



**DEPARTMENT OF PUBLIC WORKS, OPERATIONS DIVISION**

2221 Pacific Street Bellingham, WA 98229

Peg Wendling, Public Works Operations, Plants Section

Telephone (360) 778-7872 ♦ pwendling@cob.org

To: Theresa Phillips, Washington State Department of Health, theresa.phillips@doh.wa.gov  
RE: Comments on proposed rule changes to 246-290 WAC, Group A Public Water Supplies  
Date: 09/23/16  
From: Peg Wendling, City of Bellingham Department of Public Works

Thank you for the opportunity to comment on the draft updates to WAC 246-290. Our comments are in two primary areas: 1) the definition of disinfectant residual concentration, and 2) on-line turbidity measurement.

1) Detectable Disinfectant Residual

We question whether the full potential health ramifications have been studied of the determination to add the definition found in:

**WAC 246-290-010 (80) of** *"Detectable residual disinfectant concentration means 0.2 mg/L free chlorine, total chlorine, combined chlorine, or chlorine dioxide."*

Coupled with:

**WAC 246-290-451 (7) (b)** Disinfection of drinking water.

*"Maintain a detectable residual disinfectant concentration in all active parts of the distribution system, unless the department approves a written request to use a lower value. At a minimum, the request to use a lower value must identify the instrument used to measure the residual disinfectant concentration and include the manufacturer's documentation of the instrument's accuracy to measure the lower value."*

The City of Bellingham maintains an average annual distribution system free chlorine residual of 0.40 mg/L. Over the course of a year (2015 data) we have found that 18.5% of our routine monitoring sites have a free chlorine residual of < 0.20 mg/L. In the peak disinfection by-product formation season, the number of sites where we find free chlorine residuals under the 0.2 mg/L level increase to nearly 30%. The City of Bellingham has observed an increasing trend of THM formation during the peak (late summer) sampling quarter and to require our utility to increase residual disinfectant levels to meet this new definition of "detectable" when no need appears to exist to do so, will simply result in the increased risk associated with exposing our service population to much higher levels of disinfection by-product levels unnecessarily.

As a matter of fact, since 2011, the City of Bellingham has only had two total coliform positive samples in its routine distribution system monitoring program, and at the time of the sampling, these sites had a free chlorine residual level of 0.28 mg/L (2012, Underhill station) and 0.40 mg/L (2015, Cornwall and Pine station). While disinfectant residual is a valuable tool to help assess the microbial integrity of our distribution systems, it does serve as a surrogate for microbial inactivation. This being the case, we

make a habit of running a heterotrophic plate count (via R2A media) at all routine sites with a free chlorine residual at the detection level of our field instrument to get an actual assessment of the microbial viability at all low-chlorine sites, and respond accordingly based on actual bacterial counts.

Finally, the results from our two most recent (2016) method detection level studies on the field colorimeter used for disinfectant residual determinations have shown that we are able to accurately measure free chlorine residual with the Hach DR850 (SM 4500-Cl G) down to a detection level of 0.01 and 0.02 mg/L, with the calculated standard deviation of 0.0038 and 0.0053 respectively. We do hope that the Department of Health makes full use of the provision to: *approve a written request to use a lower [disinfectant residual] value. At a minimum, the request to use a lower value must identify the instrument used to measure the residual disinfectant concentration and include the manufacturer's documentation of the instrument's accuracy to measure the lower value.*

While we understand the Department's concern about analytical precision in field assessments of disinfectant residual, we do request that the Department understand there are utilities in Washington that will do the work to produce high quality data in the interest of protecting its citizens from disinfection byproducts, and not require us to utilize a disinfectant residual value that is an order of magnitude greater than what we are able to detect, to estimate the sufficiency of microbial deactivation.

## 2) On-line Turbidity Measurement

Our next comment pertains to the portion of draft code found at **WAC 246-290-638 (4)**

In section **WAC 246-290-638 (4)(b)(i)** the designated turbidity technology listed for determining compliance with the code, limits utilities from utilizing sound and proven technology that is available for use which offer equal or better precision and accuracy. While we do understand the desire to have highly accurate turbidity monitoring equipment, consideration should be made for newer technologies that are and are yet to become available.

In section **WAC 246-290-638 (4)(c)(i)** utilities are told to

*(c) The purveyor shall validate continuous turbidity measurements for accuracy as follows:*

*(i) **Calibrate** turbidity equipment based upon a primary standard in the expected range of measurements; and*

*(ii) **Verify** continuous turbidimeter performance on a weekly basis, not on consecutive days, with grab sample measurements made using a properly calibrated bench model turbidimeter.*

We believe the section of code in italics above directly contradicts **WAC 246-290-638 (4)(b)(ii)** which states that the turbidimeter in use needs to be properly operated, calibrated, and maintained at all times in accordance with the manufacturer's recommendations.

Specific to Section **WAC 246-290-638 (4)(c)(i)**

For those of us that operate routinely well under the 0.1 NTU level, please realize that manufacturer's recommendations are very clear against using low-level standards for **calibration**. We believe the word that should be used to avoid confusion in this instance is "**Verify**". Because the relationship between turbidity and nephelometric light scatter is highly linear between 0 and 40 NTU turbidimeter manufacturers recommend the use of higher-concentration primary calibration standards (such as 20 NTU) to produce the highest possible accuracy, even when the expected measurements are < 1 NTU.

Due to the propensity in which error is magnified by the use of low-level standards calibrating with a standard in the expected range of measurement will work to introduce unnecessary error in the measurement. Even the smallest error in the expected range of our instrument (in our case 0.03 NTU) has a huge impact when applied over the linear NTU range. The reported accuracy of Hach 1720e is 0.015 - just the instrument measurement range can add error. Applying that to a 0.03 NTU standard can create a 50% error that gets magnified the higher you go up the NTU scale. If the same accuracy "error" is applied to a 20 NTU primary calibration standard, then only a 0.075% error is created which dampens any calibration error significantly down to the measurement range.

In example, if preparing a 1.0 NTU standard through dilution, and the water used has an NTU of 0.2 (all dilution water has background NTU), the prepared standard would actually be 1.2 NTU which is a 20% error. Error can be introduced into all standards, but if "**Calibrate**...in the expected range of measurement" in low-level standards that error gets magnified. It is our belief the intent of this section is to **verify** in the expected range of measurement and the wording should reflect this. If this verification indicates the online instrument is off by a predetermined amount, calibration should then occur with a primary standard at the appropriate concentration.

For Section **WAC 246-290-638 (4)(c)(ii)**

As a measure of the ability to scatter light, turbidity is a qualitative measurement and not an inherent physical property of water and as such, is highly dependent on the detection system used to measure the ability of water to absorb or scatter light. By verifying turbidimeter performance by utilizing a separate bench meter with different optics and light properties/intensity problems will occur, particularly with utilities like Bellingham with very low turbidities. If the intent is to get accurate or even precise data from comparing two different turbidity instruments, the Department is expecting more from the measurement and technology than can be reasonably expected in low-level turbidity water. If the intent is to verify that the benchtop turbidimeter is in good working order and able to be called into action in the event of an on-line turbidimeter failure, we suggest the alternative of demonstrating a robust program to verify the accuracy and precision of the benchtop turbidimeter.

Agreement about the problems inherent in comparing the data from different turbidimeters include:

After disparate results were found (0.1-0.3 NTU) in the comparison of six benchtop and four portable turbidimeters in a highly controlled setting, researchers concluded: "The results suggest that low-level turbidity readings made with different benchtop and portable instruments might agree more closely if improvements were made to the instrument design standards, possibly through the voluntary standards system. It is possible that the significant differences observed in the study between benchtop and portable instruments of one group and those of the other group are coupled in some way to the different electronic processes used in zeroing and calibrating the instruments".

Letterman, R.D., Johnson, C.E., and Viswanathan, S., Low-level Turbidity Measurements: A Comparison of Instruments. AWWA 96:8, August 2004.

"Because different instruments typically read the turbidity of a sample differently, operators often find it difficult to accurately calibrate one instrument against a reading from another instrument. Operators sometimes generate a significant error without being aware of the error when they don't know about instrumental interferences (e.g., stray light, particularly from bubbles) when attempting to match measurement values across different optical systems."

Sadar, Michael J, Turbidity Revealed, Appearing in Opflow, Nov. 2007.

