

**Water Quality Committee
Village of Millbrook
September 7, 2010**

In attendance- Deputy Mayor Stanley Morse, Frank Genova, Steve Lynch, Howard Schuman, Scott Tumblety, Dr. William Augerson, Scott Osborne, Greg Bolner, Dr.Emma Rosi-Marshall and Clerk Linda Wiltse.

Call to Order-Deputy Mayor Morse called the meeting to order.

Pledge of Allegiance-Dr. Augerson led the pledge of allegiance.

Introduction-The Deputy Mayor introduced Emma Rosi-Marshall who is a water quality specialist. He added that she recently moved into the Village. Emma is from northern Michigan and she went to the University of Georgia where she received an undergraduate degree in ecology. He also stated that she had been at the Institute of Ecosystem Studies (IES) for one year. She studies the nutrient cycles, fish and insects living in water.

The Deputy Mayor distributed an emergency contact list and asked that corrections be submitted.

Village Water Buffer Data Sheet-see attachment A. Deputy Mayor Morse introduced Greg Bolner, who was the engineer at Chazen at the time this data was produced in 2006. Greg stated he will be working on the water portion of the grant in the future. The Deputy Mayor stated the committee will focus on water issues for now but they may turn to sewer issues in the future. He handed out the water buffer report. Greg stated the current permitted use is calculated from the peak demand day for the Village. The average daily use is self explanatory. Greg added that the current daily safe yield may have to do with how much the Village can draw from the ground and still have the water infiltration gallery easily recover. The maximum daily demand was calculated and used from the daily demand. Emma asked about the capacity of the aquifer and the Deputy Mayor referred to the buffer sheet. He asked the committee to look at the potential future draw down on the water system. Dr. Augerson stated they must develop an understanding of the housing and water use. Greg stated the use is based on the number of bedrooms which is an accepted methodology. Dr. Augerson stated he wanted to see where the numbers came from. He added that electricity figures are driven by peak demands and not by average usage.

Water Reports-Deputy Mayor Morse submitted three reports for review at the committee's pleasure and he added they will be available for viewing at the Clerk's Office. The Gerber Report was written in 1982, the Horsley Report was written in 1992 and the Chazen Report was written in 2006.

Potential System Improvements & Expansions-Steve Lynch discusses the potential system improvements & expansions that are to be evaluated under Task II of the Shared Services Grant. He discussed four new areas in the Village which included Elm Drive,

the Thorne Building/Hitchcock Estate, the former Bennett College site and Nine Partners Lane. The committee proceeded to decide to concentrate on the former Bennett College site and Nine Partners Lane. The third portion of this task is to study the potential second water source and the potential related water pumping station. Steve stated the committee will also study the water pressure mitigation options. Lastly, the committee will concentrate on the potential extension of water service into the Town of Washington and the former Dutchess County Infirmary site.

Deputy Mayor Morse stated the 30,000 gallons of water usage from the Bennett proposed project. He added there are 80 undeveloped parcels in the Village and if built out would require 28,000 gallons of water usage. Nine Partners Lane expansion would require an unofficial water usage of 10,000 gallons.

Howard stated the Dutchess County Government Center contract signed with the Village currently allows them to use 14,000 gallons per day. He added that the contract needs renewing and the Village Board of Trustees should keep in mind during negotiations that the Infirmary can provide their own water. The contract expires in February 2011. Frank added that the former Infirmary site remains a public office to service eastern Dutchess County. The building is currently office space and when it was utilized as an infirmary they used a tremendous amount of water. Steve stated they must examine in a scientific and thorough way to identify the future needs and the current needs. They must examine what are the capital operating costs for future use needs at the Dutchess County Infirmary. Steve added that he is in direct contact with the Infirmary site manager. The Deputy Mayor stated the subject of the water contract was brought up in the past by the former Mayor. Steve added that this is a very important issue and the committee should be involved.

