling.

Ms. Vaccarella stated this is fully in the hands of NJDEP.

12. NJDEP email dated 10/8/06 regarding recycling program.(forwarded to Public Works).

Chair Nugent noted there is 4.5 million in grants available for recycling programs..

13. Block 57/Lot 4 letter dated 9/18/06 from Beardslee Engr. regarding reissuance of LOI.

14. Block 39/Lot 8.01 letter dated 9/22/06 from Studer and McEldowney regarding LOI.

Chair Nugent complimented the engineering firm for stating their concerns.

15. Block 39/Lot 8.01 memo dated 9/20/06 from Planning Board Chair regarding LOI.

16. HCHD LINCS - dated 10/13/06 – Public Health Advisory regarding tuberculosis.

17. Block 8/Lot 3 – letter from ETI dated 10/11/06 – request for LOI presence/absence.

C. SEPTIC REPAIRS (*HCHD status in italics*).

1. Septic System Repair Appl. from HCHD, B 68/L 10.01. [Final Field 9/13/06](#)

2. Septic System Repair Appl. from HCHD, B 1.01/L 14.27. [Final Field 9/22/06](#)

3. Septic System Repair Appl. from HCHD, B 46/L 19.15. [Final Field 9/15/06](#)

4. Septic System Repair Appl. from HCHD, B 57/L 11.43. [No work done as of 10/12/06](#)

5. Septic System Repair Appl. from HCHD, B 51/L 24.02. [No work done as of 10/12/06](#)

6. Septic System Repair Appl. from HCHD, B 56/L 15.01. [Addition, moving tank location; no work done as of 10/12/06](#)

7. Septic System Repair Appl. from HCHD, B 66/L 19.22. [Final Field 9/29/06](#)

8. Septic System Repair Appl. from HCHD, B 64/L 18.05. [Final Field 10/12/06.](#)

D. OLD BUSINESS

1. 9/20/06 agenda item C.3. Septic System Repair Approval from HCHD, B 44/L 2. [Final Field 9/2/06](#) - *confirm 4 bedrooms.*

Noted.

2. 9/20/06 agenda item B.10. Block 65/Lot 18.02 RT engineer report – closing/end.
- *Mr. McEldowney confirmed that the document is complete as is.*

Noted.

3. Pandemic In-House Meeting for Faith Based Organizations in township.

Chair Nugent stated thanks to Ms. Butula and Ms. Petzinger for their efforts with the meeting last month.

Ms. Butula stated that she had received back up support. She would like to state her thanks to Ms. Clapp for her assistance in getting this out to the public through the meetings that she attends.

Chair Nugent thanked Ms. Sheay and the county representative Ms. Wheatley for their participation at the meeting.

Ms. Butula will distribute a copy of the minutes from the meeting to the board members and Mr. Beckley at HCHD.

E. New Business

1. Rabies Clinic 11/18/06 – Free rabies clinic for dogs/cats @ Three Bridges Firehouse.

(Posted on www.readingtontwp-nj.org News & Events).

Chair Nugent stated thanks to Ms. Petzinger who will be at the clinic.

2. HCHD upcoming distance learning programs <http://njlmm.rutgers.edu>

Noted.

3. Volunteers dinner.

RSVP's are due.

F. APPROVALS

Category A. – Single Lots

The following application was withdrawn from the agenda by the engineer..

1. Block 25/Lot 12.01 – Beardslee Engr., Henriksen, Mountain Rd.

Escrow fees paid 8/3/06. Check #1118 \$500.00.

Data sent with 9/20/06 packet.

2. Block 93/Lot 26 – Biggs Engr., Bongiorno, Old York Rd.

Escrow fees paid 10/2/06. Check #338 \$500.00.

Mr. Jess Symonds, NJ licensed engineer represented this applicant before the board.

This existing 3 bedroom dwelling is on Old York Road, the existing system is to the rear of the building. The system malfunctions in wet weather with effluent breaking out onto the surface. A pump system is proposed. Soil logs and testing were done in May 2006.

