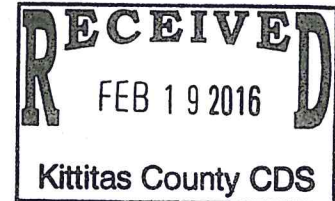




STATE OF WASHINGTON  
DEPARTMENT OF HEALTH  
EASTERN DRINKING WATER REGIONAL OPERATIONS  
16201 E Indiana Avenue, Suite 1500, Spokane Valley, Washington 99216-2830  
TDD Relay 1-800-833-6388

February 16, 2016

Clint Perry  
Palomino Fields Water System  
PO Box 394  
Cle Elum, WA 98922



Subject: Palomino Fields Water System; PWS ID #AD369; Kittitas County  
Water System Plan; Submittal #15-1201; DOH Comments

Dear Mr. Perry:

Thank you for providing the draft Water System Plan (WSP) for the Palomino Fields Water System received in this office on November 23, 2015. The following comments will need to be addressed before the Department of Health (DOH) can approve the document:

**Chapter 1**

- 1) Update the WFI to include: Owner's name and contact information, and a physical street address of the well house.
- 2) The Rural Lands portion of Chapter 8 from the 2011 Kittitas County Comprehensive Plan was not included as indicated.
- 3) Include a Local Government Consistency form completed by Kittitas County Community Development Services.

**Chapter 2**

- 4) You show a constant DSL percentage of four percent. In the long-term, this may not be sufficiently conservative. Please consider a large percentage over the long-term for planning purposes.
- 5) Please show your calculations for peak hourly demand (PHD).
- 6) What are the required or desired flow rates for the sprinkler systems, as based on ISO, Fire District, other?

**Chapter 3**

- 7) Page 3-1, system pressure requirements: Please update the text and your analyses of the requirements for the two conditions: 30 psi for PHD and 20 psi for MDD+FF.

- 8) You describe an analysis of storage, but it does not appear that your system includes any storage. In the Water System Design Manual, Equation 9-3 calculates Standby Storage need with the largest well out of service, while the footnote to Equation 9-3 states that DOH advocates at least 200 gallons per ERU, regardless of any calculated value. Please indicate whether you are providing storage or not and your rationale for not providing (if not provided).

---

- 9) For fire protection sprinkler systems, the planning document text states “system guarantees” a fire flow of 30 gallons per minute. What “system” is making this guarantee: the water system or the sprinkler system manufacturer?
- 10) Fire protection sprinkler system: What happens during a fire, fire trucks arrive and have no hydrants to which to connect?
- 11) DOH is reviewing your Source Approval submittal. We provided comments, via email, on December 14, 2015. At this time, we will continue with that approval process and not review the Susceptibility Assessments presented in this planning document.
- 12) What is the current use of the two sources, if any?
- 13) Regarding the Hydraulic Analysis presented on Pages 2 and 3, please clarify the analyzed scenarios (please see Comment 5, above). Have you analyzed the phasing of installation of distribution piping, in which “looped” piping may not occur until after initial phases and the lack of looping could possibly lead to more pressure losses in dead-end lines?
- 14) If providing storage, did you analyze this in your hydraulic analyses? Storage can provide an additional site for providing flows into the distribution system. What is the physical location of the storage?
- 15) System Capacity: Please evaluate Source Capacity for both Annual capacity (Equation 6-3) and Maximum Day (Equation 6-4), equation references to the Water System Design Manual.
- 16) Worksheet 6-1: Please provide the following: both Annual and Maximum Day Capacity of the sources (please see Comment 13, above), show calculations, and possibly show “phased” capacity limits. For example, it appears that the existing two wells can only support up to 45 connections. Please explain the storage limits, if no storage is provided in the water system.

#### Chapter 4

- 17) Metering Program: What existing meters are there, and how do they relate to the system as it is developed? What parts of this system exist (other than the two sources)?
- 18) For the list of conditions listed on Page 2, the 0.392 acre-feet corresponds to 350 gpd, so this appears to be a Qi water right. For Qa, using 220 gpd, the annual volume would equate to 0.246 acre-feet.
- 19) Irrigation water: Please provide an agreement or water right information to support that this water is available. How are you controlling the individual homes from using the drinking water system for irrigation?
- 20) The Department of Ecology has issued a comment letter regarding this submittal. A copy of the review letter dated December 15, 2015, from the Department of Ecology is enclosed. Please address the issues, if any, contained in the letter in the second draft submittal.



