

Final
Small Business Economic Impact Statement
Chapter 246-291 WAC, Group B Public Water Systems
October 31, 2012

Section 1. What is the scope of the final rule package?

The primary purpose of the rulemaking is to meet the objective of the preproposal statement of inquiry (CR-101), and include changes to chapter 246-291 WAC, Group B public water systems, to be consistent with legislative intent. The rule requires new and expanding Group B systems to:

- Meet water quality standards without needing treatment;
- Use a drilled well for the source of supply; and
- Follow more rigorous design and construction standards.

Under the rule, all Group B systems must comply with more stringent public notification requirements when serious public health risks exist.

The rule also:

- Includes editorial changes so that requirements are more clear and understandable;
- Clarifies roles and authority of the department and LHJs;
- Updates language to mirror national standards that have been adopted in other rules (primarily in chapter 246-290 WAC); and
- Updates or removes obsolete references.

The rule represents a shift in the regulatory framework that aligns the Group B chapter with the department's ability to implement the Group B program. The scope of this rule extends to all Group B water systems in Washington State. Purveyors of Group B systems and their customers will be directly affected by these changes.

Section 2. Which businesses are impacted by the rule package? What are their North American Industry Classification System (NAICS) codes? What are their minor cost thresholds?

There is one NAICS business code that applies to the rule. Because most purveyors of Group B systems do not identify themselves primarily as a Group B system, the number of systems found in the state database is a small fraction of the total number of Group B systems in Washington State.

NAICS code	NAICS code description	Total establishments	Minor cost threshold (1% of annual payroll)	Minor cost threshold (3/10% of receipts)	Number of establishments by employment-size	
					49 and fewer	50 and greater
221310	Water supply and irrigation systems	159	\$1,295	No information available	159	0

Section 3. What is the average cost per business of the rule?

WAC 246-291-060, Waivers

This section provides authority to the local health officer or local board of health to grant waivers, but does not provide authority for the department or the State Board of Health to grant waivers.

In counties in which the LHJ has accepted primary responsibility for implementing chapter 246-291 WAC or has developed a local ordinance, the local health officer or local board of health may grant a waiver to a purveyor of a proposed Group B system from the requirements of this chapter, except in calculating residential population¹.

When a new or expanding Group B system cannot meet the requirements for approval, the purveyor can request a waiver from a local board of health or health officer. Specific conditions outlined in this section must be met before a local health officer or board of health may grant a waiver. Conditions for a purveyor to obtain a waiver include, at a minimum:

- The local board of health or health officer must condition the approval by requiring the new or expanding Group B system to provide water quality treatment, monitor and report the quality of water to document that drinking water standards are not exceeded;
- The local board of health or health officer must condition the approval by requiring appropriate operations and maintenance; and
- The local health jurisdiction must provide ongoing oversight.

Cost: This section does not create new treatment requirements. The only cost to purveyors seeking a waiver is the cost that the local board of health or health officer charges for processing the request. The cost of a waiver fee ranges from a nominal cost to \$760².

¹ In the design of a new or expanding Group B system, a purveyor must calculate residential population based on the statewide OFM average household population, which is 2.5 persons per household (WAC 246-291-200(2)). No waivers can be provided to this requirement.

² Summary of data gathered from nine LHJs.

WAC 246-291-120, Design Report Approval

This section includes two significant changes.

1. It eliminates the requirement for existing Group B systems to submit a water system plan update or design report for changes to the system that do not change the number of approved service connections.
2. It requires Group B systems intending to expand the number of approved service connections to complete and submit all documentation required for approval of a new water system under this chapter.

Cost: Under this section, purveyors intending on expanding their systems will incur higher costs to obtain a complete new system approval for the expansion than they would have for submitting a design report under the current rules. But, many of the documents for the new system approval would not need to be generated because the information is the same as when the system was approved (for example, site maps). This results in higher costs than under the current rules, but lower than a complete new Group B system approval. Under this section, the probable new cost for creating a Group B system submittal ranges from \$1,000 to \$3,000 more than the cost of meeting requirements under current rules.³

WAC 246-291-125, Groundwater Source Approval

This section establishes requirements for drinking water sources used for new and expanding Group B systems. It incorporates requirements that previously had been in WAC 246-291-040 and WAC 246-291-100. The proposed section contains several significant changes:

1. A source for a new or expanding Group B system must be a groundwater source from a properly constructed drilled well. Dug wells, groundwater under the direct influence of surface water (GWI) and surface water sources cannot be used.
2. A source for a new or expanding Group B system must meet minimum supply requirements, producing at least 750 gallons per day (gpd) per residential connection for systems in western Washington and 1,250 gpd per residential connection for systems in eastern Washington.
3. Before submitting the system design to the department for approval, a potential GWI source for a new or expanding Group B system must be evaluated to determine whether the source is or is not GWI.

