Form 1100-001P (Rev. 11/13)

Wisconsin Department of Natural Resources
Natural Resources Board Agenda Item

Item No. 3.A.4.

DRAFTING ERRORS CORRECTED
Section 110. NR 812.08(4)(b)15 on page 38 and Table A on page 43 of Board Order

SUBJECT:
Request that the Board adopt DG-03-13, proposed rules affecting chapter 280, Stats., related to related to water supply wells.The proposed rule licenses drill rig operators. The proposed rule also requires that persons filling and sealing wells, and persons that inspect well and water systems for real estate transactions must be licensed well drillers or pump installers.

FOR: February 2014 Board meeting

PRESENTER'S NAME AND TITLE: Ken Johnson, Water Division Administrator

SUMMARY:
2008, revisions to Chapter 280, Wis. Stats., require individuals to hold either a water well driller or pump installer license to fill and seal wells, and to conduct well and water system inspections if one is requested as part of a property transfer. The same statute revision requires the department to develop rules for issuing citations for specific licensing, and well and pump code violations. It also authorized the department to develop registration and training requirements for registered drill rig operators. The proposed code changes bring NR 146 and NR 812 in sync with the statute.

The proposed revisions to NR 812 will require the use of a common inspection form for water systems being inspected as part of a real estate transfer. The inspection form requires the inspector to look for unused and noncompliant wells on properties. Using a common form will bring consistency to the inspection process.

The proposed rule changes and real estate inspection form were developed with representatives of the Wisconsin Water Well Association, well drillers and pump installers. We believe the well drilling and pump installing industry support these revisions.

The Natural Resources Board approved the Statement of Scope at its October 2013 meeting and authorized hearings at its December 2013 meeting.

The economic impact to small businesses is expected to be minimal. The inspection of properties and water systems for real estate transfer is expected to find unused and noncompliant wells that will need to be upgraded to become compliant with the code, or filled and sealed. This may lead to additional work for licensed persons and help avoid costly well contamination for property owners.

RECOMMENDATION: That the Board adopt DG-03-13.

LIST OF ATTACHED MATERIALS (check all that are applicable):

- ☐ (choose one)
- ☒ Fiscal estimate and economic impact analysis (EIA) form
- ☒ Response summary
- ☐ Attachments to background memo
- ☐ Environmental assessment or impact statement
- ☒ Board order/rule

Approved by	Signature	Date
Jill D. Jonas, Director, Bureau of Drinking Water and Groundwater	Jill D. Jonas	1/24/14
Ken Johnson, Water Division Administrator	Ken Johnson	1/24/14
Cathy Stepp, Secretary	Matt Moroney	2/3/14

cc: Board Liaison - AD/8 Program attorney – LS/8 Department rule coordinator – LS/8

CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: January 21, 2014

TO: All Members of the Natural Resources Board

FROM: Cathy Stepp, Secretary

SUBJECT: Background memo on Board Order DG-03-13, relating to licensing of drill rig operators, requirements for filling and sealing wells, and inspections of wells for real estate transfer.

1. Subject of Proposed Rule:

The proposed rule addresses issues regarding the licensing of drill rig operators for water supply well drilling; the requirements that persons that fill and seal wells must be licensed; and inspection requirements for wells and water systems if one is completed as part of a real estate transfer.

2. Background:

The Wisconsin Water Well Association was concerned about poorly trained persons inspecting water supply wells and also filling and sealing water supply wells. The Association worked with the DNR, and the legislature to modify the statute governing drinking water to require the persons completing certain tasks related to water supply wells must be licensed by the DNR to complete these tasks.

3. Why is the rule being proposed?

2007 Act 360 was passed with the support of the Wisconsin Water Well Association resulting in changes to ch. 280, Wis. Stats., which will improve protection to public health and groundwater. Issues addressed by this rule include licensing requirements for individuals constructing water supply wells, inspecting wells at the time of real estate transaction, and filling and sealing of unused and noncomplying water supply wells.

4. Summary of the rule.

The proposed rule addresses these four areas with respect to water supply wells:

1. Well abandonment must, in most cases, be performed by a licensed well driller or pump installer or someone working under the supervision of a licensed person.
2. Well and pressure system inspections conducted as part of a real estate transaction must be performed by an individually licensed well driller or pump installer. An inspection of the water system isn't required at the time of a real estate inspection but if one is completed it must be done by a licensed individual.
3. Drilling rig operators must be registered with the department and complete additional training to qualify for an individual well driller license. A registered drill rig operator or licensed driller must be on site during all potable well drilling activities.
4. Some violations of ch. 280, Wis. Stats., and chs. NR 146 and NR 812, Wis. Adm. Code, will be subject to forfeitures through the citation process.

