From: Franz, Hayley
To: Papadopoulos, George
Cc: stergios.spanos@des.nh.gov
Subject: RE: Keene RTC
Date: Tuesday, August 11, 2020 9:03:48 AM
Attachments: RE WET Test Data.msg

Hi George,

Below are responses to the major points in the comments that you listed below from Keene. Please let me know if you need any additional information.

- **2.0 Alternative Low Flow**

  - ***"The permit includes a calculation for $WWTF_{ACTUAL}$ of 4.22 cfs. The correct value, based on a 2.65 mgd value, is 4.10 cfs. The value of 4.10 cfs should be used for $WWTF_{ACTUAL}$ through-out the calculations."***
    This change does not modify the dilution at all. I would like to know what date range they are using to verify this number with the DMR data, but if we just want to revise this to appease them, I am fine with that since it will not affect the calculations at all.

  - **"State of NH law supports use of August median stream flows in lieu of 7Q10 calculations to establish nutrient discharge limits for aquatic life and human health criteria. NH RSA 485-A:8(II)."**
    This is not necessarily true; it would be more appropriate to replace the word "supports" with "allows" or "does not prohibit". RSA 485-A:8.II simply says, "The commissioner shall not calculate nutrient discharge limits for aquatic life and human health criteria based on 7Q10 flow or such other flow criteria more restrictive than 7Q10." It does not say that the August median flow should be used in calculating nutrient limits. NHDES-WMB is working to develop a policy with flows other than 7Q10 and criteria other than 100 ug/L, as this instream concentration target would not be appropriate with the use of a higher flow, but that policy has not been finalized yet.

  - ***"The NH. Department of Environmental Services (NHDES) published a presentation by the NH Water Quality Standards Advisory Committee, dated October 11, 2018, entitled "Alternatives to 7Q10 for Nutrient Permitting." In summary, Keene is requesting the use of the August median flow for calculating nutrient effluent limits. They also later go on to state that all WQBEL be adjusted based on revised dilution using August median.***
    While the WMB has explored alternative flows for nutrient permitting, they have not finalized a policy for which flows and criteria should be used. Since this has not been finalized, we do not have a criterion for use with the August median flow. The presentation from 2018 is not a recommendation, but rather is an analysis generated for discussion purposes. Any use of this approach should be made with an independent analysis of its validity. NHDES cannot yet recommend this approach

until further vetting and public input.

- ***"There are significant impacts from this calculation; namely, all WQBEL will need to be revised as a result of this change in methodology. Keene respectfully requests approval of this modified Dilution Factor calculation and further asked that it be incorporated into the Final Permit, with reasonable potential analyses and WQBEL modified and adjusted accordingly and in accordance with the CWA."***
  For toxin and metal parameters, state law mandates the use of 7Q10 for effluent limitations.

- ***"The upstream 7Q10 flow listed in the Reasonable Potential Analysis Table is listed as 11.4 cfs. Keene respectfully requests that the Reasonable Potential Analysis Table in Appendix B be modified in the Final Permit to represent 11.7 cfs to remain consistent with the 7Q10 set forth in the Draft Permit."***
  This appears to be a typo in the RP table and 11.7 cfs is the correct value.

- **3.0 pH Range**

  - ***Keene is requesting to complete a pH study for a modification of their pH limits.***
    DES responded to Keene's WET sampling in 2018, see the attached email.
    In order to allow for a pH demonstration and limit adjustment, the permittee must demonstrate that either:
    1. the range should be widened due to naturally occurring conditions in the receiving water; or
    2. that the naturally occurring receiving water pH is not significantly altered by the Permittee's discharge.

    The permittee does not satisfy either of these conditions, and is therefore not able to perform a pH study or receive a pH limit adjustment. Regarding number 1, the receiving water is impaired for pH. We are at this time unable to precisely differentiate contributions of the natural and anthropogenic contributions to low pH. We do know that while there are signs of improvement there is ongoing anthropogenic acid deposition and that the long-term historical deposition has depleted the natural buffering capacity of or soils and underlying geology. Simply put, upstream is not a "natural" condition. Regarding number 2, due to Keene's low dilution factor, the pH in the receiving water will be significantly altered by the discharge.

- **7.5.4 Notice of Bypass/Upset**

  - ***"This language does not provide a definition for "drawing water." Does this requirement apply to both surface water withdrawals and groundwater withdrawals? Keene is aware that there are no surface water withdrawals within 20 miles downstream of the effluent discharge. If this requirement pertains to only surface water withdrawals, and since Keene is aware that there are no existing surface water withdrawals within the defined distance, then Keene***

respectfully requests that this requirement be removed from the Draft Permit." This only applies to surface water withdrawals. This is standard permit language that should be maintained, should any new water systems add withdrawals within 20 miles downstream of the facility.

- ***This section of the Draft Permit also requires that "a written notification, which shall be postmarked within 3 days of the bypass or upset." Keene does not have the ability to bypass their WWTF; accordingly, Keene respectfully requests the removal of the word "bypass" from this article. Further, Keene requests clarification on the term "upset" that would trigger this notification in advance of the issuance of the Final Permit such that the City can respond formally depending on the revised language and associated definition of the word "bypass."***

  "Bypass" refers to bypassing any component of the treatment system, not the treatment system as a whole. Bypasses can occur for various reasons, for example, during construction or failure of equipment. For this reason, "bypass" will remain in this standard permit language. "Upset" refers to any disruption in operation that affects the treatment of the wastewater being discharged.

- **7.6 Water Reservoirs and Wells**

  - ***"In Keene, there are three separate water supplies, with two surface water reservoirs located in Roxbury, NH. Surface water is conveyed from the Babbidge Reservoir to the Water Treatment Facility. The City's surface water supply is supplemented by four groundwater wells located on West Street and Court Street. Keene respectfully requests that the water sources be updated in the Final Permit to reflect the correct number of wells and reservoirs."***
    DES confirmed that there are 2 reservoirs and 4 wells, and this modification is acceptable.

Thanks,
Hayley

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