A letter has been provided by HCHD.

There was some discussion of the required 15' distance from the property line.

Chair Nugent recapped that effectively the application before us complies with our ordinance, it may not be consistent with how the County has conservatively applied the BOH ordinance to the toe of the mound.

Mr. Symonds stated the toe of the mound will be about 99' from the existing well on the neighboring property; and the point of the bed will be about 104' – 105'.

Chair Nugent stated #4. of the HCHD letter raised the issue of mottling in soil log 2, and the regional zone of saturation being at 22".

Mr. Symonds stated that was probably due to a lack of permeability. Mottling was at different depths in all three holes, 22" was the most shallow. The elevation in the design of the bed has accounted for the 22".

Mr. Symonds testified that he saw no evidence of a water course, or wetlands vegetation on this property, or on the surrounding property.

Chair Nugent asked for Mr. Hansen's interpretation of the annotation on the fact sheet from the engineer of the 2', 5' 20' and 2' in parenthesis in the general section "when determining distance set backs from the disposal field, the edge of the disposal field is considered to be the edge of the gravel envelope for conventional and soil replacement bottom lined installations and is the edge of the lateral fill extension for soil replacement fill enclosed (2') mounded disposal fields 5' pressure dosed 20' gravity dosed and mounded soil replacement disposal field (2') installations.

Mr. Hansen stated it is not very clear, it seems that what they are saying is that a conventional bottom lined system would be a system that is not a fill enclosed system, basically where the gravel ends and the excavation ends is the edge of the disposal field. A soil replacement fill enclosed system has the additional fill enclosure around it, which is additional excavation and that is the edge of the disposal field.

Ms. Vaccarella stated that when they are talking about a mounded disposal field, they are talking about a true mound that is directly on the surface of the ground with no excavation.

Mr. Hansen stated the code allows for it but it is very rare that it is ever done. A true mounded disposal field is not a fill enclosed elevated, what we call mound. By definition, a mounded disposal field is much different than that as the code goes.

Chair Nugent stated that what we are saying here is that the 5' and 20' don't apply here.

Mr. Hansen stated anytime you are looking at distance to the property line, the disposal field is the edge of your excavation.

Ms. Vaccarella stated in the appendix of the code is the schematic of the disposal field showing distances. Ms. Vaccarella stated the discussion that has occurred here, added to the file would be sufficient enough to address the whole issue.

Ms. Butula clarified the toe of the disposal bed at its furthest point to the property line is 23', the toe of the mound is 99', and the point of the bed is 106' from the from the existing neighbors well.

Ms. Taormina confirmed that Mr. Symonds has prepared the plans that have been submitted before this board, this is an alteration to correct a malfunctioning system, no expansion, no change in use, and that Mr. Symonds would testify that this design is in more conformity with the state code than the current system, and that in his professional opinion, absent of misuse, will the system provide long term satisfactory performance.

Mr. Symonds stated yes to all the above, and there are no wetland plants or indicators of wetlands on this site, or the adjacent areas.

A **MOTION** was made by Ms. Butula to approve for Block 93/Lot 26, from a map named Septic Design for John Bongiorno dated 7/6/06, surveyors map dated 6/8/06. The septic design map was prepared by Jess Symonds, licensed PE in NJ. The surveyor was George A. Sniffen, professional licensed land surveyor. County reports are dated 8/8/06, 10/11/06. This is an alteration with no expansion. There is a general note 2 and 3 regarding the proper distances for neighboring wells and septics. The engineer testified to no wetlands. The board is doing this after much discussion acknowledging that the toe of the mound is 10' from the property line, but that the corner of the bed is 23' from the property line. A primary only was done 5/23/06, soil log 1, 112" with mottling at 72", soil log 2 126" with mottling @ 22". Soil log 3 for basin flood had mottling at 52 – 84", permeability was basin flood #1 @ 84" done 5/25/06, passing. Regional water is soil log 2 @ 22". This is a pump system, necessary deed restrictions apply.

