



STATE OF WASHINGTON
DEPARTMENT OF HEALTH
SOUTHWEST DRINKING WATER REGIONAL OPERATIONS
PO Box 47823, Olympia, Washington 98504-7823
TDD Relay 1-800-833-6388

October 20, 2009

Stephanie Ray
City of Yelm
105 Yelm Avenue West
Yelm, Washington 98597

Subject: City of Yelm, ID #99350, Thurston County; Water System Plan, ODW Project #09-0602

Dear Miss. Ray:

Thank you for providing the Water System Plan (WSP) for the City of Yelm (City) received by the Office of Drinking Water (ODW) on June 4, 2009. Following are two comments regarding the plan and a list of specific comments that are organized by sections of the plan. Once these comments are addressed, we can complete our review.

- The WSP should demonstrate that the current system has adequate source, storage, and distribution capacity to meet projected demands during the next six-year planning period following ODW approval. If there is not adequate capacity for the six-year planning period, then ODW will not grant an unspecified approval. The approval will be based on the existing capacity and limiting factor for growth.
- The Thurston County Conservancy Board approval for the transfer of the McMonigle water right was denied by the Department of Ecology (Ecology). This denial means the McMonigle water right is not available to the City as they expected when preparing the WSP. We understand that you are currently working with Ecology to resolve this and other issues identified in Ecology's August 11, 2009, letter. Since the McMonigle water right was counted toward the current total water right portfolio, the information in the WSP prepared based on this assumption must be corrected. Following are several specific comments requesting revisions related to the McMonigle water right. However, the plan should be consistent with this change and edits should be made accordingly.

Section 1 – Description of Water System

1. Page.1-13. According to the projections presented in Table 1-4, the City is currently over connected as of the 2009 projections. It is our understanding the 2009 numbers are the first projected numbers and are actually higher than the current number of connections served. **Please provide current numbers so the table reflects accurate data.**

Section 2 – Basic Planning Data

1. The definition of an Average Day Demand (ADD) states the ADD is used to size sources and reservoirs. This is not accurate because the MDD and PHD are used for sizing sources and reservoirs. **Please revise.**
2. Page 2-7 and Figure 2-2. **Please clarify whether the single-family residential population comprises 62 percent or 69 percent of the water consumption.**
3. Page 2-9. **Please include the reasoning for deciding to use a three-year average for calculating the system ERU.**
4. Page 2-12. **Please explain the reasoning for using one year of data (2007) rather than more years for estimating the commercial water consumption per 1,000 square foot of commercial development.**

Section 3 – System Analysis

1. Since the McMonigle water right (G2-21613) cannot be used, **please revise this section based on secured water rights already held by the city.**
2. The capacity analysis includes sources not yet constructed. **Please clarify how the City will manage future growth if additional water rights and sources of supply are not secured within the six-year planning period.**
3. Table 3-1. System Capacity Analysis Criteria. In column 4, row 2, the note states that the MDD used is the highest 24-hour use in 2007. **However, Table 2-22 shows the MDD used is based on a peaking factor of 2.41. Please clarify the methodology for determining MDD in Table 3-1.**
4. Page 3-8. There appears to be a discrepancy between the Golf Course Well's anticipated pumping capacity (500 gpm) and the legal Qi capacity (460 gpm). **Please clarify the legal production capacity for this well.**
5. Page 3-16. Schedule for Well Development and Water Rights Actions. During one of our recent WSP meetings, you informed us of problems with pursuing the new Golf Course Well. Based on our discussion, you estimated it would be about a year before this well could be brought online. **The Well Development table should be updated to reflect the current expectations for having the Golf Course Well brought online.** In addition, with the delay in bringing the Golf Course Well online it appears that the projected MDD for 2009 (1260 gpm) will exceed the available source capacity (1200 gpm). This is an indication the current source capacity is a limiting factor on growth and the water system has currently reached its limit on available capacity.
6. Page 3-16. **Please include the target chlorine residuals for CT6 and describe the CT6 compliance locations for Wells 1A and 2.**
7. Tables 3.7 and 3.8. The footnotes in these tables indicate the equalizing, standby, and fire flow storage components are added together to get the total required storage. **The footnotes should state the operational, equalizing, and standby storage are added to determine the total storage required. Please revise.**

8. Page 3-38, Table 3-9. Projected Demands for Modeling. It appears that demand has been applied evenly to each node, regardless of considerations of variations on demand from high users. **Please explain why the demands were not adjusted as nodes that might have higher usage, such as high commercial users. Is the difference in these demands negligible for how the overall system modeling?**

Section 4 – Water Resource Analysis and Water Use Efficiency (WUE)

