
From: Vicki Halmen <vhalmen@ipswichutilities.org>
Sent: Thursday, July 21, 2022 9:33 AM
To: Charlie Wear <cwear@hancockassociates.com>
Cc: Ethan Parsons <ethanp@ipswichma.gov>
Subject: RE: 55 Waldingfield Road, Water Use

Hi Charlie,

Thank you for this information.

Phase 1A and 1B seem fairly straight forward and moderately impactful to the water system.

With respect to the horse barn, can you confirm if horses are currently on-site and how many? I'm trying to understand the actual increase in water use we can expect at this site compared to the current conditions (for Phase 1).

The water saving measures you listed below are encouraging. Efforts that actually minimize water use on the property are priority. Do you have any figures on how much the rainwater harvesting will reduce the water use needed for the horses?

The water use estimates for phases 2 and 3 are helpful to get some perspective on the scale of the site modifications, but I am concerned that the details of these phases are much less certain.

With the uncertainty of Phases 2 and 3, I would recommend a requirement that the applicant reengage the Water Department for review of updated water use figures and mitigation/minimization strategies prior to commencement of construction of each of those phases. With the timing of future phases uncertain, I would also recommend that the project comply with WUMP regulations that are in place at the time of issuance of the building permits.

As mentioned in a previously email to Ethan, all water piping must be reviewed and approved by the Water Department prior to construction. The piping in general is acceptable, however, we may require some minor changes to the configuration to better align with our standards.

Please let me know if you have any questions.

Best,

Vicki Halmen
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From: Charlie Wear <cwear@hancockassociates.com>
Sent: Monday, July 11, 2022 9:48 AM
To: Vicki Halmen <vhalmen@ipswichutilities.org>
Cc: Ethan Parsons <ethanp@ipswichma.gov>
Subject: 55 Waldingfield Road, Water Use

Hi Vicki,

Hope you are well. This is a follow up to your email of February 7, 2022 and our subsequent phone conversation and is meant to both clarify and memorialize the intended uses as they relate to our water use for the proposed project. We intend to draw upon the Town's Water System.

All projected use flows listed here are based upon Title V design flows as required under the WUMP program. Actual flows are likely to be about 50% less than Title V design flows.

Phase 1A: Proposes the conversion of the existing (mansion) 10 bedroom residential building to a 13,366sf "executive retreat" which would fall under the definition of an office use since the executives at the "retreat" are essentially performing activities one would expect in an office. Flows for the Mansion would be 110gpd/bedroomx10 bedrooms=1100gpd existing. For the proposed office use we would have 75gpd/1000sfx13,366sf=1002gpd. This results in a small reduction of 98gpd. So, for Phase 1A we would anticipate a reduction in flows and that there would be no WUMP fee for this Phase.

Phase 1B: Proposes the demolition of the existing 4br farmhouse and in its place the construction of a 21 bedroom guest house. It also includes renovations and a footprint expansion to the existing 10 stall barn. The expansion is to improve space that will be ancillary to the primary use which is a horse barn. We do not intend to increase the number of horse stalls and therefore we do not anticipate an increase in water flows associated with the rehabilitation and expansion to the barn. So, for phase 1B we see an increase of 17 bedrooms or 1870gpd per Title V. Under the WUMP program we believe this would be 17brx\$1500per bedroom or a Total Wump Fee for this Phase 1B of \$25,500.

Phase 2: Anticipates the construction of a Wellness Center, a 10,000sf Innovation Center and conversation of the mansion from office space to a 9br guest house. The wellness center will be similar to a health spa, will have an outdoor pool and will include space where people do yoga, dance, stretching, practice mindfulness and perhaps a small weight room component. After analyzing Title V, the use that seems closest is a "Country Club" which projects 20gpd day/occupant. Ora has projected no more 90 employees would be on site at any given time, so I calculated a use for this of 90gpd x 20 occupants = 1800gpd. This is a very conservative approach since it is unlikely that all employees on a given day would use the Wellness Center and they anticipate having 90 employees on site only as an occasional peak when Phase 3 (which I will get into next) is built out. The Innovation Center essentially replaces the space lost in the mansions "executive retreat" office space. For the Innovation Center I have calculated 75gpd/1000sf x 10,000sf of office space = 750gpd. The conversion of the mansion from office space back to a residential use is essentially a wash. The office use was 1002gpd and the conversion to 9br would be 990gpd. A reduction of 12gpd. Summing these all up I come up with 2538gpd in increased flow. Under the WUMP program the fee would be 2538gpd x \$13.50/gpd for commercial use or \$34,263.

Phase 3: Finally Phase 3 would include the construction of a 10,000 Collaboration Center which again would most resemble an office use. So, 10,000sf x 75gpd/1000sf = 750gpd. The Wump Fee would be 750gpd x \$13.50/gpd = \$10,125.

It should be noted the schedule for these phases is not set in stone and that Phases 2 & 3 may not occur for many years if at all.

Also, as part of this project Ora intends to incorporate many water saving measures into the design including:

- The use of low flow toilets, waterless urinals, low flows fixtures for all showers and at all taps in bathrooms and in any kitchens as well as using low flow appliances for any dishwashing and laundry
- The use of rainwater harvesting at the barn for watering and cleaning the horses
- The use of landscaping that does not require permanent irrigation and the prohibition of permanent irrigation on site.
- The design and implementation of stormwater management facilities on site that will recharge all of the stormwater for up to a ten year event back to the ground to replenish the aquifer

Given these measures and the fact that we will be recharging our used water or effluent back into the aquifer through the use of Title V Septic Systems I would argue that we are close to net-zero use from the perspective of the impact to the aquifer. Additionally, the approximately \$70,000 in WUMP fees calculated above should result in improvements to the Town's Water System that will truly make this a net-zero project.

We are meeting with the Planning Board the evening of July 21. Based on the attached information I am hoping we could get your comments for the Planning Board by then. Please let me know should you have any questions on this.

The link below will give you access to the latest plans currently before the Planning Board.

 [Ora](#)

Regards,

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