**"EPA does not recommend calibrating on-line instruments by comparison with a bench-top turbidimeter.** It has been determined that this procedure is likely to introduce unacceptable levels of error into the calibration." (bold as it appears in text)

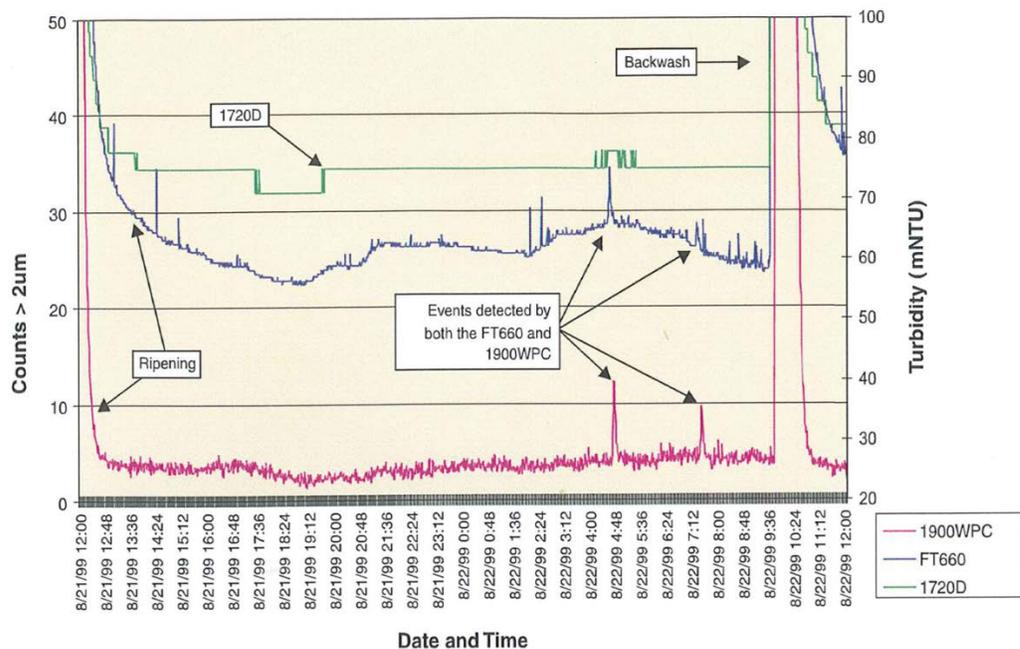
EPA Guidance Manual, Turbidity Methods and Measurement Turbidity Provisions, April 1999

While it is understood the Department is not suggesting utilities calibrate their on-line turbidimeters with a benchtop unit, the Sadar article and EPA Guidance cited above are included as examples of the recognition of the inherent unacceptable level of error that can be introduced by comparing the readings between an on-line and benchtop turbidimeter.

"Although comparisons among [turbidity] instruments with differing designs are often robust, they can also vary according to the character of the sample's matrix and particulates. Results from an interagency work-shop held in 2002 demonstrated that turbidity data from different sources and instrumentation can be highly variable and are often in disagreement with each other, even when calibration methods are similar (Gray and Glysson, 2003). In effect, instruments with different detector geometries and light sources often do not make equivalent measurements."

USGS Office of Water Quality, Technical Memorandum 2004.03, September 24, 2004.

Even manufacturer (Hach) data in "perfect" conditions show variability in nephelometric technology. The two nephelometers (blue and green lines) are tracking the same water and are consistently 20 mNTU (0.02 NTU) different.



The new ANSI/AWWA specification for online turbidimeter operation includes the recommendation that verification be performed per the specific procedures tailored to the manufacturer's instruments. In respect to verifying with comparison to another turbidimeter it states (5.1.3.1.3): "Because online and benchtop instruments are usually different designs, exact matching of turbidity values is typically not possible. When performing verification through comparison, it is important to understand the relative measurement errors on both the benchtop and online turbidimeters. Many online turbidimeters do not

do not have a glass sample cell, resulting in lower stray light errors. Most benchtop or portable turbidimeters do have glass sample cells which can cause positive bias (error) on the laboratory instruments.

ANSI/AWWA C671-16, Online Turbidimeter Operation and Maintenance, Sept. 1, 2016.

If the practice of comparing the on-line analyzers with the bench turbidimeter did not consume such a large portion of person-hours to complete weekly, then generating this information would not be such an issue. As it is, weekly performance of this task which generates no data found to be useful to optimizing the operation of the instrument used for compliance reporting, takes away from other duties that legitimately work to optimize the accuracy and precision of online and bench instruments.

For these reasons, the City of Bellingham would like to respectfully suggest an alternative methodology to the weekly verification of on-line turbidimeter performance using a separate benchtop turbidimeter. Currently Bellingham utilizes a weekly procedure to document and verify instrument performance which is recommended by the manufacturer. We challenge the accuracy and precision of each on line turbidimeter utilizing a 1.0 NTU ICE-PIC verification module that is sent back to Hach on an annual basis for recertification. Each analyzer is benchmarked to itself and tracked. In this way, we are able to verify the reading of the optical system on each unit and not introduce the inherent variability expected when trying to compare different optical systems. This practice gives us confidence that we are able to confirm the accuracy and the performance of each online instrument and to evaluate this performance through time against a known secondary standard. Possession on this data is valuable and gives us insight as to any declining operation of an online analyzer. With this data we are able to prioritize preventative maintenance and operations such as bulb replacement at greater than yearly intervals, and primary calibrations at greater than quarterly intervals, to ensure each on-line instrument is performing optimally. This practice meets the manufacturer's recommendations as specified in WAC 246-290-638 (4)(b)(ii). No benchtop turbidimeter comparison allows this type of insight in the low-turbidity levels we measure.

The City of Bellingham's benchtop turbidimeter is routinely serviced. It is calibrated with primary standards on a quarterly basis. In addition, the benchtop reading is verified with secondary standards with each use. While the benchtop turbidimeter may be called into use in the event of a failure of an on-line turbidimeter, it is more likely that a spare on-line turbidimeter and/or logger, which are maintained on site, would be quickly swapped with the malfunctioning unit to allow for the continuous monitoring of the turbidity of the raw, individual filter, or combine filter effluent turbidity to guide operations at our treatment plant.



3628 South 35th Street  
Tacoma, Washington 98409-3192

TACOMA PUBLIC UTILITIES

September 28, 2016

Theresa Phillips  
Department of Health  
PO Box 47820  
Olympia, WA 98504-7820

RE: Group A Public Water Supplies – Chapter 246-290 Proposed Rule Changes

Dear Ms. Phillips:

We've reviewed the proposed Group A rule changes and offer the following comments.

1. Water System Planning

a. Timeframes

We support the proposed changes to revise the timeframe for water system plan updates from six years to ten years with the option to choose a shorter timeframe, and to revise the planning elements and forecasting requirements to align with the new timeframe for water system plan approvals. We also support the revisions to the triggers for expanding systems to submit a water system plan, and the clarification of the conditions and options for water system plan amendments. Aligning planning element timeframes and extending the update cycle from six to ten years will create efficiency for Tacoma Water's planning efforts.

b. Local Government Consistency Determination Requirements

We have concern that the proposed language can be interpreted to require obtaining consistency determinations from areas where we provide wholesale water, thereby duplicating local government consistency determination efforts. Per the revised service area definition, the service area **may** include areas where wholesale water service is provided. The term "may" can be interpreted to include wholesale service area covered by another municipal water service provider with responsibility for meeting the requirements of WAC 246-290-106 (duty to provide service) and obtaining local government consistency determinations. Per RCW 43.20.260, municipal water suppliers have a duty to provide service to all new connections within their **retail** service area if the system: 1. can provide the new service in a timely and reasonable manner; 2. has sufficient water rights; 3. has sufficient physical capacity; and 4. receives a service request for a use that is consistent with local government planning under the Growth Management Act. Thus, the requirement for consistency with local plans and regulations in WAC 246-290-108 is relevant only to "applicable" service areas as stated in the current rule.

We believe that duplication isn't intended, and that the language be clarified to that effect.

2. Creation of a new "Reporting Violation" in WAC 246-290-451 & WAC 246-290-453

We are aware of the long-standing requirement to submit monthly reports to the Department by the tenth day of the month following the month of interest. 40 CFR 141.31, 141.563 & 141.570 include specific

Ms. Theresa Phillips  
September 28, 2016  
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requirements consistent with this. We are not aware of any language in the Code of Federal Regulations that establishes a "reporting violation" for submitting this information a day late, and the Department's characterization of the addition of WAC 246-290-451(8)(c) and WAC 246-290-453(5) in the provided "Summary of Proposed Rule Changes" as "clarifying" is a significant understatement. The new language adds a class of violation to public water systems for failing to meet a deadline (not failing to protect public health) that exceeds the underlying federal requirements, and potentially creates additional burden and cost for public notice, while having no relevance to actual system performance.