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The rule develops a standardized water system inspection form to be used at the time of a real estate transaction. All inspections will need to follow this form. The rule also simplifies and clarifies language relating to setback distances to contamination sources for wells.

5. How does this proposal affect existing policy?

The rule changes support existing policy of having well construction codes that are understandable to, and implementable by, well drillers and pump installers. Several aspects of the code have been clarified, and some existing sections of code have been removed.

The rule changes support existing policy of having licensed and trained individuals working on wells and water systems. A person must hold a well drilling or pump installing registration to fill and seal wells. Well inspections at the time of property transfer are not required, but if there is one, it must be completed by a licensed individual.

The rule changes support existing policy that enforcement be timely. Citations can be issued for select violations of the codes and offers the department another tool to gain compliance. Issuing citations will be more efficient than a referral to the Department of Justice.

6. Has Board dealt with these issues before?

The Natural Resources Board approved the Statement of Scope at its October 2013 meeting and approved the request for hearing authorization at its December 2013 meeting.

7. Who will be impacted by the proposed rule? How?

The rule revisions will affect persons owning wells that need to be filled and sealed since that work needs to be completed by a licensed person. The rule revisions will affect persons intending to purchase property if they decide to have an inspection of the well and water system. There will be costs associated with completing the inspection and required sampling. This is a voluntary step on the part of the purchaser and not a requirement of the proposed rule. Inspection forms and water test results will not be sent to the department.

8. Soliciting public input on economic impact synopsis

All licensed well drillers and pump installers were contacted prior to the public hearings on this rule. Also, the water division administrator met with the Wisconsin Realtors Association to discuss the rule. These groups will regularly work with or be affected by this these rule changes.

9. Environmental Analysis

No environmental analysis is needed. The rules should help to prevent groundwater contamination as unused wells are discovered and then properly filled and sealed. Also, noncompliant wells will be brought up to code if possible, or properly filled and sealed.

10. Small Business Analysis

There is not expected to be an economic impact on small business. The inspection of properties and water systems for real estate transfer is expected to find unused wells and noncompliant wells that will need to be upgraded to become compliant with the code, or filled and sealed. This may result in additional work for licensed persons and help avoid costly well contamination for property owners.

NR 146 and NR 812 Revision Comments and Responses
Natural Resources Board Order No. DG-03-13

January 21, 2014

This document presents a summary of public comments received on the proposed revisions of Chapters NR 146 and NR 812, Wisconsin Administrative Codes, and the Department responses.

PROCESS SUMMARY

The draft code changes were approved to go to public hearing by the Wisconsin Natural Resources Board on December 12, 2013. The draft code was made available for public review from December 2 through December 20, 2013. In addition to the usual public notice, a postcard was mailed to all licensed well drillers and pump installers. Two days of public hearings were held on the proposed code changes as follows: December 16, 2013 in Madison, Milwaukee, Wausau and LaCrosse, and December 17, 2013 in Madison, Green Bay, Eau Claire and Ashland. The hearings were held in conjunction with hearings on Natural Resources Board Order No. DG-02-13, Heat Exchange Drilling.

COMMENT SUMMARY

There were a total of 20 attendees at the eight public hearings. Two persons testified on the record regarding DG-03-13 and the Department received one letter and three e-mails in addition to the Clearinghouse Report to the Agency regarding DG-03-13. Of the 20 hearing attendees, two indicated general support of the draft code changes and no one indicated general opposition to the draft code changes.

Comments in this document are summarized under comment categories. Except for comments on Form, Style and Placement in Administrative Code, and Clarity, Grammar, Punctuation and Use of Plain Language, the Department has provided an individual response to each comment.

Some of the comments received resulted in changes being made to the proposed codes and rule package, as indicated in the comment responses.

COMMENTS AND RESPONSES

Comment category: Minimum Separation Distances between Wells and Potential Contaminant Sources

Comment: Regarding NR 812.08(4)(b)15. Buried sanitary ~~or storm~~ collector sewer serving 4 or fewer living units ~~or~~ and having a diameter of 6 inches or less.

Changing "or" to "and" to correct a mistake that the department made in the last code revision will be problematic for drillers who have complied with the code for the past 22 years and will now find their installations flagged as noncompliant during property transfer well inspections.

