

3.3 Public Water Supply

Comment 3.3-1 (Keystone Associates Letter Dated December 8, 2011): 3.3-4 A discussion of fire flows for the residential project served by the municipal water supply district are now included however, fire flows for the residential project within the proposed private water supply system are not discussed.

Response 3.3-1: *Cluster # 1 consisting of 55 residential units, is served by the Fallsburg Consolidated Water District and will utilize fire hydrants spaced along the loop roadway at intervals of approx. 500 ft. Clusters # 2, 3 and 4 are not in nor proposed to be included in the town water district, but will utilize onsite drilled wells, storage and distribution piping, with no fire hydrants proposed nor required. As indicated in the DEIS. Section 3.11.3, "Fire Protection", the project site will be served by the Fallsburg Fire Dept. with a 3-5 minute response time from the firehouse in South Fallsburg.*

The relatively close proximity of active hydrants along Heiden Road which end near the Raleigh Hotel entrance drive, placing them within 1000 ft. of clusters #2 and 3, in addition to the availability of mutual aid by surrounding fire departments utilizing tanker trucks, insures adequate fire protection availability. Cluster # 4, accessed off Park House Road, is also within 3-5 minutes of the Fallsburg Fire Department via Lake Street as well as mutual aid availabilities, including water tanker trucks. The closest municipal fire hydrants are located on Lake Street in South Fallsburg approximately one (1) mile north of cluster 4, which could be utilized to replenish tanker trucks if necessary.

Comment 3.3-2 (Planning Board Meeting, November 10, 2011, James Creighton): The DEIS does confirm that there are impacts to Pleasure Lake wells. There are two wells, I believe, that were monitored when they were doing well digs. And I know one owned by Ken Uhl shows a significant draw down during the testing phase. And it indicates if there are problems later that the applicant would then deal with possibly digging a deeper well. I would submit at this point because the impacts are already confirmed that in the initial stage that the developer be required to dig a deeper well so that impact would get down that way. There is no interest in becoming adverse to the applicant anywhere down the road. I think because the issue has already been identified, I believe that mitigation is necessary and should be required at this point. I think doing it now at this stage is a lot easier than doing it later after construction has begun or completed.

Response 3.3-2: *The Fallsburg Fishing and Boating Club (FFBC) was contacted for volunteers to have their wells monitored during the 72 hour pump test of wells on the applicant's property. The pump test requires pumping the wells at 1.5 times the average daily demand with the best well out of service. Two FFBC members volunteered and their wells were monitored, one on the west side of Pleasure Lake and one on the east side. The well on the east side showed no impact from the pump test. The well on the west side of the lake experienced a drop of approximately seven feet in the static level in the well. The well is a depth of 310 feet deep with a static level water level measured at 30 feet below the ground surface giving a 280 foot water column in the well. The pump test result is considered a minimal impact on the water column of the height in the well tested, therefore no mitigation would be proposed for that well.*

An independent hydrologic study was completed for the Town by Brickhouse Environmental from West Chester, PA, in a letter report dated April 9, 2012 from Paul White, PG to Kenneth Ellsworth, PE. The Brickhouse report reviewed the well drilling protocol and

implementation and concluded that the quantity and quality of water were suitable to the development.

The Brickhouse report also recommended further well drawdown testing to model possible groundwater impacts. The applicant however has agreed to fund an escrow to be used to repair wells with impacts affecting their viability. Since further testing and modeling would not eliminate the possibility of adjoining well impacts, it would be an expense that would not contribute to resolving potential impacts. It is therefore concluded that the escrow funds set aside with provision for replenishment, if necessary, will provide suitable safeguard against potential significant adjoining well impacts. Final details of the well protocol will be resolved prior to final site plan approval.

The proposed protocol for addressing potential well impacts is contained in Appendix B of the FEIS and is entitled "Residential Well Mitigation Program".

Comment 3.3-3 (Planning Board Meeting, November 10, 2011, Arthur Rosenshein): We can't state for the future. We go with what we have. Could I ask for a response to the comment about the well testing showing at least one affected well.

Response 3.3-3: See Response 3.3-2 above.