Cost: A purveyor of a new or expanding Group B system could incur additional costs if the purveyor intended to use a dug well, GWI or surface water source. Because this section requires a purveyor to use a drilled well instead of a dug well or surface water source, the difference between the costs of a drilled well and the costs of a dug well or a surface water source represents a new cost associated with this section.

³ Based on information from a survey of consulting engineers. See Appendix B of the preliminary significant analysis for more information.

The cost of a new well varies, depending mostly on the well depth. Most well drillers charge a set-up fee to pay the expense of getting the well drilling rig on site, a minimum charge for drilling a shallow well (usually 50 feet), and then a per-foot cost beyond the minimum. A 20 to 40 foot deep dug well can cost between \$5,000 and \$8,000⁴.

The costs of a drilled and dug well meeting current well construction standards (chapter 173-160 WAC) vary greatly depending on site-specific conditions, which confound the assessment of the cost differences between them. Most often, a purveyor drilling a well will have the well drilled deeper and obtain water from a more protected aquifer.

A review of the well depths reported for current Group B water systems in the department's records shows an average depth of 175 feet, with a range from 20 feet to over 400 feet. Using the average well depth provides a cost approximation of a typical drilled well of between \$8,000 and \$20,000⁵. This estimate of a typical cost range for the average new drilled well will be used throughout the remainder of this analysis.

Most dug wells (allowed under the current rules) require water quality treatment because the shallow aquifer typically contains bacteria and other contaminants. Disinfection using chlorine injection is generally the most inexpensive method of treatment. The capital costs typically range from \$1,000 to \$1,500 and annual operations and maintenance (O&M) can cost \$200 to \$400 per year.

The cost of a surface water source (allowed under the current rules) with current surface water treatment in Part Six of chapter 246-290 WAC should be compared to the costs of a drilled well. The cost of a surface water source varies greatly, depending on the conditions on the site and quality of the water that determine the appropriate treatment technology. For a Group B system, the minimum costs are over \$50,000 plus O&M costs.⁶ Clearly, after accounting for treatment costs, using a drilled well is more cost effective than complying with all current requirements for systems using a surface water source.

A purveyor of a new or expanding Group B system will incur additional cost if the purveyor intends to use a drilled well that does not meet the minimum supply requirements. In those cases, the purveyor would need to drill a new well for additional supply, or obtain water from an intertie with another public water system. Based on department records, fewer than two percent of sources for existing Group B systems would not supply a minimum of 750 gpd for a typical six-connection system. However, the department's records are not complete, with about ten percent of systems not having a source capacity listed.

⁴ Costs obtained from a survey of licensed well drillers. See Appendix B of the final significant analysis for a summary of responses.

⁵ Cost estimate based on a survey of consulting engineers. See Appendix B of the final significant analysis for more information.

⁶ Based on estimates from EPA-600/2-79-162a, August 1999

The typical cost range for an average depth well (175 feet) ranges between \$8,000 and \$20,000.⁷ The cost of obtaining water through an intertie can vary greatly, and would not be a flat cost, but a monthly or yearly charge based on a long-term agreement.

WAC 246-291-135, Interties (New Section)

This section establishes standards for purveyors of new and expanding Group B systems intending to use an intertie source. An intertie is a physical connection between two public water systems. Most commonly, a Group A system will provide water to a Group B system under terms of an intertie (or a “wholesale”) agreement.

Cost: Typically, a wholesale water system already requires a signed agreement that establishes terms and conditions for service meeting the requirements that exist in WAC 246-290-132 for Group A water systems. Depending on if the purveyor of the Group B system uses an attorney to review and approve the agreement and other documents, the cost of producing the required documents can be from nominal costs to \$1,000.⁸

WAC 246-291-140, Water system planning and disclosure requirements

This section requires additional water system planning and disclosure documents to be submitted by a purveyor of a new or expanding Group B system.