This motion was seconded by Ms. Sheay. On roll call vote, the following was recorded:

Ms. Albrecht	Aye	Ms. Muir	Aye
Dr. Allen	Aye	Ms. Sheay	Aye
Ms Butula	Aye	Chair Nugent	Aye

3. Block 70.01/Lot 2 – NJ Septic, Porubcan, Hillcrest Rd.

Escrow fees paid 9/1/06. Check #1334 \$500.00.

Mr. Doug Fine, NJ licensed engineer represented this applicant before the board.

Chair Nugent noted the review letter from HCHD listing several items that need corrections.

Mr. Fine stated they are mostly clerical errors, the revisions would be made and submitted to the board.

4. Block 38/Lot 38.01 – NJ Septic – CharDham Hindu Temple, Coddington Rd.

Escrow fees paid 7/18/05 Check #1233, \$500.00;
4/10/06 Check #1299, \$500.00;
10/6/06 Check #1330, \$500.00

Previously heard 6/21/06.

Ms. Lloyd Tubman, Archer and Greiner, represented the CharDham Hindu Temple before the board. This application was previously heard in June 2006, the board requested the LOI # added to the map, which has been supplied. There was discussion of the Tunis Cox Road area ground water plume.

DEP's material was obtained and submitted to the board's hydrogeologist Mr. Mulhall who said that even though the concentrations of volatile organic compounds were low, it was his feeling that as a safety issue, that a point of entry treatment system be installed, which was agreed upon by the applicants hydrogeologist Ms. Althoff.

Ms. Butula stated she was very happy with that recommendation.

Chair Nugent confirmed that the applicant would install the system, and the monitoring of the water would be done every 6 months.

Ms. Tubman proposed for her client, pre-treatment testing annually and post-treatment testing bi-annually, reported to the state and this board.

Ms. Vaccarella agreed that that would be sufficient.

There was some discussion of the left top third of the map which has an arrow to a circle marked M.H.1 for manhole 1.

Chair Nugent confirmed the latest map sheet 2 and 9 of 10 were both revised as of 6/27/06, that is the latest version.

Mr. Fine stated the approved wetlands area file number has been added to the plan.

Chair Nugent stated regarding the soils testing, and reviewing the 2/27/06 Ferriero review letter, there was minor seepage in soil log sl-2B at 12 – 15”.

Mr. Fine stated in the June 2006 minutes it states regarding the seepage on 2 and 2B, as in 3 and 3B there was a heavy snowfall that day, and snow run-off.

Chair Nugent stated regarding the number of people working at the facility, there is just 10 people.

Mr. Fine confirmed 10 people.

Chair Nugent confirmed that the size of the pump tank would be adequate due to the utilization of duplex pumps.

Mr. Fine agreed.

A **MOTION** was made by Ms. Butula for approval for Block 38/Lot 38.01, for the data submitted from a map named Septic System Design for CharDham Hindu Temple dated 7/13/05, pages 1 - 10. There are revisions, 12/12/05, 2/10/06, 6/27/06, sheet 2 of 10 and 9 of 10, prepared by Douglas Fine licensed engineer in NJ. The surveyor is Thomas Yager and Associates.

On sheet 2 labeled existing conditions demolition plan for Block 38/Lot 38.01 dated 7/14/05.