Response: The department agrees to leave "or" in the code.

Comment: Regarding NR 812.08(4)(c)20 creating a minimum 50 foot separation distance between a well and sludge or septage landspreading or drying area.

It is not always easy for the driller to know where these areas exist. These separation distances should be eliminated.

Response: The department will change the minimum separation distances between a well and a sludge or septage landspreading or drying area to a *recommended* separation distance of 25 feet when the driller is siting the well.

Comment: Regarding NR 812.32(4)(e) When a well is installed with a submersible pump and an above ground discharge, it shall contain an UL approved check valve and an air-vacuum relief valve prior to any buried portion of the discharge pipe. When water is pumped to a pond or other body of water, the end of the pump discharge pipe shall be terminated at least 2 feet above the highest elevation of the water in the pond or other body of water.

What does the department mean by "air-vacuum relief valve?"

Response: An air-vacuum relief valve is a standard feature on surge tanks used for flowing well installations and on municipal water supply pump systems. They can be found in water supply equipment catalogs. The department maintains a list of acceptable air-vacuum relief valves, though it is currently in need of updating.

Comment category: Water Sampling Requirements

Comment: Regarding NR 812.41(3) is repealed and recreated to read: NR 812.41(3) SAMPLING FOR COLIFORM BACTERIA, NITRATE AND ARSENIC. (a) For potable wells, the pump installer or his or her agent or the owner shall collect a water sample to be analyzed for coliform bacteria within 30 days following completion of the original pump installation and before the system is placed into service. Water samples shall also be collected and analyzed for coliform bacteria, nitrate and arsenic within 30 days after the well is entered for the purpose of measuring or diagnosing any feature or problem within the well or after the well is entered for rehabilitation, redevelopment, reconditioning or cleaning or if the well is entered for the purpose of installing, replacing or repairing equipment located within the well or when the casing height is raised. If the pump installer uses the well owner as the agent to collect the water samples, the pump installer shall provide the owner with laboratory designated sample bottles and department prescribed forms. Regardless of whom the pump installer designates to collect and submit the samples for analysis, the responsibility to ensure these tasks are completed belongs to the pump installer. Water samples shall be collected within 30 days after completion of the work. If the installation is completed at a time when the sample will be received at a certified laboratory later than 48 hours after the sample was collected, the sample may instead be collected within 30 days after the well is placed in service. If the laboratory test report indicates that any test result is invalid for any reason, including improper sample bottle, improper collection technique or longer than 48 hours between sample collection and arrival at the

laboratory, the pump installer is required to collect replacement samples within 30 days of receiving the invalid test report(s).

"If the pump installer designates the owner to collect samples, the responsibility is on the pump installer to make sure the samples are collected." I do not agree, if the arrangement is made with the owner the responsibility should shift to the owner.

Response: Since 1991, the well code has allowed a pump installer to designate an agent to collect required samples. Although not previously stated explicitly in code, it has been department practice to enforce failure to collect required samples against pump installers because they hold the licenses to perform the work. Requiring the department to follow-up on missing samples from tens of thousands of well owners would make the sampling requirements unenforceable.

Comment: Also regarding NR 812.41(3), *Concerned that arsenic samples at time of pump installation or chlorination may cause inconsistent results. The department should add a recommendation that additional sampling may be required if the arsenic test results are high.*

Response: Agree. The department will add a note to this section and update our arsenic brochure and webpages.

Comment: Regarding NR 812.44(4) SAMPLES. Any property transfer well inspection shall include the collection of water samples to be tested for coliform bacteria, nitrate and arsenic for each potable well on the property. Any property transfer well inspection shall include the collection of a water sample to be tested for coliform bacteria for each nonpotable well on the property. The coliform test shall be performed by a laboratory certified for bacteriological testing of drinking water. The nitrate test shall be performed by a laboratory certified for nitrate analysis of water. The arsenic test shall be performed by a laboratory certified for arsenic analysis of water. Laboratory test reports shall not be submitted to the department except in the case of a variance request. Laboratory test reports for coliform bacteria, nitrate and arsenic shall be provided to the person that requested the inspection.

Replace the word "performed" with "analyzed."

Response: The department will make that change.