- A purveyor must submit disclosure language to the department for review and approval as a part of the Group B system design submittal.
- A purveyor must record the approved disclosure language on the property title for all properties to be served by the Group B system.

Cost: Many counties in Washington have similar fee structures for recording documents. In those counties, the cost of recording the first page to the property title is \$62. Each additional page costs \$1. The new requirements would require recording up to 30 pages on the property title, depending on how many parcels the system will serve. Overall, the costs of the requirements would typically range between \$70 and \$100.

⁷ Costs obtained from a survey of licensed well drillers. See Appendix B of the final significant analysis for a summary of responses.

⁸ Based on an estimate of up to three hours of attorney time plus document production costs.

WAC 246-291-170, Water quality requirements for groundwater source approval

This section incorporates water quality requirements from current rules that apply to the design and approval of a new or expanding Group B water system, including WAC 246-291-320 (2), -330 and -350 (1). This section also makes significant changes to the water quality requirements for only new or expanding Group B systems. The rule:

1. Eliminates the drinking water standard for nickel;
2. Strengthens the primary drinking water standard for arsenic from 50 micrograms per liter to ten micrograms per liter for new or expanding systems;
3. Requires purveyors to submit two coliform samples for a new or expanding Group B system design approval; and
4. Prohibits use of a source that exceeds a primary drinking water standard. Sources for new and expanding Group B systems cannot rely on treatment to meet primary drinking water standards.

Cost: A purveyor of a new or expanding Group B system could incur additional costs from this section if the purveyor drills a well that exceeds the new arsenic standard. A purveyor intending to use a source that does not meet the arsenic standard can drill a new well, develop a one or two connection system without treatment or water quality monitoring, or develop a Group A system with treatment, operations, and water quality monitoring as required under chapter 246-290 WAC.

Requiring one extra sample will cost a purveyor of a new Group B system between \$30 and \$40 for sample analysis, depending on what a laboratory typically charges for coliform analysis.

A purveyor of a new or expanding Group B system could incur additional costs from this section if the proposed source does not meet primary drinking water standards. In those cases, the purveyor would need to drill a new well that meets standards, obtain water from an intertie with another public water system, or use the well for a Group A system with treatment, operations, and monitoring as required under chapter 246-290 WAC.

Sometimes, if a well is contaminated with bacteria or nitrate, the problem can be resolved with the construction of a new well or deepening the existing well to obtain water from a more protected aquifer. Using the average well depth of 175 feet, the cost of a typical drilled well is between \$8,000 and \$20,000⁹.

There are cases when a purveyor will not be able to drill a new well that meets primary drinking water standards. For example, some geologic formations create high arsenic levels in groundwater supplies, and any well drilled in the affected area would exceed the primary drinking water standard.

⁹ Cost estimate based on a survey of consulting engineers, and information on nitrate treatment costs from the Office of Drinking Water Yakima Watershed nitrate treatment project. See Appendix B of the final significant analysis for more information.

The cost of obtaining water through an intertie can vary greatly, and would not be a flat cost, but a monthly or yearly charge based on a long-term agreement. As analyzed under WAC 246-291-135, intertie agreement costs can range from nominal costs up to \$1,000.

Another option for a purveyor would be to create a new Group A system, and meet the requirements of chapter 246-290 WAC that allows for water quality treatment with requirements for appropriate planning, engineering, and monitoring. The cost for the design and construction of a system meeting planning, engineering, and design standards in chapter 246-290 WAC ranges between \$30,000 to \$50,000.¹⁰

WAC 246-291-200, Design standards

This section modifies design standards for new or expanding Group B systems. A purveyor must design a system using:

1. Minimum residential population calculations;
2. Minimum water supply design requirements; and
3. Updated design standard references.

Planning, design, and construction of a new or expanding Group B system that serves ten to 14 residential service connections using Group A system standards cost about \$14,000 to \$27,000 more than complying with the requirements under the current Group B chapter.⁹

This requirement results in minimal implementation costs to new or expanding systems. Group B system storage requirements are more a function of a system's need to meet peak hourly demand (PHD) requirements; those requirements have not changed in the rule.

WAC 246-291-280, Existing Group B Systems (Replaces WAC 246-291-130, Existing System Approval)

This section incorporates the intent of WAC 246-291-130, Existing System Approval, and establishes more specific requirements. This section provides a route for purveyors of Group B systems created before the effective date of this rule to obtain a status of "adequate for existing uses" if the system did not have prior department design approval.