Tacoma Water always strives to submit the monthly report by the tenth day of the following month, but we have been late on occasion. Our system is complex, we collect an enormous amount of data on it, some of which comes from external laboratories, and the assembly of that information into a single package takes time. The recent change to fluoride reporting requirements exacerbated that because it requires we manipulate the data into yet another format. If one of the external parties is late to report, or any one in the process is away on vacation, or we have a holiday in the mix, we can slip a few days. This in no way indicates that the system wasn't monitored, tested or carefully operated at all times, and we do not believe that this issue warrants being called out as a "violation". We understand that the Department may have individual issues with systems that fail to report at all, and seeks a compliance tool to address those cases.

We recommend a deeper assessment of whether the non-compliance occurrence rate really justifies subjecting every water system in the State that treats its water to the risk of violation implicit in this new requirement. If the determination is yes, then we recommend an approach that looks at a longer term pattern (say six continuous months of failing to report by the 10<sup>th</sup> day) before assigning a violation.

Thank you for your consideration of this feedback. Please contact Heather Pennington, 253-502-8199, should you have any questions or wish to discuss these topics further.

Sincerely,



Pod: Linda A. McCrea  
Water Superintendent



September 27, 2016

Sent via Email and U.S. Mail

Theresa Phillips  
Rules Project Manager  
Washington State Department of Health  
PO Box 47820  
Olympia, Washington 98504-7820

**RE: City of Bellevue's Comments to Proposed Rule Changes - Group A Water Providers Chapter 246-290 WAC**

Dear Ms. Phillips:

The City of Bellevue (City) has reviewed proposed revisions by the Washington State Department of Health (Department) to the rule for Group A Public Water Supplies, Chapter 246-290 WAC.

As part of the public review process, the City has the following comments:

General Comments

The Department of Ecology has cited the lack of groundwater/well information in previous water system plans as one reason to question if the City still holds rights to the Water District #68 wells. Bellevue's position is that the information was never required by DOH or WAC, so its omission should not be penalized. The new WAC language would explicitly require this information to be reported, implying that it was not in the past (consistent with Bellevue's position). These comments make note of this. Specifically:

- WAC 246-290-100(4): The amended language in WAC 246-290-100(4) expands the existing scope of a Water System Plan. The existing language only requires a Water Resource Analysis (including Water Rights Self Assessment or WRSA per subsection f.iv) "In order to demonstrate system capacity", while the new language requires a WRSA under all circumstances. Bellevue was not previously required to provide a WRSA, because inter-local agreements (water purchased from Seattle) alone were sufficient to demonstrate sufficient supply capacity. The new, broader requirements of a Water System Plan should not be enforced retroactively by other state agencies as a means to demonstrate continued water rights for other supplies, such as emergency wells.

- 246-290-131: This is a new section being added, and was not previously included in the WAC. Its new requirement to list emergency sources and supplies in the emergency response program should not be enforced retroactively by other state agencies as a means to demonstrate continued water rights.

The City requests that the Department specifically state that the new or modified language shall not be enforced retroactively by other state agencies as a means to demonstrate continued water rights.

### Section-Specific Comments

#### **WAC 246-290-451(5) – Disinfection of Drinking Water**

*“If the department determines that any of the following conditions apply, the purveyor shall provide continuous disinfection of the distribution system and meet the requirements under subsection (7) of this section: (a) E. coli MCL violations; ...”*

The City interprets item (a) to mean that continuous disinfection will not be required of a consecutive system currently in compliance, however the Department may ultimately require temporary or permanent continuous disinfection in response to repeated MCL violations, particularly if the consecutive system does not respond to those violations in a manner consistent with the other requirements of this section (e.g. completing Level 1/Level 2 assessments, completing corrective actions, etc.).

#### **WAC 246-290-638(5) – Analytical Requirements**

*“Purveyors shall verify instruments used for continuous monitoring of free and total chlorine residual at least every five days with a grab sample measurement or with a protocol approved by the department as required under 40 C.F.R. 141.74(a)(2).”*  
(Underlines added for emphasis.)

Depending on how the term “protocol” is interpreted, the proposed language in this section appears to be inconsistent with the cited language used in 40 CFR 141.74(a)(2). The federal language states, *“Instruments used for continuous monitoring must be calibrated with a grab sample measurement at least every five days, or with a protocol approved by the State.”* Thus, the federal language implies that the five-day requirement **and** the measurement method are both part of the “protocol” that may be altered so long as the State approves.

However, in the Department’s proposed language, the five day period has been moved to earlier in the sentence. The result is that the five-day requirement appears to be outside of the “protocol” that can be negotiated, leaving only the test method as a point of negotiation inside the protocol.

We recommend the Department follow the format of the federal language. We suggest the sentence be modified as follows to ensure that both the calibration period and the calibration method be left open for negotiation:

*“Purveyors shall verify instruments used for continuous monitoring of free and total chlorine residual ~~at least every five days~~ with a grab sample measurement **at least every five days** or with a protocol approved by the department as required under 40 C.F.R. 141.74(a)(2).”*

If you have any questions regarding these comments, please contact Todd Dahlberg at [tdahlberg@bellevuewa.gov](mailto:tdahlberg@bellevuewa.gov) or (425) 452-2030.

Sincerely,



Joe Harbour  
Operations and Maintenance Assistant Director  
Bellevue Utilities Department

C: File

Sept 13, 2016

Teresa Philips  
Department of Health



Sent Via Email

Dear Ms. Philips,

Eastound Water Users Association, a Group A water system (DOH #221740) serving on Orcas Inland in San Juan County would like to submit the following comments on proposed changes to WAC 246-290.

**WAC 246-290-100 Subsection (4)** Development of water system capacity is a slow process, involving multiple governmental entities. Water system should be planning beyond a 20 year horizon, and the revised language “FOR A PERIOD OF AT LEAST 20 YEARS INTO THE FUTURE, is prudent.

**WAC 246-290-100 Subsection (9)** Water system planning is expensive, and time intensive. A good water system plan can have a “shelf life” of longer than 6 years. Eastsound Water supports the proposed changes that extend the water system approval from 6 years to 10 years. Extending the approval window of our water system plan will free up funds to continue needed water system upgrades.

**WAC 245-290-108 Subsection (1a and 2)** Consistency with Local Plans and Regulations. Eastsound Water is a private, member-owned Association that serves the unincorporated Eastsound Urban Growth Area, in San Juan County. Eastsound Water has found that past growth projects adopted by San Juan County have had little correlation with the actual growth pattern experienced in our service area. Eastsound Water is concerned that our existing water system members could be exposed to substantial cost to develop additional water system capacity for “projected growth” that is unlikely to ever occur, or occurs at a much slower rate than projected. In rural counties such as San Juan, GMA compliance efforts has been problematic, expensive and inaccurate. To comply with GMA San Juan County “planned” for 50% of the growth on Orcas Island to occur in the Eastsound UGA. Eastsound Water mapped 6 years of residential building permits between 2006-2012, and found that less than 14% of the new development on Orcas Island occurred in the Eastsound UGA. Eastsound Water believes it is in the best interests of our members to utilize our internal data on how the water system is growing and the lots available for future development to project future water system demand. (EWUA currently serves 90% of the developable lots in our service area) Eastsound Water does not wish to be compelled to build capacity that is unlikely to be needed simply aid in County GMA compliance.

**WAC 246-290-638.** The proposed change to allow DOH engineers to approve the use of new and evolving technology, such as laser tracking, is in the best interests of water systems and public health. New technologies are coming into the waterworks field at an ever increasing rate. The WAC should not limit DOH’s ability to review and approve the use of new technologies. EWUA supports the changes that allow safe and efficient adoption of new water quality monitoring technology possible.

**In the Spirit of Service,**

**Paul Kamin**

General Manager.

pkamin@rockisland.com

**Eastsound Water Users Association**

PO Box 115                      286 Enchanted Forest Rd

Eastsound WA 98245                      360 376 2127

www.eastsoundwater.org                      fax 888 523 2470



## **PUBLIC WORKS**

September 26<sup>th</sup>, 2016

Mark Weeks  
Chief Water Treatment Plant Operator  
City of Everett, Water Filtration Plant  
3200 Cedar Street  
Everett, WA 98201

Theresa Phillips  
Department of Health  
PO Box 47820  
Olympia, Washington 98504-7820

Subject: Comments regarding language for turbidity monitoring as proposed in WAC 246-290-638 (4):

Dear Teresa,

I would like to submit the following comments and suggestions regarding the above mentioned proposed change to the state drinking water regulations:

In addition to the existing methods listed in Section (4)(b)(i) of WAC 246-290-638, this section should be worded to allow the Department of Health Office of Drinking Water staff the authority to approve new turbidity measurement methodologies that are approved by the USEPA as they become available without the necessity of further WAC revision.