Comment 3.3-4 (Planning Board Meeting, November 10, 2011, James Creighton): Those that were tested that drew down 7 feet on the west shore closer to the dam, actually it was not very close to the dam, but it was on the west shore, and those were submitted as test wells. You didn't test every well. But the expectation is the 7 feet drop on every well along the west shore, not anywhere else. And at this point, the understanding is as stated in the DEIS is that if there is a problem down the road, the applicant will fix it. My word is if we have identified the issue now, let's make sure the applicant digs their well deeper so that it is either more effective or doesn't impact others. That's what was stated by the applicant in the DEIS that if there is a problem, we will dig our well deeper. You guys only tested two.

Response 3.3-4: The recommendation to dig deeper wells would apply to neighboring wells if an impact was determined to be sufficient to warrant the action. See Response 3.3-2 above.

Comment 3.3-5 (Planning Board Meeting, November 10, 2011, Arthur Rosenshein): What is the mechanism? In other words, John Q homeowner is up there, it is summer, he notices there is a problem. How is it taken care of with minimal impact so he doesn't have to make a lot of phone calls, whatever. What mechanism is built in that protects them?

Response 3.3-5: Residents would be directed to file complaints with the Code Enforcement Office, which would have a Town approved hydrogeologist evaluate the complaint based on preset criteria. Then the mechanism set forth in Response 3.3-2 above would determine the resulting action if required.

Comment 3.3-6 (Planning Board Meeting, November 10, 2011, Arthur Rosenshein): My concern is at the moment is we have had some very wet years. Maybe a decade from now we have a spell of dry years, then the effect becomes apparent. And what happens to them when that occurs. They call code enforcement and then she makes a call to whom...: It is a concern. One of the things that happens is while the thing is under construction, you have a lot of handles to control the situation. Once the thing is built, you are gone, the developer is gone, what is the

guarantee mechanism for people who suddenly it becomes apparent? And it may be a number of years later. How is that built in so that they do not have to end up out of pocket finding an attorney to push something because the association says, "We don't really think we are responsible because it is an act of God that it hasn't rained in a year." I don't know how that can be taken care of so that the pre-existing, the people who live there now, don't find themselves in jeopardy sometime later.

Response 3.3-6: See Response 3.3-2 above.

Comment 3.3-7 (Planning Board Meeting, November 10, 2011, Mendel Lerner): I think that the way the 72-hour test works and the way we establish the protocol for testing (*not all distinguishable*), we went beyond, I'm not an engineer, but beyond what other developments... The health department has their own rules about testing. The DEC has tough rules of how long it has to be tested, how many wells... and have to accomplish a day and half supply. And basically, I think when we put together a protocol, the worst case scenario, and that was the 72-hour testing... plus another 24-hour test. So we wanted a worst case scenario. So if you want to start with hypotheticals, the actual tests show they can produce water more than double the amount of water that will actually be used. And plus the storage on site. It would also be something to keep in storage if there is an issue with water, with the wells producing enough water. So of course we have to make sure that our neighbors don't get impacted by our usage. But there is enough leeway to say it's not something that's a concern on a regular day-to-day basis.

Response 3.3-7: See Response 3.3-2 above.

Comment 3.3-8 (Planning Board Meeting, November 10, 2011, Arthur Rosenshein): We were told there was sediment. Let me just clarify. Was there sediment in the well? It was tested or not.

Response 3.3-8: There was no sediment in the well caused by the pump test.

Comment 3.3-9 (Planning Board Meeting, November 10, 2011, James Creighton): I haven't been able to talk to this particular home owner because of the time frame of this public hearing. But what I do know is the applicant has identified that a 7 foot draw down on our well, which is not next door, it's more than a thousand feet away, and identified a specific problem. That means people all along the area, if anybody close to the site... I just pointed out they identified the problem and said if there are such impacts, the applicant will mitigate the neighbors' drinking water wells by either deepening the well or drilling a new well. If that's what they they're going to do, why don't they just drill a deeper well.

Response 3.3-9: See Response 3.3-2 above.

Comment 3.3-10 (Planning Board Meeting, November 10, 2011, Mendel Lerner): If the drop is only 7 feet then it shouldn't be a big concern. If it's something that's going to become an issue and a problem, we don't want a problem and we want to show the neighbors that we are not a fly by night. We want to make sure.

Response 3.3-10: See Response 3.3-2 above.

Comment 3.3-11 (Planning Board Meeting, November 10, 2011, Will Illing): From what I'm hearing, yes, there is a great concern. Again, if we had a 7 foot drop on a well that's a thousand

feet away and there are other wells between that well and the pumping well, then more study needs to be done to see what the impact is. It sounds like they need town water if they're going to impact the existing homes in the area. I just don't not that the town has capacity for them. Maybe it could be developed.