This section includes one non-significant change. This section authorizes purveyors of Group B systems that obtained departmental approval under current rules to provide service to additional connections, up to the total number of approved connections, without having to meet the new requirements.

Cost: To meet the requirements of this section, a purveyor could have to spend three to twenty hours reviewing the system's water well report, inspecting and assessing the well site for potential sources of contamination, and obtaining updated water quality samples.

¹⁰ Cost estimate based on a survey of consulting engineers. See Appendix B of the final significant analysis for more information.

The labor costs for assessing a Group B system's adequacy could range from \$300 to \$2,000 depending on:

- How much documentation exists;
- How much field work would need to be done, and
- If an engineer or designer would be required to complete and submit documentation.

Sample analysis would range from \$400 to \$500.¹¹

WAC 246-291-360, Public Notification

This section includes significant changes for public notification requirements related to monitoring, including requirements for a purveyor to:

- Notify consumers served by the system and provide information within 30 days if they are required to monitor for water quality under WAC 246-291-300;
- Notify consumers within 24 hours if a sample contains *E. coli* or has a nitrate level greater than 10 milligrams per liter;
- Notify consumers within 30 days if the system has an arsenic level greater than 10 micrograms per liter; and
- Use specific language for a public notice.

Cost: In general, this section will not increase costs to purveyors. There could be minor costs for a purveyor required to deliver a public notice within 24 hours instead of 30 days. For example, a purveyor who lives in a primary residence away from the Group B system may have to drive some distance to deliver the required notification. In this case, the purveyor would incur costs for fuel and time spent in transit. However, the purveyor could rely on email, fax or one of the system's consumers to deliver the notice at a minimal cost.

The additional information required for public notification result in no additional cost to purveyors. Overall, the additional information required to be included in the public notice will be less than \$100 (if required to drive to deliver notice).

Section 4. Does the rule impose more than minor costs on impacted businesses?

Does the average cost per business exceed both of the minor cost thresholds? (Yes or No)

Yes. The compliance cost is expected to exceed the annual payroll minor cost threshold for some businesses with new or expanding systems.

¹¹ Based on costs obtained from department staff to conduct onsite investigations and system evaluation, hourly rates charged by Satellite Management Agencies, and information from a telephone survey of analytical laboratory costs. See Appendix B of the final significant analysis for more information.

Section 5. Does the rule have a disproportionate impact on small businesses?

Yes. The rule may have a disproportionate impact on some small businesses.

Section 6. Did we make an effort to reduce the impact of the rule?

A. Did we reduce, modify, or eliminate substantive regulatory requirements? Yes.

The rule eliminates ongoing monitoring requirements for more than 13,000 Group B systems. The rule retains authority for the department to require monitoring for instances when it is necessary to protect public health and safety.

B. Did we simplify, reduce, or eliminate recordkeeping and reporting requirements? Yes.

The rule eliminates recordkeeping and reporting requirements. If monitoring is conducted, under either department direction or their own decision, purveyors must provide results to system consumers and the department.

C. Did we reduce the frequency of inspections? Yes.

All routine inspections are eliminated.

D. Did we delay compliance timetables? Yes.

The rule effective date is delayed for one year to allow local health jurisdictions enough time to adapt to and implement the new rule requirements.

E. Did we reduce or modify fine schedules for noncompliance? Yes.

The rule modifies enforcement provisions to reference only statutory obligations.

F. Did we create or implement any other mitigation techniques? No.

G. If you answered “No” for the previous six questions, please explain why it is not “legal or feasible” to implement any of these mitigation techniques.

Not applicable.

Section 7. Did we involve small businesses in the rule development process?

Department staff met with a representative from the Association of Washington Business, and solicited comments on behalf of that organization, which represents both small and large business interests. The department held four public workshops and solicited input from small business and the public at large, and also met with various stakeholder groups to get feedback on the rule:

- Association of Realtors
- Association of Counties
- Building Industry Association of Washington
- Drilling and Groundwater Association
- Plumbing and Pipefitters Union
- Public Utility District Association
- Water Supply Advisory Committee
- Washington Water Utility Council

Section 8. Will businesses have to hire or fire any employees because of the requirements in the rule?

There will not be any jobs created or lost as a result of the rules.