STATE OF WASHINGTON
DEPARTMENT OF HEALTH
NORTHWEST DRINKING WATER REGIONAL OPERATIONS
20425 72nd Avenue South, Suite 310, Kent Washington 98032-2388

February 14, 2017

JOHN VODOPICH
PUBLIC SERVICES DIRECTOR
HONORABLE MAYOR AND CITY COUNCIL
PO BOX 7380
BONNEY LAKE WA 98391-0944

RE: Bonney Lake, City of, ID# 07650
Pierce County
Water System Plan
Submittal # 16-1106

Dear Mr. John Vodopich, Honorable Mayor Neil Johnson and Honorable City Council Members:

Thank you for submitting the draft Water System Plan (WSP) for the City of Bonney Lake on November 16, 2016. Upon review of the plan, we offer the following comments.

Planning Data and Water System Description

1. It appears the Bonney Lake plan is approvable only to 2024. See comments below for further discussion and clarification.
2. Page 5-7. The City's policy on the drilling of private wells within the retail service area appears to be inconsistent with the Tacoma-Pierce County Health Department (TPCHD) Environmental Health regulations. If the request for service comes from within the City's Retail Service Area, the TPCHD regulations prohibit the drilling of wells to serve individual connections or small (Group B or small Group A) public water systems within the Retail Service Areas of Group A water systems. The drilling of irrigation wells is also prohibited.
    a. Please resolve this with both PALS- CWSP process and TPCHD.
    b. Maybe a re-consideration of your retail service area is in order?
    c. Also, the narrative as written on 10/16/16 doesn't address the new Supreme Court's HIRST decision nor does it identify if some of your service area is in closed basins.
3. Provide signed local government consistency statements from Pierce County, Cities of Auburn and Sumner, and your own planning department.

System Demand, Analysis, and Capital Improvement Projects (CIP)

4. Table 7-9. The table indicates that the City will be source deficient in 2024 and subsequent years. It was reported that conservation efforts could delay this deficiency by several years.

a. What viable new sources of supply are available to address this deficiency? Will savings come from supply-side efficiencies, demand-side, or both? What is growth doing to your production numbers since 2014? The CIP refers to a Cascade Water Alliance Water Rights Purchase (CIP S2) of 2 MGD. Is this in addition to the 4 MGD that is already included in Table 7-9? What is Bonney Lake's next source of supply? Will there be a new supply agreement?
b. Page ES-6. Clarify the narrative about the additional CWA water supply and it being interruptible. Identify the yearly purchased amount and the years. Explain the term "interruptible." DOH will not approve water system growth to be served by interruptible water. Please clarify.
c. Water right self-assessment forms (WRSA). The 20 Year Forecast shows a deficiency in Q_i (-369 gpm). In what year does the deficiency in Q_i appear? Will this deficiency be addressed by the Cascade Water Alliance Water Rights Purchase (CIP S2) of 2 MGD?

5. Page 4-2. The ERU values in the last paragraph do not match those in Table 4-10. This is especially pronounced for multi-family ERUs. Please resolve these apparent discrepancies.
6. Table 4-6. The table seems to be equating Multi-Family Units with ERUs. These should not be equivalent since ERU usage is based on full-time single-family residential connections.
7. Table 4-11. The ADDs in the table do not match those in Table 4-10. For example, the ADD for 2014 is given as 209 gpd/ERU while it is given as 218 gpd in Table 4-10. Please resolve these apparent discrepancies.
8. Tables 4-13, 7-18, 7-19, 7-20, and 7-21. PHD is given as 1,163 gpd/ERU. What is the meaning of this value? PHD is expressed as gpm and is for the peak hour in the system.
9. Page 7-9. In the transmission lines that are not able to meet the 30 psi minimum pressure, confirm the number of service connections in those portions of the line which cannot meet the minimum.
10. Table 7-10. It is unclear what Domestic Demand represents. Is this MDD? Please explain.
11. Page 7-24. DOH has approved (DOH Project # 15-0401) the new second booster station for the Lakeridge 810 zone. However, it does not appear that the construction has been completed. What is the status of the booster pump station?
12. Tables 7-14, 7-16, and 7-17. The tables indicate a storage deficiency for the Ponderosa 800 zone from now through 2034 (0.74 MGal). It appears that additional storage is needed for this zone or that Tacoma Water agrees to serve as the additional storage through their wholesale agreement. Confirm whether your contract allows storage volumes. What steps will be taken to eliminate this deficiency?
13. Page 6-24. DOH's most recent sanitary survey of the City's water system was conducted on August 18, 2016, and the comments below are based on the observations made during the survey.
    a. The Peaking Storage reservoir was depleted during a hot period and was unable to recover during the remainder of the summer. This would perhaps indicate that the reservoir cannot be counted on as a reliable source of supply. Why was the reservoir unable to recover? How can the City continue to count on the reservoir as a reliable peaking supply?