Response 3.3-11: See Response 3.3-2 above.

Comment 3.3-12 (Letter to Planning Board, December 16, 2011, Fallsburg Fishing and Boating Club, James Creighton): As is made abundantly clear by the DEIS itself, the water usage for this proposed development has been shown to have a measurable effect upon the well water for neighboring properties approximately 2,000 to 3,000 feet away (depending upon which well location one measures from).

Response 3.3-12: See Response 3.3-2 above.

Comment 3.3-13 (Letter to Planning Board, December 16, 2011, Fallsburg Fishing and Boating Club, James Creighton): The maps displayed by the applicant at that meeting completely distorted the locations of each of the wells that were monitored on the West and East shores of Pleasure Lake. For example, the applicant sought to suggest that the effects of the measured well impacts were not significant and showed maps displaying the well for the Uhl family at the southwest corner of Pleasure Lake. As noted in the test results (see, DEIS, Appendix E, Graph 1: *Uhl Well - Lot 26*), the Uhl well is located at lot 26 – directly across the lake from Mr. Bisnoff (who also allowed his well at Lot 52 to be monitored during the applicant's well tests).

Response 3.3-13: The commenter is correct; the two wells that were monitored were not correctly located on the presentation map used at the public hearing. However on a site visit subsequent to the meeting the location of the wells was confirmed. The wells were accurately located on Figure 3.3-1 within Section 3.3 in the DEIS and Figure 5 within the Public Water Supply Report supplied in the DEIS Volume II, Appendix E.

Comment 3.3-14 (Letter to Planning Board, December 16, 2011, Fallsburg Fishing and Boating Club, James Creighton): Display of the Uhl well in the location of the lake closest to the applicant's property line (and nearly 1,000 feet from its actual location) suggests an attempt to avoid testing of the dozen or so wells between the applicant's property and the Uhl well that was monitored. One can expect that the well drawdown impacts to be greater the closer one gets to the wells that are tested. Accordingly, tests of the dozen or so wells (or at least the closest well to the applicant – Mr. Conklin at Lot 38) should be directed to be done and the DEIS should be supplemented to include this important data. Efforts should be made to monitor the wells of other neighboring wells outside the FF&BC area.

Response 3.3-14: See Response 3.3-2, 3.3-5 and 3.3-13.

Comment 3.3-15 (Letter to Planning Board, December 16, 2011, Fallsburg Fishing and Boating Club, James Creighton): It appears that the base information regarding the impacts to the Uhl well set forth in the DEIS Appendix E appeared to be 15% greater than those described in the DEIS narrative (DEIS page 3.3-5).

Response 3.3-15: The Uhl well static level and the impacts on it as illustrated on page 5 and on Graph 1 in Appendix E, Water Supply Report, are consistent with the description in the DEIS text page 3.3-5.

Comment 3.3-16 (Letter to Planning Board, December 16, 2011, Fallsburg Fishing and Boating Club, James Creighton): Our initial discussions with various engineers and design professionals is that any measurable impact upon monitored wells approximately half a mile away is something that merits major concern. The FF&BC and its members request that the Planning Board direct that the applicant perform more testing under a heightened protocol set forth by the Town Engineer to evaluate the water resources available to the area. Well pumping data must also be provided to determine that the estimated direct recharge to the bedrock aquifer during drought conditions would support the proposed potable water demands.

Response 3.3-16: See Response 3.3-2 and 3.3-5. The Water Supply report in Appendix E, Volume II of the DEIS indicates that the recharge from the site is greater than the water needed from the production wells. See page 7, section 9.0 Conclusion, number 2.

Comment 3.3-17 (Letter to Planning Board, December 16, 2011, Fallsburg Fishing and Boating Club, James Creighton): The Water Supply Report (DEIS Appendix E) also clearly shows that the source of the water supplying the aquifer in question (which serves both the Uhl well and the proposed project) appears to be fed by the large wetland area along Heiden Road over the ridge line, not by Pleasure Lake. Accordingly, these water resources are not as unlimited as one might assume when thinking of a project located near Pleasure Lake.

Response 3.3-17: See response 3.3-16.

Comment 3.3-18 (Letter to Planning Board, December 16, 2011, Fallsburg Fishing and Boating Club, James Creighton): We respectfully request that we be advised of any additional testing and the suggested protocols so that the FF&BC can be aware of the impacts upon its sensitive and finite water resources. The DEIS in its present form is inadequate and must be supplemented before this project can move forward to the FEIS and approval stage.