Also submitted a wetlands transition area averaging map for Block 38/Lot 38.01, dated 10/5/05 by James Hill, licensed engineer in NJ, revision on 3/2/06, file # 1022-04-0019.0. Also a summary of the usage letter from the president of the temple, Y. Bhatt. An architectural layout design of the temple by Mistry Design was submitted, with revisions 5/10/05, 7/18/05, 7/25/05 and 9/28/05. Letters from Studer and McEldowney dated 1/18/05, 10/25/05, 4/7/06, 5/11/06 and 6/15/06 were submitted. Reports from Ferriero Engineering are dated 10/10/05 and 2/27/06. A report from our hydrogeologist, M2 Associates, Inc., Matt Mulhall dated 9/22/06 is included. A letter from Ms. Lloyd Tubman dated 7/21/06 is included. Mr. Fine has confirmed that there are no adjoining wells within 100’ of the proposed primary and reserve disposal areas. Because of concerns by this board of the plume that is immediately adjacent to this property, and from the recommendations of our hydrogeologist Matt Mullhall of M2 Associates, he recommended installation of a POET system, and that the POET system that is installed will have a primary and secondary unit installed to insure removal of chlorinated solvents and we have come to an agreement between the parties at this board meeting that the water plan that has been designated will be along with the installation and proper maintenance of the POET system, there will be annual pre and post system testing, with the results to be submitted to the NJDEP and to Readington Twp. Board of Health and every 6 month post system testing with the results to be submitted to the NJDEP and to Readington Twp. Board of Health. The annual testing of the pre treatment will become part of the Tunis Cox and Coddington Road project surveillance of the migration of the plume.

For the primary, soil log 2 and 2B, done 2/28/05, soil log 2 @ 135”, no hydraulically restricted zones or horizons, mottling was at 65”, seepage at 117”. On 3/29/05, soil log 2B was done to 120” with mottling at 57”, seepage at 91” and no hydraulically restricted zones. The permeability was pit bail 2B done at 120” on 3/28/05 passed with a K @ 2.06. The in season ground water monitoring dates were 3/7/05 – 4/25/05, with soil log 2 having 84”. The engineer has explained seepage of 12 – 18” with the fact that there was snowfall on that day. The regional water for the

primary has been determined by soil log 2B at 57". For the reserve, soil logs 3 on 3/29/05 to 152", mottling at 65" to 152", seepage at 138", no hydraulically restricted zones. On 3/29/05 soil

log 3B was done to 126", mottling at 53" and 67" to 122", seepage at 105 and below, no hydraulically restricted zones. Permeability test was pit bail 3B @ 126" on 3/29/05, passed with K @ 3.89"/hour. In season ground water monitoring dates were 3/7/05 – 4/25/05 with 96" being the most significant in soil log 3, the engineer testified about minor seepage at 10 – 12" by reiterating the same snowfall on the day of the soil log. The regional ground water for the reserve was determined by soil log 3B @53". An LOI done 7/5/05, case 1022-04-0019.1. FWW040001. A DEP letter dated 4/3/06 transition area averaging plan numbered 1022-04-0019.1. FWW060001. This is a deed restricted pump system, which should be passed on to persons following them. The existing well which is denoted on the map was installed and tested, results were presented to this board as part of the hydrogeological study.

This motion was seconded by Ms. Sheay. On roll call vote, the following was recorded:

Ms. Albrecht	Aye	Ms. Muir	Aye
Dr. Allen	Aye	Ms. Sheay	Aye
Ms Butula	Aye	Chair Nugent	Aye

Ms. Albrecht stepped down at 9:15 pm for this application.

Ms. Taormina stated that the next application is made by one of the board members, if any of the other board members felt they could not render an impartial decision based on their relationship with Ms. Albrecht, they should speak up.

As there were no conflicts with any of the other members, the applicant proceeded.

5. Block 66/Lot 51 – NJ Septic, Smith/Albrecht, Pine Bank Rd.

Escrow fees paid 7/18/06. Check #565 \$500.00.

Mr. Doug Fine, NJ licensed engineer represented this applicant before the board.

