1. Type of Estimate and Analysis	2. Date	
□ Original	04/10/2019	
3. Administrative Rule Chapter, Title and Number (and Clearinghouse Number if applicable) Chapter NR 812, Well Construction and Pump Installation, CR 18-095		
4. Subject NR 812 establishes construction, pump installation, inspection, and filling and sealing standards for private and noncommunity water systems and heat exchange systems.		
5. Fund Sources Affected □ GPR □ FED □ PRO □ PRS ⊠ SEG □ SEG-S	6. Chapter 20, Stats. Appropriations Affected 20.370.(4)(mq)	
 7. Fiscal Effect of Implementing the Rule ☑ No Fiscal Effect ☑ Indeterminate ☑ Decrease Existing Revenues 	 ☐ Increase Costs ☐ Decrease Costs ☑ Could Absorb Within Agency's Budget 	
8. The Rule Will Impact the Following (Check All That Apply) □ State's Economy ☑ Specific Businesses/Sectors □ Local Government Units □ Public Utility Rate Payers ☑ Small Businesses (if checked, complete Attachment A)		
9. Estimate of Implementation and Compliance to Businesses, Local Governmental Units and Individuals, per s. 227.137(3)(b)(1).		
\$632,122 or Level 2 Moderate (Between \$ 50,000 - \$ 20 million)		
 10. Would Implementation and Compliance Costs Businesses, Local Governmental Units and Individuals Be \$10 Million or more Over Any 2-year Period, per s. 227.137(3)(b)(2)? ☐ Yes ☐ No 		
 Policy Problem Addressed by the Rule The primary objectives of the rule revision are to correct and clarify language, streamline processes, update well construction standards and be consistent with federal and state law. Specific edits include: Correct errors in NR 812.08 separation distances and other errors from past rulemaking, and address revisor notes. Clarify and simplify definitions and terms. Reduce the number of figures. Clarify the remaining figures. Simplify potential contamination sources for clarity and appropriate protection of human health and groundwater. Clarify laboratory certification requirements for water sample analysis. Streamline and clarify approval processes and requirements. Reduce nitrate and arsenic sampling frequency. Clarify and streamline requirements for installing water treatment systems on private well water systems. Update drilling and well construction standards in NR 812 Suchapter II to reflect current industry methods, equipment and materials and simplify related processes. Update code for consistency with current state law including ch. 280 and 281, Wis. Stats. and ch. NR 809, Wis. Adm. Code. Clarify license requirements for filling and sealing exploration boreholes. Improve the overall clarity, simplicity and organization of the rule content. 		
 Summary of the Businesses, Business Sectors, Associations Representing Business, Local Governmental Units, and Individuals that may be Affected by the Proposed Rule that were Contacted for Comments. Well drillers, pump installers and water sample analysis laboratories contributed to the analysis. Well drillers, heat 		

exchange drillers, pump installers, water sample analysis laboratories, the Wisconsin Water Well Association and the Wisconsin Geothermal Association were represented at advisory meetings.

13. Identify the Local Governmental Units that Participated in the Development of this EIA. None

14. Summary of Rule's Economic and Fiscal Impact on Specific Businesses, Business Sectors, Public Utility Rate Payers, Local Governmental Units and the State's Economy as a Whole (Include Implementation and Compliance Costs Expected to be Incurred)

The total economic impact is estimated to be \$ 632,122 per year (Level 2 Moderate). This includes an annual cost increase to certain drilling businesses resulting from drilling requirements specified in this rule. This rule will also decrease the cost to pump installing businesses by about \$27,660 per year in the form of reduced water testing requirements for arsenic and nitrate. A detailed assessment of the economic impacts (cost and benefits) of this rule is presented below.

1) A maximum \$527,790 annual cost increase (or an average of \$890/well for ~ 5% of all wells drilled per year) is estimated to impact certain drilling businesses who will no longer be able to use mud and cuttings as an annular space grouting material.

2) A maximum 104,332 annual cost increase (or an average of 1,023/well for ~ 1% of all wells drilled per year) is estimated to impact those drilling businesses who will be required to install a minimum of 60-feet of casing in limestone instead of the current 40-foot minimum.

3) A \$27,660 annual cost decrease to pump installing businesses in the form of reduced water testing requirements for arsenic and nitrate (assumes 3% of clients require the pump installer to return for additional pump install work and resampling within 6 months of the original work). This can be viewed as a benefit transfer or savings to the well owner. The pump installer is not able to bill the customer (lost potential benefit) for second round water testing within 6 months but the well owner does not have to pay for the testing (gained benefit transfer).

Economic benefits are also expected due to correcting errors, simplified and better-organized text, and streamlined requirements. These benefits are not easily quantifiable. No fiscal impact is anticipated.

