

**VILLAGE OF BARRINGTON HILLS  
BOARD OF HEALTH MEETING  
February 10, 2015**

The regular meeting of the Village of Barrington Hills Board of Health was called to order at 7:35 p.m. by Chairman Johnston.

Board of Health Members Present: Gwynne Johnston, Chairman  
Shirley Conibear, M.D.  
Anne Majewski, M.D.

Board of Health Members Absent: Frank J. Konicek, M.D., Vice Chairman

Others Present: Michael Harrington, Village Trustee  
Dan Strahan, Village Engineer  
Janet Agnoletti, BACOG  
Kurt Thomsen,  
Scott Siman, Land Technology Inc.  
John Rosene, Resident  
Lou Anne Majewski, Resident

**APPROVAL OF MINUTES:** Dr. Majewski requested a revision to the minutes regarding her comments pertaining to the horse density/livestock report. Dr. Conibear made a motion to approve the minutes, as amended, of the January 13<sup>th</sup>, 2015 meeting of the Board of Health. The motion was seconded by Dr. Majewski and approved unanimously.

**SEPTIC VARIANCE – 11 PERAINO CIRCLE:** Scott Siman, the design engineer for the property owner, presented a request for variance with regard to the proposed septic system. Mr. Siman noted that the Village septic code requires a minimum separation of 24” between the bottom of the septic system and the limiting layer. Based on soil tests performed at the site the depth to the limiting layer was found to be 29” deep in the area of the proposed septic system, precluding the possibility of a traditional trench system. To meet the setback requirement, Mr. Siman proposed an at-grade mound system designed in accordance with the design standards of the Lake County Health Department.

Dr. Majewski asked whether the development was a garage addition or a poolhouse. It was noted that the initial application did not include any bedrooms, but subsequently the applicant had added two bedrooms, though currently there is no pool existing or proposed on the property. Village Engineer Dan Strahan noted that GHA had received revised plans and all of the previous comments had been addressed, pending approval of the variance.

After further discussion Dr. Conibear made a motion, seconded by Dr. Majewski, for approval of the request for a septic variance to construct a Type IV at-grade mound system. The motion was approved by all members present.

**WATER QUALITY STUDY:**

*Village Hall Level II Test Results:* Mr. Strahan summarized the results of groundwater testing conducted at the Village Hall. Hardness, iron, and strontium were discussed as parameters of interest from the test results.

*Level II Program:* Chairman Johnston requested information regarding the cost of various testing facilities under consideration for the Village-wide testing program. Mr. Strahan noted that three potential locations were researched: the Illinois State Water Survey (ISWS) thru BACOG, the Kane-Dupage Soil & Water Conservation District program, and McHenry Analytical Labs. Mr. Strahan noted that the ISWS program was the least expensive but less flexible with regard to the timing of samples and that McHenry Analytical Labs was the most expensive but was more flexible and the testing facility is certified by the IEPA.

Ms. Agnoletti clarified concerns regarding the capacity of the ISWS program, noting that the waiting list had been decreasing and that BACOG was willing to commit to provide the samples to the ISWS if others were performing the coordination and collecting the samples. Chairman Johnston noted that the Village Engineer would coordinate with property owners and collect the samples. Dr. Majewski asked if the time of year that samples were taken would make a difference. Mr. Thomsen noted that it probably would not, but recommended consistent timing to remove any potential seasonal variation as a variable. After further discussion, the Board agreed to proceed with testing through the ISWS program administered by BACOG, with collection of samples performed and coordinated by the Village Engineer's office.

*Groundwater Aging:* Mr. Strahan summarized a memo provided by the United States Geologic Survey that outlined a technique to test environmental tracer elements to determine an approximate age of groundwater. After discussion of the details of this testing, the Board determined that the previously discussed testing program was sufficient and that groundwater aging could be revisited at a later date if determined to be beneficial.

**SEPTIC AMENDMENTS DRAFT:**

*IDPH Status Report:* Mr. Strahan noted that the draft amendments had been submitted to the Illinois Department of Public Health for review and approval. The IDPH had acknowledged receipt but had not yet provided comments.

*Septic Flow Rates for Barns & Stables:* Mr. Strahan reviewed the rationale behind draft recommendations for flow rates for residential, recreational, and commercial barns and stables. It was noted that septic design criteria tends to be very conservative, based on peak usage rather than average or typical usage. Mr. Strahan noted that septic effluent from a barn or stable can come from human uses, such as bathrooms or kitchens, as well as floor drains that may collect excess urine and wash waters from the horse stalls. Mr. Strahan also recommended consideration to allow a reduced system if water meter is installed to verify a lower usage than what the code requires.

Mr. John Rosene commented that the figure of 10 gallons per day seemed high. Chairman Johnston noted that this observation may be average use, while 10 gallons per day would be peak use.

Further discussion ensued regarding when floor drains would be required, how potential changes may be incorporated into the code, and whether further public involvement may be warranted. Trustee Harrington recommended that the topic be referred to the Equestrian Commission for further input. Dr. Conibear made a motion, seconded by Dr. Majewski, to forward the recommended flow rates along with a summary of code changes that would result to the Equestrian Commission for review and comment back to the Board of Health. The motion was passed unanimously.

**PUBLIC COMMENT:** Lou Anne Majewski noted that during an application for a new barn approximately two years ago testimony was made to the Plan Commission regarding specific water usage anticipated.