b. The total capacity for the City's sources given in Tables 7-18, 7-19, 7-20, and 7-21, is 13,564,800 gpd. This source capacity represents the amount available from all your sources given a 24-hour pump day (9,420 gpm * 1,440 min/day = 13,564,800 gpd). This does not allow for any contingencies such as pump breakdowns or emergency maintenance on sources. How can the City strengthen source reliability to avoid water shortages during high demand periods?
c. The South Prairie BPS consisted of two booster pumps capable of supplying 2 MGD. The BPS was designed for four booster pumps to allow the City to use the entire 4 MGD through the Tacoma Water wholesale agreement. The CIP (Table 9-1) indicated the two additional pumps would be installed in 2016. Table 7-9 indicates you need these pumps by 2020. What year is the $1.4 M CIP going to be funded?

14. Appendix D. Detail W3. Utility separation distances between water and sanitary sewer lines are defined by the Department of Ecology. They are not specifically defined by DOH. The expectation is that a utility will follow these requirements during water line construction.

15. Appendix F. The Coliform Monitoring Plan needs a map of sample sites in the distribution system. An Acute MCL Violation is now known as an E coli MCL Violation which still generates a Tier 1 PN. Sample rotations are confusing. Early on the plan identifies 17 routine sample sites. It is difficult to describe where this occurs since the pages are unnumbered. The plan identifies weekly sample sites by Month 1, Month 2, and Month 3. Does the rotation start over every three months? Later in the plan the months (January, February, etc.) are identified and listed with the numbers 1, 2, 3. It is not clear what these mean. After this identification there are three sample lists numbered up to 38. Are these different than the 17 identified earlier? Clarify that the active sources must be sampled before treatment after any positive routine sample. This is a requirement of the Groundwater Rule.

Operation & Management

16. Page 2-18. What operational procedures does the City use to minimize water quality concerns due to stagnation issues in the reservoirs with altitude valves necessitated by inadequate overflow elevations?

17. Page 6-18. The City is currently required to collect 40 coliform samples per month. Correct the text.

18. Page 6-25. The narrative states "samples must be collected by public works systems . . ." What is a public works system?

19. Chart 8-1. The chart appears to need updating. For example, Dan Grigsby has retired and we understand that the City went through a re-organization and there is no longer a Public Works Director.

20. Table 8-1. Identify the minimum DOH required certification levels for your operators. Does the City require shift operators to be certified? Please note that the BTO certification no longer exists and correct.

21. Page 8-14. Describe and outline the health advisory notification procedures that the City uses during localized water outages in the distribution system.

22. Page 8-8. Provide a time schedule for improving the City's SOP's to demonstrate technical and managerial commitment to a well-run water system.

23. Page 8-15 and Appendix L. Emergency Response Plan.

    a. Correct the text stating DOH has it since it's being kept at the City, and is available upon request from the City.
    b. Emergency Preparedness. The City should become a WAWARN member and train staff to understand industry emergency procurement terms and processes so the City will be eligible for FEMA insurance reimbursement. The latest member list can be found at: https://wawarn.org/members.php

Source Protection, Water Resources, and Water Use Efficiency (WUE)

24. Page 27. Springs provide 53% of your supply and the City clearly needs better source protection now.
    a. There has been at least one example of unauthorized access into one of the City's spring facilities since the previous WSP update. Follow-up visits and sanitary surveys have recommended alarms for the spring collection boxes. What is the status of increasing security around the City's springs facilities? Funding should be made available this year as this is a priority. Surveys show customers want safe and reliable drinking water and when there is perceived risk without adequate action, government may appear ineffective.
    b. What operational parameters are monitored by operators through the City's telemetry system, like chlorine residual, reservoir levels, and spring flow rates?

25. Appendix C. Water Use Efficiency (WUE).
    a. Since distribution system leakage (DSL) is over the 10% state regulation, the City needs a Water Loss Control Action Plan (WLCAP) and this was not provided. Also, the costs need to be identified as a line item in the budget.
    b. WUE customer goal needs to be set when you have the consumer meeting for this plan update. Provide documentation of public forum. Please refer to WAC 246-290-830 to meet the regulatory requirements.