Response 3.3-18: See Response 3.3-2 and 3.3-5.

Comment 3.3-19 (Letter to Planning Board, December 16, 2011, Fallsburg Fishing and Boating Club, James Creighton): the Town must ensure that adequate funds are set aside for independent testing and analysis by a hydrogeologist chosen by the Town or the FF&BC, and that significant funds be held in escrow by the Town to ensure that any mitigation measures suggested by the applicant can be taken immediately or upon notice to the Town without the need for legal action against the applicant, its subsequent property owners or its condo associations (which may have little or no interest in resolving any issues after approvals are received).

Response 3.3-19: See Response 3.3-5.

Comment 3.3-20 (Letter to Planning Board, December 16, 2011, Fallsburg Fishing and Boating Club, James Creighton): It should also be noted that the suggested mitigation technique of "deepening" affected wells or drilling a new well (or the installation of filter systems as suggested by the applicant's consultant for sedimentation issues) have all been questioned. If drilling deeper wells was the answer, is it not reasonable to expect the applicant to be required to drill its wells deeper so that existing property owners are not impacted? It has been suggested that deeper water sources may not have similar water quality. Again, these fundamental questions and the data needed to answer them are completely lacking at this point in the process.

Response 3.3-20: See Response 3.3-2 and 3.3-5.

Comment 3.3-21 (Letter to Planning Board, December 14, 2011, Larine Harr): We understand preliminary well tests done at Pleasure Lake have resulted in draw downs in water levels, and we strongly urge further testing.

Response 3.3-21: See Response 3.3-2 and 3.3-5.

Comment 3.3-22 (Town of Fallsburg Planning Board Meeting, December 8, 2011, Ken Uhl): I'm on Pleasure Lake. My main concern is the aquifer. I was one of the test wells on West Shore Drive and there was an impact on the well. That was during the summer. Now you have some other development there in the summer that is going to use that aquifer beside the new one.

Response 3.3-22: The Water Supply report in Appendix E, Volume II of the DEIS indicates that the recharge from the site is greater than the water needed from the production wells. See page 7, section 9.0 Conclusion, number 2. In addition the mandated and completed 72-hour pump test was performed to prove the aquifer can provide water to this new development and remain stable to provide water to existing development. The NYSDEC pump test protocol, which was followed for this property, includes fail safes so the aquifer is not over extended. If the pump test results meets the NYSDEC requirements and follows the state guidelines the aquifer should not be overdrawn.

Comment 3.3-23 (Town of Fallsburg Planning Board Meeting, December 8, 2011, Robert Geneslaw): Mr. Creighton made the suggestion this last request that if it's evident that there are problems during the test and the applicant is agreeing to either modify the well or replace it if it turns out there are problems after construction, Mr. Creighton's suggestion was the well be replaced as part of the development of the property that is before the Board.

Response 3.3-23: See Response 3.3-2 and 3.3-5.

Comment 3.3-24 (Town of Fallsburg Planning Board Meeting, December 8, 2011, James Creighton): I don't think it makes a tremendous difference whether you tested the well right on the dam or a thousand feet from it. There's an impact shown. If your hydro geologist isn't worried about my only suggestion would be that the town considers having its own independent hydro geologist or...

Response 3.3-24: See Response 3.3-2 and 3.3-5.

Comment 3.3-25 (Town of Fallsburg Planning Board Meeting, December 8, 2011, Arthur Rosenshein): Is there any affect, the hydraulic affect from the lake water itself from the well charge, was that considered?

Response 3.3-25: No. See response 3.3-16.

Comment 3.3-26 (Town of Fallsburg Planning Board Meeting, December 8, 2011, Ken Lang): It has occurred to me; we had some challenges with lake water testing throughout the season this year because of the excessive rain. When the hydro geologists make reports, you factor an historic overview of depth of well? Or do you take the rainiest season on history?

Response 3.3-26: *Weather during the test period is described on page 5 of the Water Supply Report. Rain occurred after the pump test. Furthermore the analysis of the ability of the site to recharge the aquifer was based on average rainfall for the area culled from the Sullivan County USDA Soil Survey. The site is capable of recharging more than double the aquifer drawdown necessary to support the development.*

Comment 3.3-27 (Town of Fallsburg Planning Board Meeting, December 8, 2011, Mike Meyer): I'm on the west shore a little past Kenny Uhi. There's that big rock ledge that runs right through here. Wouldn't it be smart to test this well? The first one past the dam? Because that doesn't seem to be..., it's below the rock.