Chairman Johnston noted that another public comment was provided via email by Gail Baldwin. He noted that he would forward the email to Mr. Kosin and Mr. Strahan (text of the email is attached).

Mr. Rosene asked about the availability of minutes for Board of Health meetings. Mr. Strahan noted that both meeting minutes and a full audio recording for each Board of Health meeting is available on the Village website.

**TRUSTEE'S REPORT:** Trustee Harrington noted that he had provided an update to the Village Board on the groundwater testing program as well as an update on the proposed septic amendments. Chairman Johnston requested that an additional Board of Health member be added to assist in meeting quorum requirements. Dr. Majewski suggested that a notice be posted on the Village website.

**ADJOURNMENT:** Dr. Conibear motioned to adjourn at 8:45 PM. Dr. Majewski seconded the motion. All present said aye.

### ATTACHMENT

From: Gail Baldwin [mailto:horsing360@gmail.com]

Sent: Monday, February 09, 2015 7:04 PM

To: clerk@barringtonhills-il.gov; gjohnston@barringtonhills-il.gov; fkonicek@barringtonhills-il.gov; sconibear@barringtonhills-il.gov; amajewski@barringtonhills-il.gov; mharrington@barringtonhills-il.gov

Subject: Impact of Horse farms on Ground Water - Public comment for 2/10/15 Board of Health meeting

Please enter this information into the public record under public comment for the Board of Health meeting tomorrow, Tuesday 2/10/15:

This is from the AmericanTrails.org website. It does state the origin of the studies where they have gathered this information from. There is excellent verbiage regarding contamination of groundwater being only associated with nearby feedlots housing thousands of animals. I don't think we are in any danger of this sort of thing.

The last paragraph is particularly interesting regarding the salts in urine dissipating in approximately 3 days.

And, some valid points is that we should be more worried about fertilizers and aging septic systems than horses living next to a creek:

#### Water Quality and Horses on Trails

The endpoints of scientific inquiry for water quality studies are human exposure to pathogens for health implications and nutrient/sedimentation pollution for environmental implications. Excrement or wastes of any type should never be deposited or disposed of in water bodies.

#### Human Health

Coliforms are ubiquitous in the environment. While they are not necessarily harmful to people if ingested, coliforms are an indicator that unwanted matter is present in the water system. Their virulence is little understood; hence the precautionary care to prevent human exposure to excess

amounts of them. Coliforms, however, have not been known to injure aquatic organisms or wildlife according to Dr. Michael Rugg, Toxicologist, California State Fish and Game, Yountville CA. Recent scientific studies and their replicates confirm that adult horse guts do not significantly contain E. coli 0157:H7, Salmonella, Cryptosporidium, or Giardia, which are the organisms of most concern in water-borne spread of disease. (Atwill, et al; see several references.)

#### Groundwater

We have found no studies that we found implicating equids in groundwater contamination. Horses eliminate primarily in their pastures and paddocks (Meyer 1997). Manure left in a loose heap in deposits on trails loses its nitrogen rapidly (New Hampshire 1990). It is inconceivable that trail horses making dispersed deposits could possibly impact ground water. Most contamination of this sort occurs from areas associated with feedlots where thousands of commercially harvested animals are confined at one time, or from excessive fertilization added to soils.

Compared to other large livestock, horse manure is relatively "dry" and "hot" due to unique digestive enzymes and flora. Once deposited, it can achieve total mineralization in as short a time as 21 days (Ajwa, et al 1994). Because it is so dry at excretion, nutrients tend to volatilize rapidly into the atmosphere. One of the challenges in preserving nutrients in horse manure is to get them turned into the soil as rapidly as possible before the nutrients are lost to the air.

#### Surface Water

Again, there are very little data about impacts from horses. Bacteriological and nutrient effects (on water bodies) are seldom detectable except next to stables. (Williams et al, 1998). As part of the 319(h) grants from the Clean Water Act, new data are becoming available. Five studies have taken place in the San Mateo County watersheds to date (2002). It is important to keep in perspective that these studies involve settings where horses live 24 hours/day next to a creek. Thus far, data have not confirmed significant adverse affects on the surface waters immediately adjacent to them. Leaking aging septic systems, residential over-fertilizing, and certain agricultural practices are suspected where data exceed recommended standards. Given this, it is difficult to conceive of a situation where the manure from a few horses on a trail could adversely impact surface water nearby. Again, most trails are not sited immediately adjacent to water bodies and Mother Nature has a marvelous buffering capacity when even as little as 10 feet of vegetation is available at the side of a trail.[www.ca.nrcs.usda.gov/rts/sec4.htm](http://www.ca.nrcs.usda.gov/rts/sec4.htm)

Phosphorus and potassium are the trace constituents of most concern in horse urine. They bind to soil particles and may be eroded away into surface water bodies. They would be present only in the minutest of quantities in manure on trails, thus of little concern. For horses paddocked near streams, a recent study by Dr. Michael Rugg on accumulation of urine salts in soil in arid climates demonstrated that these salts could be dissipated in just three days by watering dry paddocks to invite biological degraders to the soil. Thus a simple BMP of turning on a sprinkler once a day will not only keep dust down, but will mitigate urine salt accumulation in paddock soils.

Submitted by: Gail Baldwin & Ross Friedmann

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