1. Water Use Efficiency. Page 4-1. The minimum required measures must be based on demand side savings. Supply-side measures, such as leak detection and water audits, do not count toward required measures because these activities help you understand and reduce water loss (already required). The additional measures for irrigation users count toward your required measures. Measures must either be evaluated for cost-effectiveness or selected for implementation along with a schedule. The estimated schedule for your reclaimed water projects was included. **Please include your cost-effectiveness evaluation for the other measures or if measures will be implemented, please include the anticipated schedule.**
2. Page 4-3, Table 4-3. Please note the term “unaccounted for water” does not have a standard definition and is no longer used. The current terminology is “distribution system leakage (DSL) and authorized consumption”. **Please revise.**
3. Page 4-9. **Please update the Water Right Self Assessment Form for existing, 6 and 20 year demands and include only those water rights currently held by the City.**
4. Tables 4-5 and 4-6. Anticipated Water Rights Capacity. **Please update these tables to reflect the water rights changes due to the denial of the McMonigle water right transfer.**
5. Page 4-22. In addition to the scenarios presented in this section, please include water rights interruption as a scenario that could trigger a water shortage. **Please include a plan for handling water shortage due to water rights interruption.**

Section 5 – Source Water Protection

1. Page 5-4. The contingency plan should be updated as part of the WSP update rather than being done at a future time. **Please update the contingency plan and include a copy as an appendix.**
2. Page 5-6 states a spill response plan will be developed and integrated into the Emergency Disaster Plan with the development of the Southwest wellfield. A Spill Response Plan must be implemented as part of an approved WSP. **Please submit a Spill Response Plan that addresses the City’s current water sources.**

Section 6 – Operation and Maintenance

1. Page 6-2, Figure 6-1. The correct phone number for the Office of Drinking Water is (360) 236-3030. **Please revise.**
2. Page 6-16, Emergency Response Plan (ERP). WAC 246-290-415 (2) (b) requires public water systems to have an ERP as part of their approved WSP. The ERP presented in the WSP is lacking significant information (please refer to the ERP Guide for Public Drinking Water Systems found on our website at

www.doh.wa.gov/ehp/dw/Programs/water_sys_plan.htm). Although the City intends to prepare an ERP with the development of the southwest Yelm wellfield, a current ERP is required to address potential emergencies in the existing system. **Please submit an ERP that addresses potential emergencies for the existing water system.**

3. Page 6-18. **Please describe the status for implementing the various elements of the Cross-Connection Control Program.** If there are aspects of the program that are not fully being implemented, please outline the schedule for implementation.

Section 7 – Distribution Facilities Design and Construction Standards

1. Page 7-1 and 7-4. Based on the standards that are currently used by the City, you will only qualify for the distribution exception under WAC 246-290-125 (2). In order to qualify for the exception for distribution-related projects under WAC 246-290-125(3), the City would need to submit more information on their standards (essentially submitting the projects for pre-approval) to get the distribution-related exception. **Please revise these pages to reflect the distribution exception is the only submittal exemption you qualify for.**

Section 8 – Improvement Program

1. Capital Improvement Plan (CIP). Section 8.4 lists O&M and Non-Facility Improvements; however, these improvements are not included in the 6 and 20 year CIP. **Please clarify where these projects are accounted for.**

Section 9 – Financial Program

1. Page 9-1 states the financial plan was developed prior to the developer not being able to meet its financial commitments to fund the Golf Course Well. Additionally, the City stated it would now be necessary to take the project over. However, this would delay all CIP projects by one year. **Please revise the financial program to include the costs associated with the City taking over the Golf Course Well project and the CIP implementation schedule.**
2. Due to the denial of the McMonigle water right transfer, it appears the City is at their water right capacity as of 2009. Page 9-4 states that 50 percent of the system development charges will be dedicated to capital needs and 50 percent will go to pay for debt service. Furthermore, 15 percent of SDC revenue will apply to the 20-year capital funding strategy. **Given the uncertainty of the City's ability to provide new connections, please explain how this will affect the capital funding strategy and what will be done to address this issue.**

Section 10 – Miscellaneous Documents

1. **Before ODW can approve the plan, the final WSP submittal must be signed and stamped by a licensed, professional engineer.**
2. **Prior to ODW approval of the WSP, the governing body or elected board must approve the WSP [WAC 246-290-100 (8) (b)]. Please include documentation showing the WSP has been adopted.**

3. **Please provide any comments received from adjacent water utilities concerning the draft WSP along with your response to those comments.**

Appendix 1

1. 1-B. Yelm Municipal Code Ch. 13.04.120 defines an ERU as an equivalent flow of 900 cu ft or less per month. This is an ADD of 221 gpd/ERU, which is higher than the ADD calculated for this water system plan. **Is this number going to be revised? How does this code effect allocation of water to customers?**
2. 1-D. Yelm Comprehensive Plan Chapter V – Public Facilities and Utilities. Under the Levels of Service section of this document (p. V-3), it states that for planning and concurrency purposes, the City requires 300 gallons per day, per connection. It also states that 30 percent of the City's existing water rights are set aside for industrial development. These statements are inconsistent with what is presented in the main body of the WSP. **Please clarify what these numbers represent and how this discrepancy will be resolved.**