The Deputy Mayor concluded the total number of gallons of potential usage the Village needs to protect is 82,000. This means that 80% is possibly committed to the buffer area. He asked what if the water storage tank goes out of order. Dr. Augerson commented that a natural disaster such as an earthquake could reasonably occur. Scott Osborne answered there could be pressure issues if they had to take the tank off line. He added that the pumping would have to be constant. Frank stated there would be no head pressure. Greg stated he recollects that the Bennett property agreement would provide 2 wells for their needs and provide extra water for Village use. The pumps at the water infiltration gallery are designed to pump at the average daily needs. He added that if there is no water storage the pump could keep up with demands in the evening. They must have water storage. Greg stated the design of the pump is 8 to 10 times the peak day if there is no storage available. This can over-pressurize the water system. This type of setup only works well in a very small system. Emma stated the pumps are designed to pull the average daily use. The tank allows with a pressure sensor to send a signal to the pump. The pump will turn on if the pressure is low and the pump will shut off if the pressure is high. Greg questioned why would the Village take on added demands for water without compensation? Howard asked about the water quality issue at the former Bennett College site. Greg answered that the water quality could be an issue since it would be mixed with the current Village water. Greg stated that on an emergency basis they could

install a pressure relief valve if they don't have the opportunity to recycle the unused water back into the system.

Deputy Mayor Morse stated the water rain flow average in Dutchess County is 40 inches per year. He added that a drought would be a significant and severe issue. The Deputy stated they can use grant funding to look into what other municipalities are doing in relation to sewer benefit assessment. (SBA) Steve added that task 4 will evaluate and compare the expected cost to the Village's.

Howard asked about Dutchess County's future plans at the Infirmary and Steve said they will inform him at the end of the summer. Steve added the county has no expectations on their side and the Town of Washington may be skittish as well on their level of involvement. He ended by stating some scenarios may be place holders.

Steve stated the SBA is covered under grant funding to identify the potential expansions, needs and costs. Also funded by the grant is the ability to examine a second water source. Frank commented on the terminology used when referring to the water infiltration gallery. Scott Osborne stated a water source could be a well, an infiltration gallery or something else. Steve stated the capital and operating costs of future water sources are covered under the grant tasks. Steve added they want to identify the water pressure issues. Scott Osborne stated the Village must have a pumping station no matter what your water source is. The committee will use as a place holder for the Town of Washington and concentrate on the Village for now.

The Deputy Mayor referred the committee to two new aquifer charts. Frank stated there are 3 water sheds that supply the aquifers and those are the Wappingers Creek, the Ten Mile River and the Fishkill Creek. Emma stated she is knowledgeable about surface waters. She added she wants another map showing streams. She pointed out that Pleasant Valley pulls their water from the Wappingers Creek aquifer which if the map showed the surface water it would also be impacted by our Village water source. Steve stated it is at best an unrelated water source. Frank asked if the Chazen study found infusion into the gallery since the gallery was contributing to the stream. Emma stated it depends upon the type of soil. Emma added that they need to look at the water shed lines and flows. Greg stated that many are gravel aquifers which follow the stream's flow direction. Greg added that the Village water source is covered under the ground water protection zone under the NYS DEC since it has a recharged zone for the water source.

Deputy Mayor Morse stated Howard is working on the total number of water users in the Village.

Round Table Discussion-Frank discussed his comments at the last meeting were changed in the minutes and he respectfully requested his comments not be changed. The Deputy Mayor stated his request could be honored. Howard brought up the topic of the committee's approval of the minutes. Steve stated that part of the grant pays for the minutes to be taken. Howard questioned the procedure for the approval of the minutes. He asked for the pleasure of the group. Steve stated that not all of the committee needs to

unilaterally approve the minutes. They could be sent to the committee and they could go over them at the next meeting. The Deputy Mayor stated they could vote to change the minutes at the meeting. Scott Tumblety had no comments. Dr. Augerson submitted his notes on the field trip and he gave his thoughts on the security of the water source and on how to prevent entry into the system. He added that a little more control on the entry into the water source should be seriously considered. He also expressed his concerns in the event of forest fires with large trees around the edge of the water source. The Village should be weighing the risk. Dr. Augerson noted that the activities of others outside the Village control are of concern as well. He added the Town of Washington activities may impact the Village water source. He ended with commenting that the Village might think about developing actions to reduce the demand such as zoning, building permits and development. See attached

The Deputy Mayor cautioned that mowing the lane leading into the aquifers would perhaps raise people's interest into what is located down the lane. Howard questioned if the NYS DEC protection zone is in NYS law and Greg answered he will look it up. Greg, after some review, stated that when he did the Chazen study he looked at the peak two day water demands if they were looking at the daily buffer. He added there is some excess capacity in the Village supply for water. 287,000 gallons is the peak demand as per Greg.

Howard asked if any long term studies have been done and Scott Osborne stated not to his knowledge.

Future Meeting Scheduled-September 27, 2010 at 4:30 p.m. which will be held at the Village Hall.

The meeting concluded at 6:15 p.m.

Respectfully Submitted,

Linda T. Wiltse
Village of Millbrook
Clerk/Treasurer