15. Benefits of Implementing the Rule and Alternative(s) to Implementing the Rule Substantive rule revisions will recognize modern construction methods, improve groundwater protection, reduce errors, improve organization and streamline requirements for businesses and the well owner. The revised rule is anticipated to be easier to read and understand for both the agency and regulated community. This is anticipated to result in easier implementation and higher compliance rates.

Greater protection of human health and groundwater is anticipated from limiting use of mud and cuttings as an annular space grout and from increasing the minimum grouted casing depth in limestone from 40 to 60 feet, because these changes can result in an annular space seal that is a more protective barrier to downward migration of surface contaminants through the well annular space seal.

Alternatively, not implementing the rule revisions will not produce these benefits.

16. Long Range Implications of Implementing the Rule The long range implication will be the same as the short range implication of this rule.

17. Compare With Approaches Being Used by Federal Government Private well construction and pump installation is not regulated by the federal government. There is no comparable federal government approach to this rule.

18. Compare With Approaches Being Used by Neighboring States (Illinois, Iowa, Michigan and Minnesota) Illinois, Iowa, Michigan and Minnesota have similar but less prescriptive rules regulating well construction and pump installing. By simplifying and clarifying requirements and reducing the overall rule length, this rule revision makes Wisconsin's approach more similar to the simpler, less prescriptive approach used in surrounding states.

19. Contact Name	20. Contact Phone Number
Liesa Lehmann, Private Water Supply Section Chief	608-267-7649

This document can be made available in alternate formats to individuals with disabilities upon request.

ATTACHMENT A

1. Summary of Rule's Economic and Fiscal Impact on Small Businesses (Separately for each Small Business Sector, Include Implementation and Compliance Costs Expected to be Incurred)

The total economic impact (compliance and implementation) of this rule is expected to be incurred by small business. The total economic impact is estimated to be \$ 632,122 (Level 2 Moderate).

Well construction businesses are estimated to be impacted by this rule as follows:

1) A range between \$487,445 and \$527,790 annual cost increase (or an average of \$822 to \$890/well for approximately 5% of all wells drilled annually) to select drilling businesses that currently use mud and cuttings as an annular space grouting material).

2) A range between \$90,637 and \$104,332 annual cost increase (or an average of \$889 to \$1,023/well for approximately 1% of all wells drilled annually) to select drilling businesses that currently grout casing into limestone a minimum of 40 feet. This range of costs was calculated using both WDNR-generated and industry-provided estimates.

Pump installing businesses will also benefit from this rule (\$27,660 per year) in the form of reduced water sampling requirements. This benefit was estimated as follows:

1) A \$27,660 per year potential benefit lost by pump installing businesses in the form of reduced water sampling requirements for arsenic and nitrate (assumes 3% of clients require the pump installer to return for additional pump install work and re-sampling within 6 months of the original work). This can be viewed as is a benefit transfer to the well owner (savings). This means the pump installer is not able to bill the customer (potential benefit lost to the pump installer) for second round water samples within 6 months but the well owner does not have to pay for them (benefit transfer).

Small businesses will potentially benefit from other cost savings due to a shorter and easier to read/comply with code. Potential benefits anticipated from easier compliance with the rule for small businesses is difficult to quantify.

2. Summary of the data sources used to measure the Rule's impact on Small Businesses

A random selection of cost proposals for drilling and well installation written by five drilling companies was gathered from existing DNR well compensation claims on file. In addition, the numbers submitted by well drillers in response to the EIA and during the public comment period were included in the final calculations. These data were compared to cost estimates prepared from independent interviews of two additional drilling companies. Interviews of four randomly selected pump installing companies were used to collect annual sampling frequency data. Sample analysis costs were received from four randomly selected analytical laboratories distributed around the state.

Less Stringent Compliance or Reporting Requirements

^{3.} Did the agency consider the following methods to reduce the impact of the Rule on Small Businesses?

Less Stringent Schedules or Deadlines for Compliance or Reporting

Consolidation or Simplification of Reporting Requirements

Establishment of performance standards in lieu of Design or Operational Standards

Exemption of Small Businesses from some or all requirements

Other, describe:

Reduction in sampling frequency requirements for arsenic and nitrate.

4. Describe the methods incorporated into the Rule that will reduce its impact on Small Businesses

Reduced the number of processes requiring written DNR approvals. An example is no longer requiring a written DNR approval to install a water treatment device on a private water system to treat bacteria.

5. Describe the Rule's Enforcement Provisions

NR 812 has civil and criminal provisions as well as citation authority for certain specific violations.

6. Did the Agency prepare a Cost Benefit Analysis (if Yes, attach to form) \Box Yes \boxtimes No