I suggest this section be reworded to read as follows:

(i) Designed to meet the criteria in "standard methods," EPA Method 180.1, Hach FilterTrak Method 10133, or Great Lakes Instruments Method 2; or other methods approved by EPA that are determined by the Department of Health to provide equivalent or better performance.....

Turbidity measurement technology is undergoing rapid advances and changes in technology. The Hach Co., who is by far the major supplier of turbidimeters to the drinking water supply industry in the United States, has already introduced a product that will render the existing Hach equipment and methods obsolete within a few years. This is particularly true for the Hach 1720-E incandescent and FT660sc laser on line turbidimeters which are currently the dominant instruments in use in drinking water treatment plants in Washington State today. This puts water purveyors who are replacing or planning to replace current turbidimeters in an impossible situation and would force utilities to purchase instruments that are designed around antiquated



## ***PUBLIC WORKS***

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...methods such as EPA Method 180.1 and will not allow them to take advantage of the increased efficiency and accuracy that new technologies will offer. This would be detrimental to continued improvement in turbidity removal performance by treatment plants and to the desirable approach of continuous improvement of treatment plant performance.

Thank you for the opportunity to comment.

Sincerely,

Mark Weeks

cc: John McClellan COE  
Nancy Feagin DOH

**From:** [Thomas D. Mortimer, Jr.](#)  
**To:** [Phillips, Theresa \(DOH\)](#)  
**Cc:** [Bauer, Sean](#); [Brubaker, Tom](#)  
**Subject:** FW: Kent Comments to Group A Rule Changes  
**Date:** Wednesday, September 28, 2016 2:29:05 PM  
**Attachments:** [image001.png](#)

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Theresa

I was involved in preparing these comments for Kent. In reviewing the final transmitted draft, I noted that I inadvertently included an unintended parenthetical at the end of the proposed rule change text for 246-290-106. It has been deleted in transmittal below.

Thank you

Tom Mortimer  
Attorney at Law

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**From:** Bauer, Sean  
**Sent:** Monday, September 26, 2016 9:52 AM  
**To:** 'Phillips, Theresa (DOH)'  
**Cc:** Bauer, Sean  
**Subject:** RE: Group A Public Water Supplies Rule Changes

Thank you Theresa, here are our comments on the draft rule change:

**1) Duty to Serve: WAC 246-290-106 (5)(6) Deletions per temporary/emergency conditions**

- (5) Municipal water suppliers may provide temporary water service to another water system if a written agreement with the water system is in place.  
(6) To resolve a significant public health and safety concern, the department may allow water service to be extended prior to meeting the requirements of this section.

**Comment:**

It is our understanding that sub-sections (5) and (6) above were deleted based on the assumption that the new "flexibility" afforded by the proposed changes to 246-290-107 (Place of Use expansion) and 108 (Consistency with local plans/regulations) obviated the need for these sub-sections. In this regard, it is DOH's intent to allow utilities the flexibility to expand retail service into their future service areas without the need for a WSP amendment. This is indeed desirable. However, the sub-sections proposed for deletion do not relate to that context or situation. To the contrary, **these sub-sections provide utilities very important authority and flexibility to meet emergency or short term shortage/supply situations whereby one water system**

**comes to the temporary aid of another system by providing water within the latter system's service area.** This is a distinct and different fact pattern from a utility seeking simply to expand service into its own claimed/future service area without need for a WSP amendment. DOH's effort to create greater flexibility for utilities is appreciated, but in this case the proposed rule change does not operate as intended, and would actually eliminate an important tool used by the City of Kent and many other utilities to meet emergency and temporary inter-utility needs.

**We would strongly recommend that these sections be reinstated and modified as below in bold. (Note: The City has been encouraged to make this comment/recommendation by DOH officials).**

(5) Municipal water suppliers may provide temporary water service to another **water system service area** if a written agreement with the **receiving** water system is in place.

(6) To resolve a significant public health and safety concern, the department may allow water service to be extended from a **municipal water supplier to another water system's service area** prior to meeting the requirements of this section.)

**The intent of the above text is to restore the inter-utility assistance context of sub-sections (5) and (6).** If such action is not taken, and the deletions remain, there is no clear authority to undertake temporary service area supply agreements and/or to provide efficient short term emergency aid under law or statute. This result could be very detrimental to utilities, the public they serve, and DOH.

## **2) Place of Use Expansion (WAC 246-290-107)/Consistency with Local Plans/Regulations 246-290-108)**

### **Comment:**

It is our understanding that the intended purpose of the changes in these sections, as well as to the "service area" definition, is to allow utilities to expand into their future service areas (from present retail service areas) without having to submit a WSP amendment to the relevant County/City and DOH per a land use consistency review. On its face, the changes are well intended. However, they also appear to create unintended consequences and regulatory requirements that are not consistent with law.

Under existing statute, there is no "duty to serve" in future service areas, nor is there a related duty under law when a utility prepares a WSP to secure a land use consistency determination for its future service area. This distinction in "duty" is largely due to the fact that utilities are commonly unable to project the size, location, or nature of future water infrastructure in future service areas, where new service will actually be required (per development activity), or related land use/enviro impacts. Thus, compelling utilities to secure a consistency determination for future service areas where no duty to serve exists is neither required nor appropriate. The proposed rule changes now create a circumstance where such a determination is required in a WSP, regardless of whether such action is appropriate or possible.

In summary, the DOH rule change appears to inadvertently compel a utility to treat within its WSP, a future service area as retail, with a duty to serve, that falls within its future service area, where no service requests exists, and which the utility may have no near or long term plans to serve, and secure a related consistency determination. Consequently, the proposed text in these sections, and the definition section, absent clarification, could create unnecessary and confusing jurisdictional conflicts between utilities and cities/counties.

In order to avoid this potential situation, and create greater clarity, while preserving flexibility, the following textual change is recommended:

WAC 246-290-106: Duty to Serve - (3) Municipal water suppliers must meet the requirements of WAC 246-290-108 **when planning to provide retail water service in their future service areas.**

The above text is intended to preclude an absolute requirement that utilities must provide land use consistency determinations to counties/cities for future service areas in their WSP updates when there is no intent, request, or need by the utility to provide retail service within its 10 year (or other) DOH approval horizon. We concede that the text still creates the situation of possibility of having to prepare a WSP amendment between WSP's if the need arises, so it does not necessarily achieve the full scope of flexibility intended by DOH. It does, however, preserve DOH's goal of enabling water systems to secure a consistency determination for a future service area at the time of WSP preparation, and more importantly, is consistent under law and does not impose an inappropriate regulatory burden on utilities.

Let me know if you have any questions.

Thanks.

**Sean M. Bauer**, *Water System Manager*  
Water Division | Public Works Department  
220 Fourth Avenue South, Kent, WA 98032  
Phone **253-856-5610** | Cell **253-740-7089**  
[sbauer@KentWA.gov](mailto:sbauer@KentWA.gov)

**CITY OF KENT, WASHINGTON**

[KentWA.gov](http://KentWA.gov) [Facebook](#) [Twitter](#) [YouTube](#)

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---

**From:** Phillips, Theresa (DOH) [<mailto:Theresa.Phillips@DOH.WA.GOV>]

**Sent:** Thursday, September 22, 2016 4:37 PM

**To:** Bauer, Sean

**Subject:** RE: Group A Public Water Supplies Rule Changes

Hi Sean:

I just got back from a meeting in Kent. The link you need to use is the one that says "Notice of public

hearing and proposed rule changes” The first two pages are the hearing notice and the remaining pages are the rule text.

T



Theresa Phillips  
Division of Environmental Public Health  
Washington State Department of Health  
360-236-3147 | [www.doh.wa.gov](http://www.doh.wa.gov)

**Public Health** – Always Working for a Safer and Healthier Washington

---

**From:** Bauer, Sean [<mailto:SBauer@kentwa.gov>]  
**Sent:** Thursday, September 22, 2016 10:36 AM  
**To:** Phillips, Theresa (DOH) <[Theresa.Phillips@DOH.WA.GOV](mailto:Theresa.Phillips@DOH.WA.GOV)>  
**Subject:** Group A Public Water Supplies Rule Changes

Hi Theresa;

I'm able to find the proposed rule change summaries for the Group A Rule Changes, but I can't find the Group A Rule with the strike through to see the proposed wording, is that available somewhere and I just don't see it? Specifically I'm looking for what 246.290.638 is going to look like?

Thanks Theresa.

**Sean M. Bauer**, *Water System Manager*  
Water Division | Public Works Department  
220 Fourth Avenue South, Kent, WA 98032  
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*Commissioners*

Nancy E. Barnes  
Jane A. Van Dyke  
Jim Malinowski

*Chief Executive Officer/  
General Manager*

Wayne W. Nelson

26 September 2016

Theresa Phillips  
DOH Office of Drinking Water  
PO Box 47822  
Olympia, WA 98504-7822

Subject: Group A Public Water Supplies, chapter 246-290 WAC Formal Comments

Dear Ms. Phillips:

Thank you for the opportunity to review and comment on the draft rule proposal. Below are the comments I would like to submit for consideration. If an alternate format is preferable or any follow-up information is needed, please let me know.