<u>Comment category: Well Casing Pipe Depth Verification</u>

Comment: Regarding NR 812.41(4) WELL CASING PIPE DEPTH VERIFICATION. When required to measure well casing pipe depth, due to lack of a confirmable well construction report, the pump installer shall enter the well details, including location, well casing pipe depth, total well depth, distances to possible contaminant sources and well owner information on a form provided by the department and shall submit the report to the department within 30 days. A copy of the report shall also be provided to the well owner within 30 days.

Many WCR have legal description only and no means to exactly locate the wcr. I recommend adding language such as, "if there is reasonable justification that the well casing depth is adequate casing verification is not required." This would save the time and costs associated with removing the well pump to determine the casing depth. Many times a pump is partially

removed to repair a damaged wire, pipe etc. The cost to fully remove the pump would be much greater than the information gained by the casing verification.

Response: The suggested language is unenforceable and well casing pipe depth verification is not required in the example offered by the author—repairing damaged wire, pipe etc. The cases where verification is required--extending well casing pipe out of a pit or alcove, or deepening a well,--warrant measurement of the casing pipe depth if the contractor cannot definitively match the well to an existing well construction report through its locational information and the name of the owner at time of construction. Verifying the well casing pipe depth will protect the well owner from wasting money on a possibly seriously noncompliant well.

Comment category: Sample Faucets

Comment: Regarding NR 812.42(11)(b) *Sample Faucet.* No matter what the date of the pump installation was, when doing any pump work involving replacement of the pressure tank, or work involving the water supply piping inside the basement or building, upstream of the pressure tank, the pump installer shall install a complying sample faucet if one is missing. The pump installer shall also replace any noncomplying sample faucet, no matter when it was installed, that does not comply with the requirements of s. NR 812.34, including replacement of any threaded sample faucet with a sample faucet without threads. It is no longer permitted to file the threads off a noncomplying sample faucet.

Many older systems have a threaded sample faucet and have been sampled at this point for years. If the well produces a safe sample at this faucet why is it necessary to replace it: It seems costly and wasteful to remove a functioning faucet and replace it when the existing one is serving the purpose.

Response: The reason that the well code eliminated the installation of new threaded sample faucets in the 1991 revision was to protect the well from contamination via cross connections. Threaded sample faucets make it easy to connect a hose which can be submerged in a bucket or tank containing a contaminant which can then be drawn back into a well via backflow or back siphonage and contaminate the groundwater, or be a threat to the health of those drinking the water. The department believes that threaded sample faucets installed prior to 1991 pose a significant enough hazard that they should be eliminated also. The estimated cost of replacing a sample faucet when other work is being performed is less than $100.

Comment category: Property Transfer Well Inspections

COMMENT: *Housing impact statement requirement not met – Section 227.115 of the Wisconsin Statutes requires the Department of Administration to perform a housing impact report for any administrative rule that affects, among other things, the cost of housing, or constructing, rehabilitating, improving or maintaining single family or multi-family dwellings. Because the proposed well water rules could have an impact on the cost to rehabilitate, improve and maintain single family homes due to various provisions of the rule such as likely has an impact on the cost of housing by limiting the supply of developable land, a housing impact statement should be prepared as part of the administrative rulemaking process.*

RESPONSE: The Department of Natural Resources does not believe Section 227.115, Stats., is applicable to the proposed rule revisions for the following reasons:

1. The proposed rule revisions in chs. NR 146 and 812 do not meet the criteria in s. 227.115, Stats., as they do not directly or substantially affect the development, construction, cost, or availability of housing in this state and the rules are unlikely to limit the supply of developable land.
2. Inspections of water systems are voluntary, not mandatory. An inspection is only completed if the buyer or seller chooses.
3. The results of an inspection of the water system are between the buyer and the seller to resolve. The proposed code changes don't require that the results of the inspection be submitted to the DNR. The code states the results of an inspection should not be submitted to the DNR unless a well variance is needed. The code does not require non-complying features be repaired. That is a negotiating item between the buyer and seller.

***COMMENT**: Property Transfer Well Inspection (Section 44) – This section requires well inspectors to provide a completed property transfer well inspection form to any person requesting an inspection. See NR 146.11(5). However, we were informed that the property transfer well inspection form has not yet been completed. Because the content of this form could affect the outcome of the transaction, the WRA would appreciate the ability to review and comment on the form before it is finalized.*

***RESPONSE**:* The inspection form was created by a committee with membership consisting of well drillers, pump installers and DNR staff. The well drillers and pump installers that developed the form complete many private well inspections each year and are familiar with the features that determine whether a well is compliant or not. A copy of the inspection form will be sent to the commenter.

