

▲ Site Planning
▲ Land Use Planning
▲ Mineral Resource Consulting
▲ Wetland Delineation and Permitting
▲ Mitigation Planning



▲ Wildlife and Botanical Studies
▲ Natural Resource Planning
▲ Forestry Consulting
▲ Environmental Impact Statements
▲ Soil Studies
▲ Environmental Site Assessments

P.O. Box 145 ▲ Montgomery, NY 12549 ▲ Telephone: (845) 457-8141 ▲ Fax: (845) 457-4763
email: basecamp@frontiernet.net

July 20, 2020

Town of Goshen Planning Board
41 Webster Avenue
Goshen, NY 10924

Re: *Hambletonian Park Section F*
SBL 8-1-12.221
AEC Project # 0443

Dear Chairperson Bergus and Members of the Planning Board:

As set forth in our April 30 request, the Applicant participated in a conference call with Supervisor Bloomfield, Sean Hoffman, PE, Richard Golden, Esq., Kelly Naughton, Esq., and me on March 26. The call was scheduled to discuss the potential volume of water available in the Hambletonian/Heritage Water District #1 for future use by the Section F subdivision. Some level of certainty with respect to water supply is necessary for the Applicant to devote additional resources to the approval. The consensus of the call was that the Applicant should present an analysis for the Planning Board's consideration; and, that the Planning Board would make a recommendation to, and request a determination from the Town Board. Subsequent to Mr. Hoffman's review of June 12, I participated in the virtual meetings with the Planning Board on June 18, and the Town team meeting on July 2 with Superintendent Knoell, Sean Hoffman, PE, and Kelly Naughton, Esq. to discuss the full 2019 data set and the operational considerations of both systems.

Certain considerations were discussed during these meetings related to project background, and current conditions. The principal points discussed can be summarized as follows:

- The Town has not yet accepted the dedication of the Heritage Estates infrastructure. For the purpose of this analysis, the applicant recognizes that any determination by the Town Board will likely be conditioned on that acceptance.
- The Section F Resolution of Preliminary Approval and Findings Statement set forth conditions for the ultimate final approval of the project. Findings Statement section F.1, Bullet #3 calls for a specific mitigation measure, the deepening or hydrofracking of Hambletonian Well #1. Recognizing that underlying conditions have changed, by virtue of enlargement of the District and incorporation of the Heritage wells, the Applicant is proposing a per-lot contribution-in-kind to the Water District, rather than improvements to Well #1 which would serve no reasonable purpose at this time.
- In Preliminary Resolution Condition #9 the Planning Board required that the applicant, prior to final approval to provide a hydraulic analysis to the Town and Orange County Department of Health. The applicant will perform this analysis as part of the OCHD submission.
- Storage capacity is not an issue, as the 1986 tank was designed and financed based on completion of Section F.
- For the purpose of this updated analysis, data from the time period January through December, 2019 was selected. This period considers the most recent data, and includes the full summer of 2019, in order to take the higher summer demand into consideration.
- The combined Hambletonian Park and Heritage Estates' water demand is based on the full 2019 data set of production figures, provided to us by Mr. Hoffman in spread sheet format.
- For the purpose of this analysis, actual Hambletonian well production data will be used. The projected yield in the original Water Supply Application (WSA), date of decision October 7, 1958, 216,000 gallons per day (gpd), likely overstates the current supply

capacity.

- For the purposes of this analysis, the NYSDEC approved Heritage well production figures will be used for a projection of available supply. The total figure, 57,600 gpd, is based on the standard convention of, “best well out”.
- Heritage Well #6 has unresolved treatment issues, and is not yet in use. This analysis considers that this situation is offset by the fact that the higher- producing Well #8 is in service, however, it will be considered at the lower, Well #6 pumping rate.
- For the purposes of this analysis, Hambletonian Park Section F potential demand will be based on the accepted 75 gpd per capita for metered systems, typically employed by the Department of Health. Additionally, the number of residents assigned to Section F will be based on the 2006 *Rutgers University, Center for Urban Policy, Research Residential Demographics Multipliers - Estimates of the Occupants of New Housing*.
- As noted in earlier communications, the Applicant has committed to a mix of three and four bedroom homes. For the purposes of this analysis, we will assume that 19 four bedroom and 18 three bedroom homes will ultimately be built. Using the Rutgers multipliers of 3.67 and 2.95 persons per four bedroom/three bedroom home, respectively, establishes a potential future population of 123 residents in Section F. Applying the 75 gpd per capita multiplier yields a potential future water demand for Section F of 9,225 gpd.

Based on these data and assumptions, we offer the following water supply capacity analysis:

Parameter	Value
Heritage Estates WSA approved volume	57,600 gpd
Hambletonian wells production	19,630 gpd
Total Available Supply	77,230 gpd
Hambletonian/Heritage combined consumption	28,467 gpd
Potential Hambletonian Section F demand	9,225 gpd
Total projected demand	37,692 gpd
Surplus	39,538 gpd

Mr. Hoffman’s review of June 12 calls for considering the maximum daily demand (MDD) for the District, which, as noted, is a doubling of the average daily demand (ADD). Based on the discussion during the June 18 Planning Board meeting, established per capita multipliers are an acceptable methodology for estimating demand in metered settings. Using the multipliers noted above and the Hambletonian metered usage yields the following Three analyses:

Parameter	Value
<i>Current Usage/Production Analysis</i>	
Hambletonian metered consumption	23,560 gpd
Heritage demand: (48 4 BR x 3.67 x 75 gpd) + (27 3 BR x 2.95 gpd)	19,186 gpd
Potential Hambletonian Section F demand	9,225 gpd
Total projected demand, ADD	51,971 gpd
Heritage Estates WSA approved volume	57,600 gpd
Hambletonian wells production	19,630 gpd
Total Available Supply	77,230 gpd
Surplus	25,259 gpd
 <i>Approved Capacity Production Analysis</i>	
Total potential demand, MDD	103,942 gpd
	72.2 gpm
Total District approved capacity	190 gpm
Surplus	117.8 gpm


Tested Capacity Production Analysis

Total potential demand, MDD	103,942 gpd
	72.2 gpm
Total District tested capacity, best Heritage well out	109.5 gpm
Surplus	37.3 gpm

As evidenced by these data, various methods of evaluating system capacity indicate adequate supply capacity for Hambletonian Park Section F; a conclusion also reached by Mr. Hoffman in his review of June 12. We respectfully request that, upon review of this information, the Planning Board acknowledge the potential surplus in the system, and request an affirmation from the Town Board that Section F is entitled to water under the stated conditions, and that there is adequate reserve capacity in the system to service the project.

We look forward to appearing before your Board at your earliest convenience, in person, or virtually, to answer any questions it may have regarding this request. In the interim, please do not hesitate to contact us with any questions or comments. I am in the office infrequently due to the COVID situation; my cell number is (914) 474-5198. Coverage is not the best at my home in Crawford; please leave a voice mail and I will return calls as soon as possible. Thank you for your consideration.

AEC Incorporated
Very Truly Yours,



Jim Ullrich
President

Cc: Joe Neuman
Supervisor Bloomfield
David Steinmetz, Esq.