- **246-290-010 Definitions – (232) *Service area***; Is the word, “wholesale” intended to match the definition of “wholesale system” as defined in (310)? If so can you add system after wholesale in (232) so the intent is clear.
- **246-290-030 General Admin – *advisory committee struck***; Is there provision (formal process) for input in the crafting and participation in rule making for drinking water regulations outside of the comment period?
- **106 Duty to provide service – *interties and temporary connections between water systems***; Will this eliminate the flexibility of PWS's to interconnect as a way to provide an approved alternative source of water (Approved and Regulated Group A CWS's)? Interconnections are invaluable in situations of water shortage or loss of source.
- **300 Monitoring requirements – *triggered source water monitoring***; Systems with multiple sources, pressure zones, significant geographical boundaries, as well as hydraulic boundaries, do not have clear guidance on how to determine what is representative. With a complicated system it may not be possible to identify "representative sampling" without consideration of water use and seasonal changes. Consideration must be given to large number of sources and limited resources and time constraints such as staffing. System operators, SCADA, and methodology are better able to prioritize efforts for distribution sampling as opposed to sampling sources that have no way of contributing to an issue that cannot be proven without the use of a dynamic hydraulic model or mitigated with CT6.
- **480 Recordkeeping and reporting – *E Coli positive distribution samples***; Tier 1 reporting for E. Coli and the 24 hour notice is included elsewhere in the document for source water samples, is the same not true for distribution samples? Shouldn't all E. Coli or Tier 1 situations notify/consult the department as soon as practical but within 24 hours?

- 638 Analytical requirements – “*verify equipment every five days*”; Weekly would be more practical? Either 7 calendar days or 5 business days.

Sincerely,

A handwritten signature in blue ink, appearing to read "John Roth". The signature is stylized with a large "J" and "R".

John Roth  
Water Quality Specialist  
360-992-8034

**From:** [Kersnar, Joan](#)  
**To:** [Phillips, Theresa \(DOH\)](#)  
**Cc:** [Harper, Wylie](#)  
**Subject:** Group A Public Water Supplies Rule Changes  
**Date:** Wednesday, September 28, 2016 8:46:16 AM

---

Thank you for the opportunity to comment on the proposed changes to the Group A Rule, Chapter 246-290 WAC. Below are Seattle Public Utilities' comments related to water system planning:

a. Timeframes

We support the proposed changes to revise the timeframe for water system plan updates from six years to ten years with the option to choose a shorter timeframe, and to revise the planning elements and forecasting requirements to align with the new timeframe for water system plan approvals. We also support the revisions to the triggers for expanding systems to submit a water system plan, and the clarification of the conditions and options for water system plan amendments. A six-year planning cycle is not necessary to support updates to the Seattle Comprehensive Plan, and the update cycle of these plans are not synchronized. The City of Seattle, like many other municipalities, updates and approves a 6-year capital improvement program which covers SPU's water system every year. The Seattle Comprehensive Plan is amended to reflect these annual capital planning updates. By allowing a 10-year update cycle for water system plans, SPU would not only be able to reduce the staff workload and costs associated with these plans, but focus more attention to mid-range and long-range planning when those plans are updated.

We do, however, offer the following language change for WAC 246-290-810 (4)(i) regarding Distribution System Leakage reporting in water system plans. As written, the proposed additional sentence implies that DSL totals need to be forecasted for the plan approval period. We suggest the following change to revise the first sentence and eliminate that proposed second sentence, which we believe more clearly reflects the intent of the proposed change: "(i) Include distribution system leakage totals in accordance with WAC 246-290-820 for each year since the last approved water system plan".

b. Local Government Consistency Determination Requirements

We do have concerns about broadening the local government consistency determination requirements to the entire service area. Per the revised definition, the service area may include areas where wholesale water service is provided. Yet, RCW 43.20.260, municipal water suppliers have a duty to provide service to all new connections within their **retail** service area if the system: 1. can provide the new service in a timely and reasonable manner; 2. has sufficient water rights; 3. has sufficient physical capacity; and 4. receives a service request for a use that is consistent with local government planning under the Growth Management Act. Thus, the requirement for consistency with local plans and regulations in WAC 246-290-108 is relevant only to "applicable" service areas as stated in the current rule.

Unlike the statements made in the Significant Analysis, Seattle Public Utilities does not already obtain local consistency determinations for its entire service, but only for that portion where retail water service is or will be provided. That is, for its last water system plan, local government consistency reviews were obtained from five jurisdictions where retail water service is provided, while the proposed changes would require **an additional 25** determinations, for a total of 31. The retail water service providers in these additional 25 jurisdictions are responsible for meeting the requirements of WAC 246-290-106 (duty to provide service) and obtaining local government consistency determinations. The new requirement would place a significant burden on SPU, and similar wholesale water service providers, while duplicating local government consistency determinations.

To remedy these concerns, we recommend that WAC 246-290-106(3) be modified to exclude portions of the service area currently or planned to be served wholesale water service by the municipal water supplier. We recommend that WAC 246-290-106(3) be changed to: "Municipal water suppliers must meet the requirements of WAC 246-290-108 for their service area excluding those portions in which only wholesale water service is currently provided or is planned." Alternatively, "for their retail service area" should be retained in WAC 246-290-106(3)

or modified to include existing and future retail service areas.  
SPU's comments on other topics included in the proposed rule changes will be sent separately.

Joan M. Kersnar, P.E.  
Drinking Water Planning Manager  
Seattle Public Utilities  
700 Fifth Avenue, 59th Floor  
P.O. Box 34018 (mailing address)  
Seattle, WA 98124-4018  
Direct: (206) 684-0839  
FAX: (206) 684-0206  
[joan.kersnar@seattle.gov](mailto:joan.kersnar@seattle.gov)  
<http://www.seattle.gov/util>

**From:** [Ohm Kongtang](#)  
**To:** [Phillips, Theresa \(DOH\)](#)  
**Cc:** [Feagin, Nancy \(DOH\)](#)  
**Subject:** Group A Public Water Supplies Rule Changes  
**Date:** Wednesday, September 28, 2016 1:43:32 PM

---

Theresa,

Please see the Public Water Supplies Rule Changes that I would like to be considered added to the current rules.

(4) Turbidity monitoring.

(a) The purveyor shall equip the system's water treatment facility laboratory with a:

(i) Bench model turbidimeter; and

(ii) Continuous turbidimeter and recorder if required under WAC 246-290-664 or 246-290-694.

(b) The purveyor shall ensure that bench model and continuous turbidimeters are:

(i) Designed to meet the criteria in "standard methods," EPA Method 180.1, or EPA approved alternative to Method 180.1, Hach FilterTrak Method 10133, or Great Lakes Instruments Method 2, or Swan AMI Turbiwell; and

(ii) Properly operated, calibrated, and maintained at all times in accordance with the manufacturer's recommendations.

(c) The purveyor shall validate continuous turbidity measurements for accuracy as follows:

(i) Calibrate turbidity equipment based upon a primary standard in the expected range of measurements; and

(ii) Verify continuous turbidimeter performance on a weekly basis, not on consecutive days, with grab sample measurements made using a properly calibrated bench model turbidimeter.

(d) When continuous turbidity monitoring equipment fails, the purveyor shall measure turbidity on grab samples collected at least every four hours from the combined filter effluent and individual filters while the system serves water to the public and the equipment is being repaired or replaced. The purveyor shall have continuous monitoring equipment online within five working days of failure.

Please see my recommended changes in Red Above. If there are any questions or concerns please let me know. I plan on attending the public hearing next month.

Best Regards,

**Ohm Kongtang**

Regional Sales Manager – Western States

**Swan Analytical USA, LLC**

[ohm.kongtang@swan-analytical-usa.com](mailto:ohm.kongtang@swan-analytical-usa.com)

847.229.1290 - office

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847.229.1320 – fax

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September 27, 2016

Washington State  
Department of Health  
PO Box 47822  
Olympia, WA 98504-7822

RE: 246-290 WAC, Group A Public Water Supplies  
Proposed Rule changes

To Whom it May Concern:

The City of Auburn reviewed the proposed rule changes to WAC 246-290 regarding Group A Public Water Supplies and offers the following comments:

#### Federal Revised Total Coliform Rule

- Auburn supports the adoption of the federal Revised Total Coliform rule (RTCR) as this rule will increase public health protection by reducing the potential pathways of entry for fecal contamination into the distribution system. This pro-active approach will force systems vulnerable to microbial contamination to "find and fix" problems through level 1 and possibly level 2 assessments.