***COMMENT:** Structures built over a well (point wells) (Section 91) – This section prohibits new and existing wells from terminating below grade and requires any existing noncompliant well to be (a) filled and sealed, or (b) brought into compliance by installing a pitless adaptor on the well so that it terminates above grade. With respect to existing wells, these changes have a 10 year delayed effective date to provide property owners sufficient time to bring their existing wells into compliance.*

The proposed change would require all noncompliant wells to be brought into compliance within 10 years, regardless of whether the wells are operating properly. This is a significant change in policy from existing rules which require such wells to be brought into compliance only when repaired. In most cases, this provision will result in mandatory compliance at the time of sale because lenders will not provide financing for the home until the well is brought into compliance. The cost to replace a well ranges between $5000 and $10,000 depending upon the soil type and location of the well. Because most of the homes serviced by these wells are in rural areas with lower home values, this requirement could decrease the value of an affected home by up to 20% (depending upon the value of the home) if the well must be replaced. This seems an unreasonable expense to impose upon affected homeowners if their wells are operating properly.

RESPONSE: The existing administrative code on well construction hasn't allowed a well to be completed below the ground surface (as in a basement or pit) since 1953. If a well was constructed after 1953 and is finished below grade then this well has been noncompliant from the time of its installation. The proposed code change doesn't affect these wells. These wells

are already noncompliant and an inspection of the well should point this out under the existing code.

It is very unlikely that point wells mentioned by the commenter would still be functional if they were installed prior to 1953. A point well currently present in a basement was very likely installed or replaced after 1953. This well is noncompliant under the existing codes.

The same issue applies to wells in pits. Wells in pits constructed after 1953 are already noncompliant. Our experience with wells in pits (whether constructed before or after 1953) is that the pits are unsanitary and need to be properly abandoned. If a well located in a pit is otherwise compliant then this well can be upgraded out of the pit. A licensed well driller or pump installer can evaluate this.

The Department agrees to remove the provision that wells installed prior to 1953 in basements and pits will by rule become noncompliant 10 years after the effective date of this rule change. These wells will continue to be evaluated against the standards for existing installations in NR 812.42, and on the sanitary condition of the well, and of the basement or pit.

Inspection of the well and water system at the time of real estate transfer is a voluntary action taken by the buyer or seller, the parties to the transaction. Neither the statute nor the proposed code changes require that the well be inspected during a real estate transaction.

COMMENT: *This section requires that all well water tests to test for coliform, arsenic and nitrates and that such test must be performed by a certified laboratory. According to DNR staff, these tests will cost approximately $100. However, such tests are not required at the time of property transfer.*

RESPONSE: Well inspection at the time of real estate transfer is not required by the statute or the proposed code revisions. If a buyer or seller chooses to have a well inspection then that inspection must be completed by a licensed well driller or pump installer. The proposed code requires that inspection to be performed using a DNR specified form. That form requires water samples for bacteria (coliform), arsenic and nitrates. Neither the results of the water tests, nor the inspection form, are required to be submitted to the DNR.

Comment category: Miscellaneous

Comment: *Suggest that well drillers be required to measure well casing depth in special well casing depth areas before deepening or reconstructing a well.*

Response: Well drillers are already required to obtain department approval before reconstructing a well in a special well casing depth area. If department staff believe it necessary to have the casing depth measured, it can be made part of the approval process.

Comment: *Regarding "Citations" in both administrative rules, some code references that fall under the citable violation categories listed in statute are absent from ss. NR 146.12 and NR 812.44. Suggest that they be added to both rules.*

Response: Agree

Comment: *Table C in NR 812.26 needs to be updated to reflect the changes to the well filling and sealing requirements in rule text.*

Response: Agree

Comment: *Suggest that the department check that all the code Figures have been updated to reflect all the proposed code changes.*

Response: Agree

Comment: The department should evaluate whether to include both or just one of the driveway ramp figures and whether modifications are needed.

Response: Both are needed, without modification.

Comment: *Suggest adding figures for NR 812.42(12) Well Casing Height Extensions for Steel Well Casing Pipe.*

Response: The department believes this is unnecessary.

Comment category: Form, Style and Placement in Administrative Code

All suggested comments in this category were incorporated into the draft code revisions, except those with a specific response below.