## Chapter 5

- 21) The wellhead protection areas' time of travel radii for S02 is insufficient for the annual volume of water pumped. Reevaluate the protection area and conduct an inventory survey to include the expanded area. It should be noted that roughly half of the development, including the wells, are in a 100-year flood plain. You may want to consider what actions or improvement might be made to limit the impact on the sources should they become submerged in a flood.
- 22) Wellhead Protection Program (WHPP), Identification of the Wellhead Protection Areas, Methods: The reported open interval is, "about forty feet". Which well is this for? It is inconsistent with both of the open intervals reported in the susceptibility assessments. Please revise.
- 23) WHPP: Provide the inventory list of all potential contaminant sources within the 10 year time of travel for both wells.
- 24) WHPP: Include sample letters of the notifications sent to:
  - Owners or operators of sites with potential sources of contamination
  - Regulatory agencies and local governments of the protection areas and the inventory of potential contamination sources
- 25) WHPP: The WHPP must contain documentation of coordination with local emergency incident responders (including police, fire and health departments), along with notification of wellhead protection area boundaries, results of susceptibility assessment, inventory findings, and contingency plan.
- 26) For the submitted Declaration of Covenant, to which well does this apply? Please note, DOH requires both wells to be protected with covenants.

## Chapter 6

- 27) For both listed operators, please provide updated Certificates that are valid for 2016.
- 28) Operation and Maintenance Plan: Please evaluate having the following be "electronic" or automatic (can be electronically collected and archived): source meter readings, pump run times, pump electrical draw and water depth in each well.
- 29) Wells and distribution system: You do not indicate any ongoing, continuous disinfection chlorination, so Table 1 of the Water Quality Program does not need to include TTHM or HAA5 monitoring. In addition, this table underestimates the anticipated monitoring requirements for the system. Stan Hoffman, the Source Monitoring Program Manager, can assist you in determining the proper sample requirements.
- 30) Coliform Monitoring Plan: Please update to include any applicable Groundwater Rule (GWR) or Revised Total Coliform Rule (RTCR) requirements.
- 31) Emergency Response Program: Please include a discussion of water system responses to the following emergencies: fire (large-scale wild fires) and long-term drought.
- 32) For the water rationing note on Page 3, please delete the text referring to "irrigation needs" because you have a separate irrigation system.

- 33) Sanitary Survey Program: No sanitary surveys have been conducted for this system – only a Well Site Inspection.
- 34) Cross-connection Control Program: How are you preventing or precluding cross-connection to the irrigation system?

#### Chapter 7

---

- 35) For Specification 4.4, the air-vac device discharge needs a 24-mesh screen (see EGVU – 9 Detail).
- 36) Please add, if appropriate, a specification for pressure relief devices. These devices need a downward facing discharge, protected with a rough screen.
- 37) Blow-off Assemblies discharges need to be “above grade”, downward facing and capped when not in use (see No. EGVU – 6 Detail).
- 38) Why do you include Section 5 (Hydrants), if you are not providing?
- 39) Are the provided drawings to be reviewed as “Design” drawings?

#### Chapter 8

- 40) Please provide a map showing the locations of the various Capital Improvement Projects.

#### Other

- 41) When DOH is ready to approve the document we will notify you. At that time the governing body will need to officially approve the Water System Plan and send DOH documentation of plan approval by the governing body, such as a copy of the signed meeting minutes or a copy of the signed resolution. When the documentation is received we will send a letter documenting DOH approval.

#### END OF COMMENTS

The department’s review of your water system plan does not confer or guarantee any right to a specific quantity of water. Our review is based on your representation of available water quantity. If the Washington Department of Ecology, a local planning agency, or other authority responsible for determining water rights and water system adequacy determines that you have use of less water than you represent, the number of approved connections may be reduced commensurate with the actual amount of water and your legal right to use it.

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 **two copies** of the revised WSP **on or before May 16, 2016**. In order to expedite the review of your revised submittal, please complete the enclosed DOH Comment Response Form summarizing how each of the above comments was addressed in the revised WSP and where each response is located (i.e., page numbers, Appendices, etc.)



Clint Perry  
February 16, 2016  
Page 5

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 for **\$1,206.00** 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 to: DOH, Revenue Section, P.O. Box 1099, Olympia, WA 98507-1099.

Thank you again for submitting your draft Water System Plan for our review. If you have any comments or questions concerning our review please contact either of us at (509) 329-2116 or (509) 329-2122, respectively.

Sincerely,



Russell Mau, PhD, PE  
Regional Engineer  
Office of Drinking Water  
Division of Environmental Public Health



Benjamin A. Serr  
Regional Planner  
Office of Drinking Water  
Division of Environmental Public Health

Enclosures: Invoice  
Comment Response Form  
Department of Ecology correspondence

cc: Kittitas County Public Health Department  
Kittitas County Community Development Services  
Nathan Nofziger, PE, Western Pacific Engineering and Survey  
Ying Fu, Department of Ecology, Eastern Regional Office  
George Simon, DOH Regional Compliance Program Director  
Alyssa Gersdorf, DOH WFI Coordinator