#### Water System Planning

- Auburn supports the extending of the planning timeframe for water system plans from 6 years to 10 years with the option to choose a shorter timeframe. This flexibility will help the water system to reduce costs and plan for longer term.

#### Emergency Sources and Supplies

- Auburn supports the new requirements by formalizing the establishment of emergency sources.
- Auburn supports the new requirements if using trucked water as emergency drinking water supply.
- Auburn supports this pro-active approach and planning and preparing ahead to ensure that water from emergency sources or trucked water is safe to drink and ready to be used when emergency is declared.

#### Disinfection

- Continuous Disinfection  
Auburn supports the proposed rule to clarify the triggers for continuous disinfection of the source water and the distribution system.
- Monitoring and reporting  
Auburn supports the rule change as it provides more flexibility, better baseline and comparable residual chlorine measurement methods to ensure adequate disinfection and residual monitoring.

If you have any questions about these comments, please contact me at 253.804.5061, or [sfenhaus@auburnwa.gov](mailto:sfenhaus@auburnwa.gov).

Sincerely,



Susan Fenhaus, P.E.  
Water Utility Engineer  
Community Development and Public Works

SF/as

From: [Bauer, Sean](#)  
To: [Phillips, Theresa \(DOH\)](#)  
Cc: [Bauer, Sean](#)  
Subject: RE: Group A Public Water Supplies Rule Changes  
Date: Monday, September 26, 2016 9:51:53 AM  
Attachments: [image002.png](#)

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Thank you Theresa, here are our comments on the draft rule change:

**1) Duty to Serve: WAC 246-290-106 (5)(6) Deletions per temporary/emergency conditions**

(5) Municipal water suppliers may provide temporary water service to another water system if a written agreement with the water system is in place.  
(6) To resolve a significant public health and safety concern, the department may allow water service to be extended prior to meeting the requirements of this section.)

**Comment:**

It is our understanding that sub-sections (5) and (6) above were deleted based on the assumption that the new "flexibility" afforded by the proposed changes to 246-290-107 (Place of Use expansion) and 108 (Consistency with local plans/regulations) obviated the need for these sub-sections. In this regard, it is DOH's intent to allow utilities the flexibility to expand retail service into their future service areas without the need for a WSP amendment. This is indeed desirable. However, the sub-sections proposed for deletion do not relate to that context or situation. To the contrary, **these sub-sections provide utilities very important authority and flexibility to meet emergency or short term shortage/supply situations whereby one water system comes to the temporary aid of another system by providing water within the latter system's service area.** This is a distinct and different fact pattern from a utility seeking simply to expand service into its own claimed/future service area without need for a WSP amendment. DOH's effort to create greater flexibility for utilities is appreciated, but in this case the proposed rule change does not operate as intended, and would actually eliminate an important tool used by the City of Kent and many other utilities to meet emergency and temporary inter-utility needs.

**We would strongly recommend that these sections be reinstated and modified as below in bold. (Note: The City has been encouraged to make this comment/recommendation by DOH officials).**

(5) Municipal water suppliers may provide temporary water service to another **water system service area** if a written agreement with the **receiving** water system is in place.  
(6) To resolve a significant public health and safety concern, the department may allow water service to be extended from a **municipal water supplier to another water system's service area** prior to meeting the requirements of this section.)

**The intent of the above text is to restore the inter-utility assistance context of sub-sections (5) and (6).** If such action is not taken, and the deletions remain, there is no clear authority to undertake temporary service

area supply agreements and/or to provide efficient short term emergency aid under law or statute. This result could be very detrimental to utilities, the public they serve, and DOH.

## **2) Place of Use Expansion (WAC 246-290-107)/Consistency with Local Plans/Regulations 246-290-108)**

### **Comment:**

It is our understanding that the intended purpose of the changes in these sections, as well as to the "service area" definition, is to allow utilities to expand into their future service areas (from present retail service areas) without having to submit a WSP amendment to the relevant County/City and DOH per a land use consistency review. On its face, the changes are well intended. However, they also appear to create unintended consequences and regulatory requirements that are not consistent with law.

Under existing statute, there is no "duty to serve" in future service areas, nor is there a related duty under law when a utility prepares a WSP to secure a land use consistency determination for its future service area. This distinction in "duty" is largely due to the fact that utilities are commonly unable to project the size, location, or nature of future water infrastructure in future service areas, where new service will actually be required (per development activity), or related land use/enviro impacts. Thus, compelling utilities to secure a consistency determination for future service areas where no duty to serve exists is neither required nor appropriate. The proposed rule changes now create a circumstance where such a determination is required in a WSP, regardless of whether such action is appropriate or possible.

In summary, the DOH rule change appears to inadvertently compel a utility to treat within its WSP, a future service area as retail, with a duty to serve, that falls within its future service area, where no service requests exists, and which the utility may have no near or long term plans to serve, and secure a related consistency determination. Consequently, the proposed text in these sections, and the definition section, absent clarification, could create unnecessary and confusing jurisdictional conflicts between utilities and cities/counties.

In order to avoid this potential situation, and create greater clarity, while preserving flexibility, the following textual change is recommended:

WAC 246-290-106: Duty to Serve - (3) Municipal water suppliers must meet the requirements of WAC 246-290-108 **when planning to provide retail water service in their future service areas** *(for their retail service area)* - **The text in italics was deleted in draft rule.**

The above text is intended to preclude an absolute requirement that utilities must provide land use consistency determinations to counties/cities for future service areas in their WSP updates when there is no intent, request, or need by the utility to provide retail service within its 10 year (or other) DOH approval horizon. We concede that the text still creates the situation of

possibility of having to prepare a WSP amendment between WSP's if the need arises, so it does not necessarily achieve the full scope of flexibility intended by DOH. It does, however, preserve DOH's goal of enabling water systems to secure a consistency determination for a future service area at the time of WSP preparation, and more importantly, is consistent under law and does not impose an inappropriate regulatory burden on utilities.

Let me know if you have any questions.

Thanks.

**Sean M. Bauer**, *Water System Manager*

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**Sent:** Thursday, September 22, 2016 4:37 PM  
**To:** Bauer, Sean  
**Subject:** RE: Group A Public Water Supplies Rule Changes

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Theresa Phillips  
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Washington State Department of Health  
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**Sent:** Thursday, September 22, 2016 10:36 AM  
**To:** Phillips, Theresa (DOH) <[Theresa.Phillips@DOH.WA.GOV](mailto:Theresa.Phillips@DOH.WA.GOV)>  
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Specifically I'm looking for what 246.290.638 is going to look like?

Thanks Theresa.

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# Rule Comments

## Documents and Comments

Document Title	File Name	Document Description	WSR#	Author	Author Organization	Author Phone	Deadline Date
<b>Chapter 246-290 WAC Group A Public Water Supplies</b>							
<b>1 Comments</b>	<b>1617139grou pAdrinkingw ater102final. pdf</b>	<b>The proposed rule adopts the federal Revised Total Coliform Rule.</b>	<b>16-17- 139</b>	<b>Theresa M Phillips</b>	<b>EPH - ASSISTANT SECRETARY</b>	<b>360-236- 3147</b>	<b>09/28/2016</b>
<b>Oppose (1)</b>	<b>Commenter</b>	<b>Commenter Phone</b>	<b>Commenter Email</b>		<b>Commenter Address</b>		
<b>Oppose</b>	<b>Sam Bocook</b>		<b>sam_bocook@transalta.com</b>				
<p>Rather than changing the disinfectant residual measured in the distribution system from detectable to 0.2 mg/L because (apparently) many operators use colorwheels that aren't accurate below that level, instead require a different method of detection. Unless mine is the only system using a handheld digital colorimeter (DPD method), it seems like an unnecessary amount of manhours and paperwork for each system's instruments to be submitted for review and approved/denied. Of course, the extent of my water treatment experience is where I currently work, so my perception may be skewed against the "norm."</p>							
<b>2 Comments</b>	<b>DRAFTGroup ARuleSAFINA L8816.pdf</b>	<b>Significant Legislative Analysis</b>	<b>16-17- 139</b>	<b>Theresa M Phillips</b>	<b>EPH - ASSISTANT SECRETARY</b>	<b>360-236- 3147</b>	<b>09/28/2016</b>
<b>Oppose (2)</b>	<b>Commenter</b>	<b>Commenter Phone</b>	<b>Commenter Email</b>		<b>Commenter Address</b>		
<b>Oppose</b>	<b>Alan Kerley</b>	<b>206-365-3211</b>	<b>alan@lfpwd.org</b>		<b>4029 NE 178th St lake Forest Park</b>		
September 26, 2016							
Theresa Phillips							



## Rule Comments

### Documents and Comments

WA Dept. of Health – Office of Drinking Water  
Southwest Drinking Water Operations  
243 Israel Rd. SE, 2nd floor  
Tumwater, WA 98501

WAC 246-290-451, Disinfection of drinking water

Response to proposed rule changes.