This applicant hired Mr. Fine to do soil permeability for Block 66/Lot 51 for the purposes of the constructing a new dwelling and then demolishing the existing dwelling. The soil permeability testing was performed 3/1/06 and 3/2/06. Ground water monitoring was performed in accordance with Readington Township ordinance to provide 8 weeks based on the fact that the soils survey posed severe constraints for a septic system. A primary disposal field has been proposed, designed based on gravity flow as a soil replacement fill enclosed disposal field designated by the soil tests soil log 4, basin flood 4 and soil log 4B. Soil log 4 was excavated to a depth of 106" total. A basin flood was performed at 90" with positive results. Ground water monitoring was performed in soil log 4 as well as 4B from 3/3/06 – 4/21/06. In soil log 4, 1" of water was in the bottom on 3/30/06, the rest of the readings were dry except for 4/14/06 at 93" after heavy rainfall. 4B was excavated to a depth of 108", 104" when the standpipe was installed. This was dry during the entire course of the 8 weeks. The reserve is designated by soil log 3, basin flood 3, and soil log 3B. 8 weeks of monitoring were performed, all readings were dry with the exception of 4/14/06 with 5" of water in the 105" deep hole. Basin flood performed at 80" in soil log 3 had positive results for the reserve area. This septic system is designed for a proposed 4 bedroom dwelling served by a 1500 gallon, 2 compartment tank, gravity flow to a distribution box. Chair Nugent asked the capacity of the tank.

Mr. Fine stated 1,000 for the primary and 500 gallons for the second. Both compartments need to be pumped as a part of maintenance.

Chair Nugent asked what the plan of cutover is from the old to the new house.

Mr. Ben Smith, homeowner, was sworn in.

Mr. Smith stated the plan is to construct the new home and septic. When that construction is about to be completed, the township will issue a temporary CO pending demolition of the old house. The kitchen of the old house is to be removed. At no time will there be 2 primary dwellings on the same property. The old septic will be pulled out as part of the demolition. The old tank will be pumped

out, filled and abandoned in place. The applicant provided a potable well water test report from Advanced Water Tech.,LLC dated 9/27/06.

Chair Nugent noted the other building on the property.

Mr. Smith stated there is no water or septic system connections to those buildings.

Mr. Fine stated there is a stream approximately 740' feet in back of the home, the northwestern property line. There is a water course that runs during stream melt and very wet weather. The distance is 800' or 900' from the reserve, and close to 1000' from the primary. That is the only watercourse on the property, there is no other wetlands on the property.

Chair Nugent noted that the county has provided a review letter dated 7/11/06 indicating no issues, or concerns. All items in Ferriero review letter dated 6/12/06 have been addressed.

There was some brief discussion of gravity fed fill enclosed systems, the advantage of an outlet filter, maintenance of a double tank system.

A **MOTION** was made by Ms. Butula for approval for the data submitted for Block 66/Lot 51 from a map named Septic Design for Block 66/Lot 51 in the Township of Readington in the County of Hunterdon dated 5/2/06, 8 pages. This map was prepared by Douglas Fine, licensed engineer in NJ. The surveyor was Robert J. Templin, licensed PE and surveyor in NJ. The survey is dated 12/12/05. Reports from Ferriero Engineering dated 6/12/06, HCHD dated 7/11/06. This is both new construction and an alteration with expansion. A well test report from Advanced Water Tech.,LLC dated 9/27/06 is included. This is a fill enclosed soil replacement system. The primary dated 3/1/06 soil log 4 @ 106", mottling 70-82", soil log 4B @ 108", mottling 45-75", seepage @ 108". Permeability was basin flood 4 @ 90" dated 3/2/06, passing. In season ground water monitoring dates were 3/3/06 – 4/21/06 in soil logs 4 and 4B with results in 4 @ 93". Regional water for the primary was determined by soil log 4B with mottling at 45". Reserve area soil logs were done 3/1/06, soil log 3 @ 108", mottling 44 -50", soil log 3B to 108", mottling 45-60". Permeability was basin flood 3 @ 80" done 3/1/06, passing. In season ground water monitoring dates were 3/3/06 – 4/21/06 in soil log 3, which was dry, except for one occasion when it was 5". Regional water for the reserve was determined by soil log 3 with mottling at 44". The engineer has testified that the only wetlands is a designated biostream in excess of 1000' from the primary bed and 800' from the reserve. This system will use an outlet filter with annual maintenance of which the owner is aware.