Comment: e from the Legislative Council Rules Clearinghouse Report on Clearinghouse Rule 13-099. *Most of the definitions created by SECTION 6 and the following sections appear to be unnecessary, at the meaning of the words is fairly obvious. The same is true for some of the definitions created in s. NR 812.07.*

Response: The definitions were added in response to legal questions that have arisen in the past 20 years in enforcement or licensing situations. There is not a standard dictionary definition for these terms. The department believes that these definitions are necessary to save department time in dealing with related issues in the future.

Comment: p from Legislative Council Rules Clearinghouse Report on Clearinghouse Rule 13-099 Section NR 146.04(6) *refers to "an individual or person". Since the rule creates a definition of "person", which includes individuals, the word "individual" should be omitted here. See also s. NR 146.07(4), and review the rule for other such errors.*

Response: In this rule the only type of person who can hold a license is an individual. But an individual may also hold a registration. Because license and registration are both referred to in this paragraph, the department would prefer to leave the word "individual" in for clarity.

Comment: z, second and third sentences from Legislative Council Rules Clearinghouse Report on Clearinghouse Rule 13-099, regarding changes to the definition of "Public water system."

Also, the last phrase of the introduction should read: "A public water system includes all of the following:" Paragraphs (a) and (b) should be amended to begin with the word "Collection:. Paragraph (a) should also be amended to replace the final comma and word "and" with a period.

Response: The department would prefer to keep the changes to the definition as proposed because it will match the current definition in the Public Water Supply Code, ch. NR 811.

Comment category: Clarity, Grammar, Punctuation and Use of Plain Language

All suggested comments in this category were incorporated into the draft code revisions, except those with a specific response below.

Comment: t in s. NR 812.27 (6), *the second occurrence of "be analyzed" should be omitted.*

Response: The second occurrence of be analyzed helps to clarify that the Wisconsin state laboratory of hygiene is not required to have an agreement to provide water sample test results to the department. Deleting it could give an incorrect meaning.

Comment category: Positive Comments

From the president of the Wisconsin Water Well Association, a licensed water well driller and pump installer:

Appreciate that the department changed the proposed separation distance to an agricultural crop field to a recommended distance. Also appreciate that department will allow PVC well casing pipe to be extended completely above grade without being housed within PVC above grade

Would like to thank the department a lot for the effort put into this code revision, especially in the last six months to wrap up what has been a long process.

From the treasurer of the Wisconsin Water Well Association, a licensed pump installer:

Very much in support of the rules that are presented here.

STATE OF WISCONSIN
DEPARTMENT OF ADMINISTRATION
DOA-2049 (R03/2012)

DIVISION OF EXECUTIVE BUDGET AND FINANCE
101 EAST WILSON STREET, 10TH FLOOR
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MADISON, WI 53707-7864
FAX: (608) 267-0372

ADMINISTRATIVE RULES
Fiscal Estimate & Economic Impact Analysis

1. Type of Estimate and Analysis
☐ Original ☒ Updated ☐ Corrected

2. Administrative Rule Chapter, Title and Number
NR 146, Well Driller and Pump Installer Registration; NR 812, Well Construction and Pump Installation

3. Subject
Licensing and Standards for Water Well Drilling Rig Operators, Property Transfer Well Inspections and Well Filling and Sealing; Citations for Well and Pump Violations

4. Fund Sources Affected
☐ GPR ☐ FED ☐ PRO ☐ PRS ☐ SEG ☐ SEG-S

5. Chapter 20, Stats. Appropriations Affected

6. Fiscal Effect of Implementing the Rule
☒ No Fiscal Effect ☐ Increase Existing Revenues ☐ Increase Costs
☐ Indeterminate ☐ Decrease Existing Revenues ☐ Could Absorb Within Agency's Budget
☐ Decrease Cost

7. 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)**

8. Would Implementation and Compliance Costs Be Greater Than $20 million?
☐ Yes ☒ No

9. Policy Problem Addressed by the Rule
N/A

10. 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.
Licensed Well Drillers and Pump Installers, Wisconsin Water Well Association, Advisory Council on Well Drilling & Pump Installing

11. Identify the local governmental units that participated in the development of this EIA.
N/A

12. 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 proposed rule changes update administrative code to match statutory requirements and current department practice. Most affected entities are already licensed and many follow the standards proposed here. These requirements affect voluntary well inspections. The statute requires the department to develop rules for issuance of citations.

13. Benefits of Implementing the Rule and Alternative(s) to Implementing the Rule
This proposal aligns administrative code with statutory requirements. Those requirements improve well inspections, which should increase protection of the state's groundwater supplies.