Response 3.3-27: *See Response 3.3-2 and 3.3-5.*

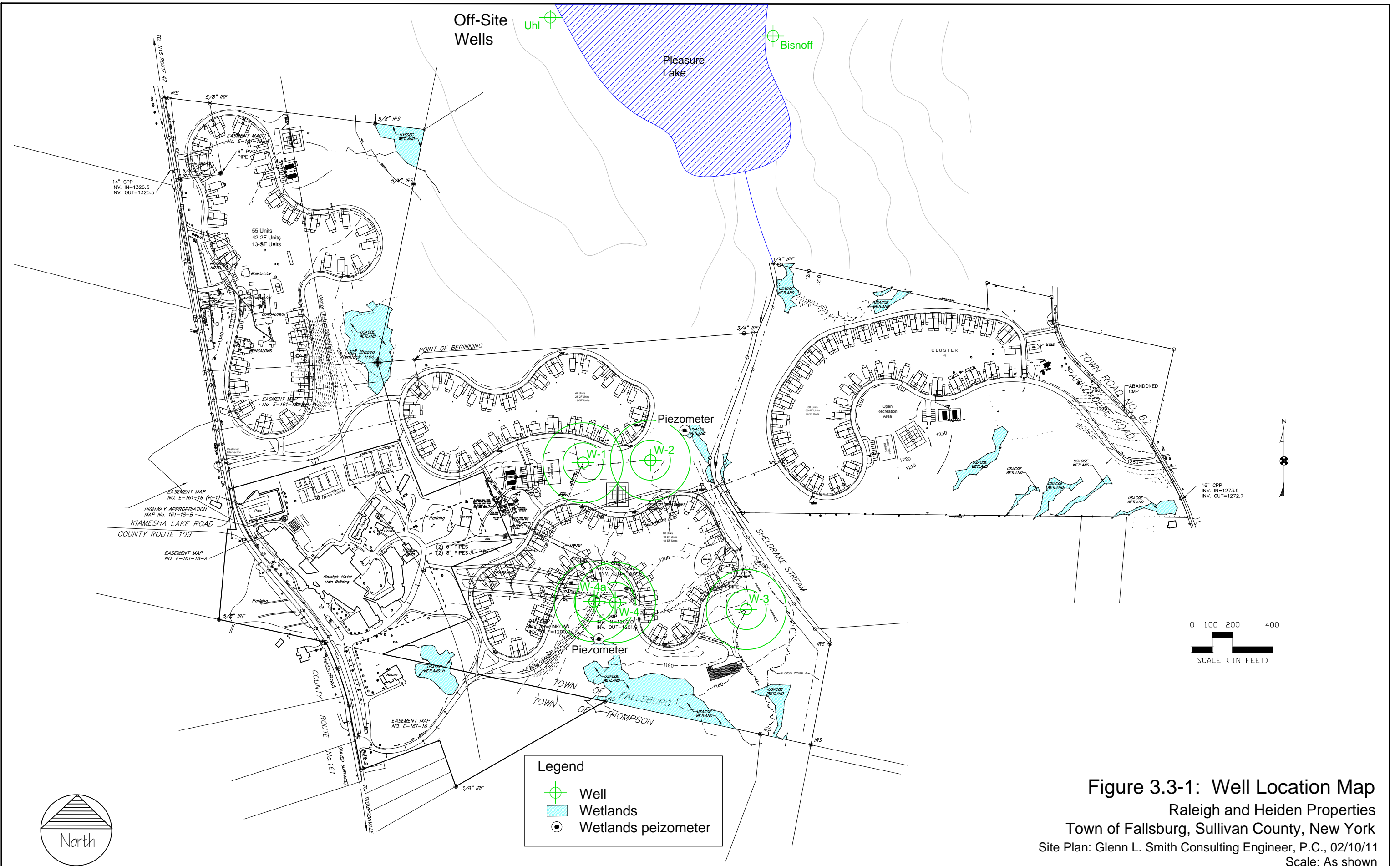


Figure 3.3-1: Well Location Map
 Raleigh and Heiden Properties
 Town of Fallsburg, Sullivan County, New York
 Site Plan: Glenn L. Smith Consulting Engineer, P.C., 02/10/11
 Scale: As shown