This motion was seconded by Ms. Sheay. On roll call vote, the following was recorded:

Dr. Allen	Aye	Ms. Muir	Aye	Chair Nugent	Aye
Ms. Butula	Aye	Ms. Sheay	Aye		

Ms. Albrecht returned to the dais at 9:54 pm.

Ms. Muir left at 10:00 pm, and did not hear the last application.

Category B. – Subdivisions

1. Block 60/Lot 12– Parker Engr., Luberto, Stanton Rd.

Escrow fees paid 12/18/05. Check #122 \$500.00; 9/6/06 check #4258 \$500.00.

Ms. Lloyd Tubman, Archer & Greiner, and Mr. Steve Parker, Parker Engr., licensed NJ engineer represented this applicant before the board.

This application is for a subdivision to include 1 new lot.

Ms. Tubman stated this subdivision has been conditionally approved.

Mr. Parker stated the proposed lot is about 3.3 acres with the remainder being a little over 9 acres, it is a flag lot configuration. The lot in the back contains the existing house, the lot in front will contain the new home. A wetlands letter from NJDEP has been provided.

Testing was performed for the proposed new lot in March 2005, with 8 weeks of testing.

March 2006 testing was done for the remainder property (in back), testing for a reserve area and 8 weeks of monitoring as well. Soil logs 2 and 4 are for the primary area, and reserve are 1 and 3 for the front property. Basin floods were successful in both cases.

Testing was straight forward, the only issue is that all the soil logs exhibited evidence of a hanging water table. In soil logs 1 and 3, that was exhibited through actual observation of seepage into the soil log, into the test pit, the seepage was, in soil log 1, was from 7" to 50", that also coincided with the mottling that was observed. Soil log 3, there was seepage from 6" to 48", and that also coincided with the mottling that was observed in that soil log. Soil logs 2 and 4 had shallow mottling, with no seepage observed in those soil logs. The results are presented on the plans, regional ground water was pretty deep, hanging water conditions were clearly demonstrated. There is permeability in those soil horizons, K1 permeability. In March 2006 testing was done on the remainder lot for reserve area, soil logs 100 and 105 were done. These also exhibited a hanging water condition. Mottling in 100 was 7 – 30", in 105 from 9 – 47". Ground water monitoring demonstrated that the regional ground water table was very deep.

We are requesting approval for a subdivision, the existing septic is functioning, there is no evidence of malfunctioning, a well test has been submitted to the board.

Mr. Parker stated a visual inspection, and conversation with the homeowner determined there was no problem with the existing septic system.

Chair Nugent stated the board requires that the existing system and well are inspected and functional. Regarding the classification of all the mottling in all the test holes as hanging, that is not a definition in 9A.

Mr. Parker stated there was physical observation of groundwater seepage in the horizon. Water that is perched or hanging within a finer grain soil horizon that is above a coarser grain horizon. A perched water condition is water above a hydraulically restrictive horizon, water cannot penetrate through a horizon that exhibits no or very slow permeability. The distinction between that and the hanging water condition is that the water is within the soil horizon, one of the conditions is that there is permeability in the soil horizon, it is not totally impermeable. The ground water hangs within that horizon.

Chair Nugent stated because of the similarity to a perched condition which is defined in the code, there is also an artesian condition possibility. This is disproved with a hydraulic head test, however part of the disproval of perched is that there must be underneath the hydraulically restrictive horizon, soil which is non saturated. What is underneath these hanging water table?

Mr. Parker stated fractured shale.

Chair Nugent stated that is non-soil, true?

Mr. Parker stated the definition of non-soil is unclear.

Dr. Allen stated it is irrelevant because there is no hydraulically restrictive, so it doesn't matter.

Chair Nugent stated fractured shale may or may not show evidence of mottling, usually does not, the mottling transitions close to the surface. There is nothing that suggests this isn't regional zone of saturation at 7", or an artesian condition that is pushing its way almost to the surface. Across 12 acres of property, there is mottling at 7", 8", 10", 50", 40".