14. Long Range Implications of Implementing the Rule
Same as above

15. Compare With Approaches Being Used by Federal Government
There are no Federal requirements for private water supplies.

16. Compare With Approaches Being Used by Neighboring States (Illinois, Iowa, Michigan and Minnesota)
Minnesota Dept of Health requires, at time of property transfer, disclosure of wells that need to be filled and sealed. Minnesota requires well filling and sealing to be done by licensed contractors. Minnesota has admininistrative penalty orders but not citation authority. Minnesota does not register water well drilling rig operators.

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ADMINISTRATIVE RULES
Fiscal Estimate & Economic Impact Analysis

17. Contact Name	18. Contact Phone Number
Dorie E. Turpin	608-266-0162

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ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
REPEALING, RENUMBERING, RENUMBERING AND AMENDING, AMENDING, REPEALING AND RECREATING, AND CREATING RULES

DRAFTING ERRORS CORRECTED ON PAGES 38 AND 43

The Wisconsin Natural Resources Board proposes an order to **repeal:** NR 812.03(2), 812.08(4)(a)3., 4., 5., 6., 8., 13., (b)9., 10., and 13., 812.26(4), 812.26(5)(e), 812.43 (1)(d); to **renumber** NR 146.02(1), 812.07(51) to 812.07(52), 812.07(52) to 812.07(51), 812.07(112g) to 812.07(111m); to **renumber and amend**: NR 146.04(2)(c) and (note) to 146.04(2)(i) and (note), NR 146.04(3)(a) and (note) to 146.04(3)(c) and (note); to **amend:** ch. NR 146 (title), 146.01(1) and (2) and (note), 146.02(3), (4), (7), (9), and (10), 146.03 (1) and (3), 146.04 (title), (1)(a) and (note), (b), and (d), 146.04(2)(title), (intro), (a), (b), and (d), 146.04(3)(title) and (intro),and (3)(b) 146.05(title, (1) and (note), and (2), 146.06, 146.07(1)(a), (b) and (e), 146.08, 146.09, 812.01(2), 812.02(1)(b) and (2), 812.03(1), 812.05(2)(b), 812.07(3), (4), (6), (10), (23), (24), (35), (38), (42), (49), (53) (54), (57m), (60), (64), (67), (72), (74)(b),(80) (intro.), (a), (b), (84), (86), (90), (91), (93)(intro), (93)(a), (94), (104), (105), (106), (107), (108), (122); 812.08(1)(intro.), (b), and (d), (2)(a), (b), (c), (4)(intro.), (a)1., and 2., 11., 14. and 15., (4)(b)2., 3., 4., 7., 12., and 15., (4)(c)1., 2., 4. and 10., (4)(d)1., 4., and 6., (4)(f)2., 7. and 8., (4) Table A, 812.09(4)(a)5. (4)(L), and (4)(r), 812 SUBCHAPTER II (TITLE), 812.10(2) and (8), 812.11(1), 812.12(16) 812.13(3)(b)7., 812.22(7)(b), 812.26(title) and (1), (2)(a)(intro.), 1., 2. and 4., (2)(b), (2)(c)(intro.) and (2)(d), (3), (5)(intro.), (6), (7), and (8), 812.27(5), 812.27(8) and (9), 812.28, 812.29, 812.30(3), 812.31(2)(a) and (b), (4)(e), 812.32(1)(a)(intro.), (2)(b), (5)(b)3.b., (6)(b) and (9)(c)3., 812.33(1)(a)1., (1)(b), (2) (intro.), and (3), 812.34 (title), and (intro.), 812.35, 812.37(4)(a), 812.42(1) (title), (intro.), (a) and (b), (1)(c), (2)(intro), (a), (c) and (d), (3), (4)(f), (6) (intro.), (6)(a)2., (6)(b)4., (7), (8), (9)(a) and (b), 812.43 (1); to **repeal and recreate:** NR 146.02(5), 146.03(2), 146.04(4), 146.07(2), 812.07(82) and (124), 812.10(11), Figures 5(b)1., 6(b)1., 7(b)1., 8(b)1., 9(b)1. and 10(b)1., 812.22(6), 812.27(6), 812.30(5), 812.32(2)(a)5. Figures 36b. and 36c., 812.41(3); to **create** NR 146.01(note), 146.02 (1e), (1m), (3m) and (note), (4b), (4d), (4f), (4h), (4j), (4L), (4n) and (note), (4p), (4r), (4t), (4v), (5)(note), (7g), (7r), (9)(note), (9g), and (9r), 146.03(4), 146.04(2)(cm), (e), (f), (g), (h), (j), (k), (L) and (2m), 146.04(3)(a), (d), and (3m), 146.04(4m), (5), (5m), (6), (7) and (8), 146.07(1)(f), (g), (h),and (i), 146.08(8) to (19), 146.09 (3)(c) and (d), 146.10, 146.11, 146.12, 812.01(1)(c), 812.07(1d), (1h), (1p), (1t), (10m), (17m), (19m), (27t), (29m), (35e), (41m), (47m), (54g), (54r), (55m), (57s), (61g), (74)(c), (74)(d), (74)(e), (75c), (75g), (75L), (75p), (75t), (75x), (79e), (79p) and (note), (79t), (80m), (85m), (94g), (94r), (96g), (108r), (110s), (112m), (112v), (119g), (124m) and (note), 812.08(1)(f), (2)(c)(note) and (note), (d), (e), (f), and (g), (4)(a) and (note) 16., 17. and 18., (4)(b)16. and (note) and 17., (4)(c)16., 17., 18., 19., 20.,and (21), (4)(d)10., 11. and 12., (4)(fm), 812.10(12) and (13), 812.12(2)(e), 812.22(9) and (10), 812.26(2)(a)5. and 6., (6)(h) and (6)(i), (7)(b)1. Table VI,, (9), 812.27(10) and (11), 812.30(6), 812.32(1)(e) and (f), (4)(c) and (d), (9)(d), 812.33(1)(a)2.d., and (2)(b)5. 812.36(3), Figures 45A and 45B, 812.41(4), 812.42(1)(b)2., 3., 4., and 5., (4)(g) and (h), (10), (11), (12), (13), and subchs. VI and VII of ch. 812, relating to licensing criteria for water well drilling rig operators, property transfer well inspectors and well filling and sealing contractors, and criteria for citations and relating to standards for property transfer well inspections, well filling and sealing and criteria for citations.