The Washington State Department of Health Office of Drinking Water needs to consider that many groundwater systems have a customer base that strongly prefers non-treated water. Requiring continuous disinfection without empirical data is overly prescriptive and takes the operator of the system and the preference of the customers out of the equation. If a source has no history of microbial contamination it should not be subject to continuous disinfection.

This proposed rule change has multiple unknown costs: Disinfection equipment, chemicals, additional staff or staff training, additional testing for disinfection byproducts, etc.

The real cost may be the dissolution of many excellent Group A water systems. The quality of our water sets us apart. Large water purveyors that use chlorine or other forms of disinfection often sell their water to cities and other utilities. If the water quality of a non-treated system is altered to mirror these larger purveyors there is little to stand in the way of these larger utilities and cities from taking over the systems against the will of the consumers. It is our water, our customer service and our excellent operation of these systems that will be lost.

If simplifying the rule and throwing a “blanket” disinfection requirement is the intent of this proposed rule change, then why are there stringent disinfection byproduct monitoring requirements at the Federal and State level?

The health benefits of disinfection byproducts such as chlorine are very much up for debate in academia. Disinfection byproducts have been proven to have long-term negative health effects.

I strongly urge the Office of Drinking Water to recognize that current regulations in place are adequate to protect public health.

Date: 9/29/2016 9:50:52 AM



# Rule Comments

## Documents and Comments

Requiring disinfection of sources that are shallow or perceived to have some other threat must be fact based by water quality sampling and not subject to interpretation or perceived risk.

The State puts great faith in its operators. Do not handcuff our ability to provide chemically pure water. I urge the State to work with water systems and its operators to exhaust all other options before requiring disinfection.

Sincerely,

F. Alan Kerley  
General Manager  
Cert No. 7496: CCS,WDM2, WDS  
Lake Forest Park Water District  
4029 N.E. 178th Street  
Lake Forest Park, WA 98155  
Office 206-365-3211  
Fax 206-365-3357  
www.lfpwd.org

<b>Oppose</b>	<b>Jamie LeBlanc</b>	<b>360.848.2132</b>	<b>leblanc@skagitpud.org</b>	<b>1415 Freeway Drive, Mount Vernon, WA 98273</b>
---------------	--------------------------	---------------------	------------------------------	---



# Rule Comments

## Documents and Comments

Document Title	File Name	Document Description	WSR#	Author	Author Organization	Author Phone	Deadline Date
WAC 246-290-638 Analytical requirements							
<p>(4) Turbidity monitoring.</p> <p>(a) The purveyor shall equip the system's water treatment facility laboratory with a:</p> <ul style="list-style-type: none"><li>(i) Bench model turbidimeter; and</li><li>(ii) Continuous turbidimeter and recorder if required under WAC 246-290-664 or 246-290-694.</li></ul> <p>(b) The purveyor shall ensure that bench model and continuous turbidimeters are:</p> <ul style="list-style-type: none"><li>(i) Designed to meet the criteria in "standard methods," EPA Method 180.1, or Great Lakes Instruments Method 2; and</li><li>(ii) Properly operated, calibrated, and maintained at all times in accordance with the manufacturer's recommendations.</li></ul> <p>4.b &amp; 4.b.i</p> <p>This does not give us a way to use new models of turbidimeters that no longer rely on EPA's methods. We, as a water purveyor, need a path to have new equipment evaluated and approved by DOH to use. This will allow us to consider other vendors and look at better technology as they arise.</p>							

Level 2 assessments must be conducted by the department or a party approved by the department which may include the system operator.

- 1. While the qualifications for an approved level 2 assessor are further described in 320 (2) (b) (iv), it would be useful to clarify when and how the department decides and approves who will conduct the assessment.**

When conducting assessments, systems shall direct the assessor to evaluate minimum elements that include:

.

.

(F) The system shall conduct the assessment consistent with any department directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

- 2. The syntax and language don't make sense. It appears (F) above is vague, general, open to broad interpretation, and seems confusing rather than providing clear regulatory explanation and direction for Group A water systems.**

(A) The system shall complete a level 1 assessment as soon as practical after any treatment technique trigger is met in (a)(i) of this subsection. The completed assessment must describe sanitary defects detected, corrective actions completed, and a proposed timetable for any corrective actions not already completed. The assessment may also note that no sanitary defects were identified. The system shall submit the completed level 1 assessment to the department within thirty days after the system learns that it has exceeded a treatment technique trigger.

- 3. What happens if the utility submits a Level 1 assessment noting that no sanitary defects were identified? Will the Department require anything of the utility if DOH determines the assessment is reasonable/valid?**

Level 2 assessments. A system shall conduct a level 2 assessment consistent with requirements in subsection (2)(b) of this section if the system exceeds one of the treatment technique triggers in (a)(ii) of this subsection. The system shall comply with any expedited actions or additional actions required by the department in the case of an E. coli MCL violation.

- 4. What is meant by expedited actions or additional actions above? This seems open to broad interpretation rather than providing clear regulatory explanation and direction for Group A water systems to take proactive measures.**

.

(6) (d)

All analyses required in this subsection shall be conducted in accordance with an EPA ((standard methods)) approved method. A diethyl-p-phenylenediamine (DPD) colorimetric field test kit relying on a visual color comparison to a visual standard may not be used by a purveyor to comply with the requirements of this subsection.

.

(7) A purveyor that adds free chlorine, total chlorine, combined chlorine, or chlorine dioxide to the distribution system on a continuous basis shall:

(a) Monitor residual disinfectant concentration at:

(i) Representative points ((throughout)) in the distribution system at least once per day, five days per week, unless upon written request, the department approves less frequent monitoring; and  
(ii) The same time and location of routine and repeat coliform sample collection.

(b) Maintain a detectable residual disinfectant concentration in all active parts of the distribution system, ((measured as total chlorine, free chlorine, combined chlorine, or chlorine dioxide. Water in the distribution system with an HPC level less than or equal to 500 organisms/mL is considered to have a detectable residual disinfectant concentration.

.

(8) Violations.

(a) Failure to provide treatment that meets the applicable requirements of subsection (6) or (7) of this section in two or more calendar days per month in which residual disinfectant concentration monitoring was conducted is a treatment technique violation;

5. For clarification, are EPA approved, non-visual DPD colorimetric field test kits (eg. Hach colorimeters) approved by the department?
6. Are chlorine residual monitoring locations or samples required beyond or in addition to routine and repeat coliform sample collection?
7. Is HPC still required for chlorine residuals less than 0.2 mg/L? Does an HPC value less than 500 cfu/ml still demonstrate evidence of detectable chlorine residual?
8. Is a treatment technique violation incurred and public notice required if non-detectable chlorine residual occurs in the distribution system in two or more calendar days per month?



**Washington Association  
of Sewer & Water Districts**  
EDUCATE ■ ADVOCATE ■ COLLABORATE

September 28, 2016

Via E-mail

Theresa Phillips  
WA Dept. of Health – Office of Drinking Water  
Southwest Drinking Water Operations  
243 Israel Rd. SE, 2<sup>nd</sup> floor  
Tumwater, WA 98501

Dear Ms. Phillips:

On January 30, 2015 the Washington Association of Sewer and Water Districts commented on the draft amendments to the Group A Rule revisions proposed by DOH. Our primary focus was the subsections of WAC 246-290-451 that delineated the conditions under which a groundwater system not currently applying disinfection would be required to provide continuous disinfection. Specifically, we suggested that subjective language about how such a determination and order might be made be replaced with objective data indicating contamination of the source(s) in subsections 246-290-451(4)(c), (4)(d), (5), (5)(a), (5)(b), and (5)(c). We believe that our concerns in 246-290-451 (5) and its subsections have been addressed in the current rule language and appreciate the Department's response. However, the language in subsections (4) (c) and (d) still does not address our concern about the subjectivity of the determination by Health to force disinfection. We feel that this decision should be based on actual water quality monitoring data. Please note how important it can be to customers of systems that have successfully supplied untreated groundwater for many years that their water continue to be untreated, absent actual measured contamination. We also believe that the treatment costs used to determine this is a minor change significantly underestimate the per-customer costs of implementing, operating, and maintaining treatment for smaller systems.

A second area of focus for us was on the time limit for submittal of monthly reports in 246-290-451(8)(c) and 246-290-453(5). We believe that deadline should be the 20<sup>th</sup> day of the following month rather than the 10<sup>th</sup>. Many smaller systems may have limited staff available to complete and submit the report within such a short time.