Appendix 5 – Wellhead Protection Plan

1. The Wellhead Protection Plan (WPP) was last approved in 2001. WAC 246-290-135 (3) (c) (iii) requires an inventory of all potential and known sources of ground water contamination (past and present) within the wellhead protection area boundaries that may pose a threat to the water bearing zone utilized by the well, spring, or wellfield. The inventory findings should be prioritized and grouped by time of travel zones. The inventory of potential contaminants is required to be updated every two years. **Please provide this updated inventory list and discuss any improvements and changes to the WPP that have been made and you anticipate making.**
2. Appendix 5-C. The sample notification letters reference a Taylor Gulch Water System. **Please provide documentation showing when the City notified the appropriate regulatory agencies, local governments, and owner/operators of the identified known and potential contaminate sources of the wellhead protection area boundaries, including inventory findings and contingency plan conclusions.**

Appendix 6-D – Coliform Monitoring Plan

1. Page 2. The number of required routine samples to be taken each month is six not two as indicated the submitted Coliform plan. **Please revise.** Additionally, the required six samples should be taken throughout the month.
2. Page 3. Repeat and follow-up sampling. Three repeat samples are required for each routine sample with unsatisfactory results. The following month, return to the required six samples. **Please revise to include this information.**
3. Page 3. Please note that the upcoming Groundwater rule (December 2009) will require you to collect repeat samples from the sources in the affected area. If a routine coliform sample is unsatisfactory, all sources must be sampled, in addition to, the coliform repeat samples. **Please include this information in the revised Coliform Monitoring Plan and make sure all sources have sample taps for source samples.**

4. The map is difficult to read. **Please provide a map clearly showing routine and repeat sample sites, well location, storage, and pressure zones.**
5. If a routine sample or repeat sample is *E-coli* positive, please contact us or call our after-hours emergency line (1-877-481-4901) immediately. During office hours, please contact our Coliform Program Manager Sandy Brentlinger at (360) 236-3044. We will work with you on the needed number of repeat and extra samples, locations, and health advisory procedures. **Please incorporate this procedure into your Coliform Monitoring Program.**

Appendix 6-H – Cross Connection Control Plan

1. The Cross Connection Control Plan is presented as a “2001 draft” plan. **Please provide a finalized Cross Connection Control Plan.**

RECOMMENDATIONS

1. Page 1-23. The retail service area includes the future Master Planned Community (MPC) located inside the city limits. Your service area policies specify the need for developers to have their own water rights for property outside of city limits or for those properties inside the retail service area that have yet to be annexed. The City may want to be more specific with their service area policies that address how service will be provided (terms and conditions) within the retail service area and inside city limits.
2. Page 3-11. Source Deficiencies and Proposed Improvements. The second paragraph of this section describes using a conservative assumption for meeting MDD; it is assumed one well is kept out of service. However, in the case of the two downtown wells (the City’s total source capacity) there are physical limitations that prevent using both wells at once. We think it would be more accurate to clarify that the current source limitations only allow considering one well for meeting the MDD condition.
3. Appendix 6-H. Update the Backflow Assembly Tester contact list (last updated 2001) for the Cross Connection Control Plan. The list can be found on the Washington Certification Services website at www.instruction.greenriver.edu/wacertservices/bat/bat_publiclist.asp.

WATER RIGHTS

A copy of this WSP was sent to the Department of Ecology on June 8, 2009. According to Ecology, it appears your water rights are not consistent with their records. Please remember that ODW’s approval of your WSP will not provide any guarantee and should not be considered to provide any guarantee concerning legal use of water or subsequent water rights decisions by Ecology. Depending on Ecology’s future actions on your water rights, additional planning or other submittals may be required. Please work with Ecology to resolve any water rights questions.

We ask that you submit three copies of the revised WSP before January 20, 2010. In order to expedite the review of your revised submittal, please provide a summary on how these comments were addressed and where each response is located (page numbers, appendices, etc.).

Stephanie Ray
October 20, 2009
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Regulations establishing a schedule of fees for review of planning, engineering, and construction documents were adopted August 3, 2007, (WAC 246-290-990). An itemized invoice for \$3,705 is enclosed.

If you have any questions, please contact Darin Klein at (360) 236-3038 or Regina Grimm (360) 236-3035.

Sincerely,



Darin Klein
Office of Drinking Water, Regional Planner



Regina Grimm, P.E.
Office of Drinking Water, Regional Engineer

Enclosures

cc: Shelly Badger, City of Yelm
Jeff Morgan, Brown and Caldwell
Thurston County Health
Amy Nielsen, Department of Ecology
Bonnie Waybright, ODW