Financial Section

26. Page 10-5. The Mayor and City Council have a fiduciary responsibility to the water system per WAC 246-290-100 (1) (j) to demonstrate financial viability. The City's water rates are not funding the full costs of water service. The deferred maintenance and capital projects for infrastructure replacement over the past decade are only getting the water system into a deeper hole. You are expected to implement a rate structure that ensures the water system is sustainable now and in the future, and can support any planned growth. The Council has frozen system development charges since January 1, 2015. Freezing these charges only creates a higher cost to be born in the future by your ratepayers.

27. Your affordability index is well below the industry standard of 1.5%. Looking at the City's annual median household income of $80,967 on-line at American FactFinder, it appears at your

2017 water rate, your affordability index is approximately 0.24%. This low number shows that your customers can afford increases in water rates now to avoid even larger increases in the future. The 2017 rate increase is a good start but there is still more work to be done. The City needs adequate rate increases over multiple years to fund the full cost of providing water. It is unacceptable to have text, like "as the budget allows" which is similar narrative to the last plan. This plan, like the last one, does not link the need to committed funding.

28. Pages ES-6 & 7, 8-19, 8-20, and 8-21, Table 8-3. How are you are addressing the O &M preventative maintenance tasks and the desired level of frequency? The O &M needs should drive the O & M budget. DOH has concerns about not funding an adequate number of staff and only "maintaining at a minimum requirement level." We understand this choice during the economic hard times of 2008- 2012. However this is not wise or prudent today. Page 8-19 identifies 12 FTE's are maintaining the water system yet 16.5 FTE's are really what's required. Describe the priorities for your current planning period: what will get done through a funding commitment, create a list of what will not get done, and show how the City is going to make incremental progress and financially commit to rectifying the past deferred maintenance.

29. What are the City's policies for:
    a. Providing a cash flow reserve? If the City does not have such a policy for its water system, consider using the American Water Works Association (AWWA) recommendation of 25% of annual operating expense.
    b. Providing a portion of rate revenue towards infrastructure replacement projects? Page 10-3. Most utilities are adding a surcharge for this type of cost to the rate bill so customers understand that it takes both annual O & M expenses, as well as some replacement funding to keep a water system financially viable.
    c. Providing an emergency reserve? If the City does not have a policy regarding an emergency reserve, the industry standard may be used, which is, estimate the cost of the single most critical piece of infrastructure including installation, and use this as a cost baseline (excluding reservoirs).

30. Asset management is gaining traction among well-managed water utilities. The City should strongly consider embracing this new industry standard of doing business to be able to educate your citizens about the true costs of water service in the time of aging infrastructure. What is the City doing in regards to implementing asset management in your water utility?

31. I understand since talking with Mr. John Vodopich, that the rate analysis process just began and will be done by late March. Please include the findings and resubmit a complete financial chapter with all the regulatory requirements addressed including a balanced budget of revenues and expenses demonstrating financial viability. Per WAC 246-290-100 (j) (ii), provide a balanced budget for the planning period you are requesting to be approved by DOH. There was no revenue and expense water budget provided in Chapter 9. Your plan, as submitted, is incomplete and not financially viable.

Other

32. Per WAC, provide a signed resolution adopting the plan by the elected officials.

We hope that you have found these comments to be clear, constructive and helpful in the development of your final WSP. We ask that you submit the revised WSP pages, maps, etc. (two copies) on or before May 14, 2017. In order to expedite the review of your revised submittal, please include a cover letter summarizing how each of the above comments was addressed and where each response is located (i.e., page numbers, Appendices, etc.).

Regulations establishing a schedule for fees for review of planning, engineering and construction documents have been adopted (WAC 246-290-990). Please note that we have included an invoice in the amount of **$5,484.00** for the review of the Water System Plan. This fee covers our cost for review of the initial submittal, plus the review of one revised document. Please remit your complete payment in the form of a check or money order within thirty days of the date of this letter in the enclosed envelope or send payment to: **DOH, Revenue Section, and P.O. Box 1099, Olympia, WA 98507-1099.**

Thank you again for submitting your plan for our review.

Sincerely,

Jennifer Kropack
Regional Planner
(253) 395-6769

John Ryding
Regional Engineer
(253) 395-6757

Enclosure: Invoice

cc: Doug Budzynski, John Woodcock, City Engineer, & Dave Cihak, Utility Supervisor, Bonney Lake
Geoff Dillard, PE, and David Matz, PE, RH2
Dan Cardwell, Pierce County Planning and Land Services
Brad Harp, Tacoma-Pierce County Health Department
Tammy Hall, Ecology, SWRO