The WASWD does support the majority of the revisions in the proposed Group A Rules, many of which, such as the planning requirements lengthening the life of Water Supply Plans, are valuable improvements. Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in blue ink that reads "Clair Olivers". The signature is written in a cursive style and is positioned above a solid horizontal line.

Clair Olivers, WASWD Regulatory Liaison

## East King County Regional Water Association Comments to Proposed Changes to the Group A Rule, Chapter 246-290 WAC

September 28, 2016

The East King County Regional Water Association (EKCRWA) fully supports the proposed revision of the timeframe for Water System Plan updates from the current 6-year interval to a more efficient and cost-effective 10-year interval. We believe the proposed option of allowing water utilities to request a shorter update cycle provides adequate flexibility for water utilities that may elect for more frequent updates. Rationale for our support of the 10-year Water System Plan update timeframe would include:

- The current schedule (every 6 yrs.) is overly burdensome on the water utility ratepayer. The overall time and expense of producing a revised Water System Plan has risen to very significant levels for many water utilities. A lengthier period between updates would significantly reduce the cost for both the water utility and local government(s) / WDOH review. Most water utilities do not find a new WSP to be needed at less than 10 year intervals.
- The review of water utilities WSP requires significant Department of Health staff time. This Health staff time could often be utilized on more productive and higher priority tasks. The water utility, local governments, and the Department of Health all benefit from a lower overall cost process by increasing the time interval between required WSP updates.
- Currently, there are frequent other “check-in” opportunities between WDOH and the water utility. Most utility construction projects require plans and documents to be submitted to the WDOH Regional Engineer. WFI and WUE reports are submitted every year. Any significant changes to the operation or administration of the water utility typically requires a revised amendment/supplement to the WSP; and the Regional Engineer can always request additional plans, information, or an amendment to the WSP, as warranted.
- The 10-year update cycle for the Water System Plan updates allows water utilities to better utilize their staff and significantly reduce consulting engineering costs associated with these Plan updates, This allows staff time and funds to be more effectively utilized on internal mid-range planning and actual improvements to the water system.
- Sanitary Surveys now occur on a more frequent basis. This provides opportunities for WDOH to “check-in” and review water utility operations on a fairly frequent basis. It is likely that multiple Sanitary Surveys would occur during the proposed longer update cycle period for a WSP providing adequate mid-planning cycle review.

The EKCRWA strongly supports the proposed revision of the timeframe for Water System Plan updates from the current 6-year interval to a 10-year interval. This longer WSP cycle is in the best interest of reducing cost to the water utility ratepayer, state agencies, and local governments.

Second, the EKCRWA has had a number of questions from utility members relative to the language in the Proposed Group A Rules concerning the consistency determination. It appears that the language is somewhat unclear as there are a number of questions and uncertainty about the extent of local government consistency and duty to serve. We would encourage Health to further clarify the language.

We need to make sure that the integrity of the former Regional Water System Planning Processes which promoted setting water system boundaries to prevent gaps between service areas (which often resulted in significant "future" service areas) is protected. In addition, the Duty to Serve must apply ONLY to the water utility designated Retail Service Area (unless: unable to serve in timely and reasonable manner, lacks sufficient water rights, lacks sufficient physical capacity or is inconsistent with local government planning).

We would suggest that further clarification or details may be warranted relative to clarifying the duty to serve and wholesale water service and consistency determination requirements for those areas covered by the wholesale water. We would recommend that each water utility meet the requirements of WAC 246-290-106(3) for their Service Area excluding those portions in which only Wholesale water is currently or planned to be provided.

Thank you for the opportunity to comment on the proposed Group A Rule. If you have any questions or require further clarification, please feel free to contact me.

Robert Pancoast, Executive Director  
East King County Regional Water Association  
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Carnation, WA 98014-0699  
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September 19, 2016

Theresa Phillips  
DOH Office of Drinking Water  
PO Box 47822  
Olympia, WA 98504-7822

Subject: Group A Public Water Supplies, Chapter 246-290 WAC Formal Comments

Dear Ms. Phillips:

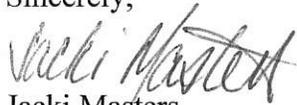
Thank you for the opportunity to review and comment on the draft rule proposal. I have enumerated my comments below. Please let me know if any follow-up information is needed.

- **246-290-030 General Admin – *advisory committee struck***; A means or provision for input from operators and other stakeholders in the crafting and development of rule changes for drinking water regulations prior to the official proposed changes being finalized. Participation from stakeholders in rule making can provide valuable context and perspective and striking the advisory committee will serve to lessen that input.
- **246-290-100 Water System Plan – *identifying all capital improvements***; I did not see capital improvements identified (defined) in the regulation. It seems as though the water purveyor would be free to determine which projects are capital improvements as opposed to maintenance functions.
- **246-290-106 Duty to provide service – *interties and temporary connections between water systems***; Elimination of the flexibility of public water systems to interconnect as a way to quickly provide an approved alternative source (another Group A CWS) in cases or situations of need either from a loss of source or unplanned water shortage could cause water curtailment or even pressure loss events that need not happen if water purveyors are able to exercise their knowledge and certifications to make informed decisions.
- **300 Monitoring requirements – *triggered source water monitoring***; Systems with multiple sources, pressure zones, significant geographical boundaries as well as hydraulic boundaries do not have clear guidance on how to determine what is representative. With a complicated system it may not be possible to identify "representative sampling" without consideration of water use and seasonal changes. With a large number of sources and limited resources and time (24 hours and staffing constraints), system operators, SCADA, and methodology would be able to better determine active source(s) that actually supply water to a particular area at a particular time. Sampling sources that have no logical way of contributing to a possible coliform presence but cannot be proven without the use of a dynamic hydraulic model is not a good use of resources.

- 451 Disinfection of drinking water – *continuous disinfection required*; While the seven conditions enumerated requiring continuous chlorination do pose a risk of contamination, some are not well defined. For example, a shallow source – who determines that a source is “shallow?” If a system has a history of non-detects in their coliform monitoring program, uses best management practices for maintaining water quality, and meets or exceeds every monitoring requirement, why would the Department wish to have the power to force the system to chlorinate? Especially if the consumers in that system do not want chemical additions to their water. Requiring continuous chlorination in a currently un-chlorinated system is expensive to construct, time-consuming, and expensive to operate when having to retrofit. As a WDM 4, a WTPO 2, a QSS, and former SMA Manager, I have dealt with retrofit chlorination systems. The cost estimates included in the Disinfection Fact Sheet are seriously understated according to my experience.
- 638 Analytical requirements – *equipment verification*; I question requiring instrumentation verification every five days. A weekly routine is much more likely to be followed and would avoid costly overtime when the five day maximum falls on a weekend or holiday.

In conclusion, it is my inference and opinion that the tendency of some of these proposed rule changes is to take decision-making away from the operator or manager of a system. The Department of Health has a robust operator certification for a very good reason: to allow those with the knowledge of a particular system the freedom to make decisions based on that knowledge for the betterment of the system. A dedicated and prudent operator would partner with the Department in decision making and never jeopardize the health of the consumers or the integrity of his or her system. If the intent is to be able to provide control for systems not operated prudently or correctly, the Department should address that issue and not penalize our consumers and those operators who exercise due diligence.

Sincerely,



Jacki Masters,  
General Manager

September 6, 2016

W. S. Dept. of Health  
Proposed Changes to the Group A Rule  
P O Box 47822  
Olympia, WA 98504-7822

The following are comments for changes to the Group A Rule.

At this time the testing frequency requirement is too demanding. Small systems that have a history of at least 12 clean reports should not be required to submit monthly samples, and the penalties for a failure to submit a sample should not be so strong!

Small systems – under 200 total service connections, should be evaluated based upon water quality history, and not so completely on sample submission deadlines. Currently, sample submission deadline failures can easily result in forced false system management changes. Such changes do not result in a change in sampling staff, but do add an additional cost to the system operators to pay someone to merely put his name on a form, and collect the monthly fee. There is no added safety to the public, just more cost.

Further, systems who report clean samples for a 12 month period should be able to opt for quarterly reporting requirements as long as clean sample results are reported by the testing company. Once a “dirty” sample is detected, monthly or weekly testing should be instituted for some period of time, say 6 months.

Those Class A transient systems who have fewer than 600 transient visitors monthly should be able to opt out of monthly testing, and go to quarterly testing, so long as the tests are clean.

Daily, weekly and monthly reporting should be reserved for systems that report water quality problems, not sample submission over-sites. Water quality problems should also drive the need for professional system management, not sample submission over-sites.

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