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Sent: Friday, August 28, 2020 10:21 AM

To: Jason Sullivan <jason.sullivan@chathamnc.org>; Chris Seamster <cseamster@mckimcreed.com>;

Tanya Matzen <TMatzen@newlandco.com>; Nick Robinson <robinson@bradshawrobinson.com>

Cc: John McDonald <JMcDonald@integrawater.com>

Subject: RE: [Ext] Planning Board Meeting

Jason,

Attached within the email is a table of average daily flows for each month over the past 18 months. The daily flows at the plant vary based on the incoming flows (i.e., water used). Also, there is naturally occurring variation in flows at the WWTP due to the operation of some internal basins within the plant. For the Briar Chapel facility, in particular, the 5-day Upset Pond has been periodically pumped back into the WWTP since the start of the year to ensure that adequate storage remains available in the event of an upset at the plant. (While this has not occurred every week day since the start of the year, the Operator has regularly ran the pumps so that an additional 20-30K gallons was returned to the plant for processing. Specifically, these operational activities occurred most frequently in January, February, April, and May. The Operator is doing pump maintenance now and should be able to send more of the 5-day upset pond water to the WWTP again in September.)

Regarding your question about wastewater flows in excess of 250,000 GPD, there would be no overflow situation. Engineers for WWTPs are required to design the facilities to accommodate 2-2.5X safety factor for maximum hydraulic flow (i.e. 500-625K GPD). If the average daily flow for a month exceeded the permit capacity, then a violation would be issued by DEQ even though the facility could handle the flow.

One final note on wastewater flow variations is that higher flows are typically seen around the holidays and after significant rainfall events. At Briar Chapel, there are also some seasonal impacts to consider such as the large pool complex and its backwashing operation. There was even a complete draining of one of the pools by the HOA recently that sent several hundred thousand gallons to the WWTP unexpectedly and those flows were not a challenge to handle. Finally, the "Work from Home" effect due to Covid has certainly impacted flows to the facility due a majority of the residents staying home. Even though some of the schools and businesses that flow to the Briar Chapel WWTP are operating at reduced capacity, those lower than normal flows are likely more than offset by the increased flows from customers' homes.

The Utility Owner and its Operator are both aware of the capacity concern and working towards added capacity for the system. An expansion plan is in the works and is hoped to be completed by Spring 2021 well before any of the referenced facilities that have not started construction would be close to coming online later in 2021.

Hope this helps and don't hesitate to reach out if you have any further questions.

Briar Chapel Flow Data

<u>Month</u>	<u>GPD</u>
Jan-19	207,091
Feb-19	187,220
Mar-19	197,311
Apr-19	178,137
May-19	196,892
Jun-19	187,439
Jul-19	185,738
Aug-19	175,021
Sep-19	194,783
19-Oct	189,322
19-Nov	190,026
19-Dec	211,047
20-Jan	224,674
20-Feb	208,957
20-Mar	197,311
20-Apr	207,887
20-May	230,172
20-Jun	202,892

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