Dr. Allen stated this is consistent with other places at the bottom of the mountain.

Mr. Parker stated what is observed out here is consistently the same. The term non-soil is not in the code, its not out of 9A. The fact that the horizons underneath the upper horizons are not mottled is very telling. Eight weeks of ground water monitoring over 2 years in different parts of the property are very consistent. Water perched in those horizons causes the mottling, as seen in soil logs 1 and 3, that's where water was observed. If that is caused by a regional condition, there would have been evidence of it.

Chair Nugent stated mottling is used as an indication of regional zone because you have to use the data which is presented, you can't be out there when it occurs. At minimum, the hanging water table needs to be proven, the state's supporting information, climatic information suggesting the testing timeframe was average or above average, disproving mottling.

Mr. Parker stated they were not going to disprove the mottling, in the state's document, three factors have to be looked at, permeable, fine grain soil that is on top of a coarser grain or more

rapidly permeable horizon, that is proved here, the lower horizon is tested and acceptable with a basin flood test, the upper horizon was tested with a class rating test and was shown to be slower permeability, and still permeable. We observed the ground water in that horizon. The state has outlined those conditions. As far as the climatic conditions, has this board indicated that 2005, 2006 were below average? They had in the past.

The board agreed that they had not restricted testing for 2005, 2006.

Mr. Parker stated he felt the case was made by the conditions which were found out there.

Chair Nugent stated in the soil permeability class rating, it is noted that the horizon was permeable, supporting the premise that it is a hanging water table. In review of the code procedure for determining the K rating of the soils, near the conclusion of that process there is a review of the soil relative to the permeability textural triangle, determining 50% of fine, very fine sand and or the consistency of the soils, causing it to move to the next slowest class, K0.

Mr. Parker stated near the bottom, the % of fine plus very fine sand is the last number in the column. 1A is 30%, 1B is 24.8, 4A is 25.6, 4B is 23.8. Below that the structure and the consistence of the soil horizons is presented. That gets lowered, the permeability class is actually based upon the average of the sample and the replicate that are run, the class would be dropped depending on if you have a firm soil consistence, or structure that is cemented, the code specifies what they are. This *inaudible* and friable structure and consistence that is described does not require that the permeability class be lowered.

Chair Nugent stated looking at test AB for soil pit boring 100, some test have a platy structure, designating a reducer of the K rating.

Mr. Parker stated that was probably observed in the horizon below the one tested, platy soil horizons are not typically seen when describing shale, not in soil with the class rating test.

Chair Nugent stated he had trouble believing this was anything other than regional.

Ms. Tubman stated is it not persuasive that you have significantly deeper ground water over 2 wet seasons. There is uniformity of the test results.

Chair Nugent stated that is the reason this application is still being heard. The monitoring pipes were separate, or were they done in the soil log?

Mr. Parker stated they were done in the soil log.

Chair Nugent stated sometimes the monitoring things are more conservative and inconsistent in their readings because of the disturbed soil.

Ms. Butula stated the water table in the Barley Sheaf area has been proven to be 18 – 19” there is a lot of failure there, going back 20 years finds mottling at these levels. There is a lot of mottling in Readington Township.

Mr. Parker stated he did not disagree with that, however with 2 years of monitoring, the evidence is pretty solid.

Chair Nugent stated he is not convinced that this is anything other than regional, without the data from the state.

Ms. Butula stated that better testing of the existing septic must be done.

Mr. Parker stated that will be done.

There was some discussion of the guidance document from the state.

Chair Nugent stated Mr. Parker should provide that document, prove this is a hanging water table, and support the K1 finding.

Mr. Parker and Ms. Tubman thanked the board for their time.

G. ADJOURNMENT

A *MOTION* was made by Ms. Butula adjourn at 10.42 pm, seconded by Ms. Sheay with a vote of Ayes all, Nays, none recorded.

Respectfully submitted:

Lorraine Petzinger
Board of Health Secretary