DG-03-13

Analysis Prepared by the Department of Natural Resources

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1. Statutes interpreted:

Sections 227.11 and s. 280.11(1), Wis. Stats.

2. Statutory authority:

Sections 280.11(1), 280.15(3g), 280.30, 280.98, 281.11, 281.12 and 281.19, Wis. Stats.

3. Explanation of agency authority:

Section 280.11(1), Wis. Stats., grants authority to the department to, among other things, establishment of all safeguards necessary in protecting public health against the hazards of polluted or impure water supplies. Specifically, s. 280.15(3g), Wis. Stats., requires compliance with licensing, training and education requirements promulgated by the department by rule for water well drilling rig operators. S. 280.30, Wis. Stats., requires licenses or registrations for persons performing property transfer well inspections or water well filling and sealing. S. 280.98, Wis. Stats, requires the department to promulgate rules for issuance of citations for specific licensing or well and pump code violations. Section 281.11, Wis. Stats., authorizes the department to serve as the central unit of government to protect maintain, and improve the quality and management of the waters of the state, ground and surface, public and private. Section 281.12, Wis. Stats., provides that the department shall have general supervision and control over waters of the state. Section 281.19, Wis. Stats., grants authority to the department to adopt rules applicable throughout the state for the construction, installation, use and operation of practicable and available methods for preventing and abating pollution of the waters of the state.

4. Related statutes or rules:

Chapter 280, Wis. Stats. – Pure Drinking Water, provides definitions for terms, defines the powers of the department, and lays out well drilling registration, licensing and qualification requirements and fees for such. It also defines certain prohibitions and exceptions, local authority and defines penalties and citations.

Chapter 281, Wis. Stats. – Water and Sewage, designates the department as the central unit of government to protect, maintain, and improve the quality and management of the waters of the state, ground and surface, public and private, provides that the department shall have general supervision and control over waters of the state, and grants authority to the department to adopt rules applicable throughout the state for the construction, installation, use and operation of practicable and available methods for preventing and abating pollution of the waters of the state.

Chapter NR 146, Wis. Adm. Code – Well Driller and Pump Installer Registration, provides definitions, registration requirements, defines the requirements for the initial application and registration conditions. It also defines requirements for out-of-state drillers, renewals and the registrant responsibilities, as well as license suspension and revocation criteria.

Chapter NR 812, Wis. Adm. Code – Well Construction and Pump Installation, provides a general section covering purpose, applicability, cooperation with the department, contracts for noncomplying installations, disposal of pollutants and injection prohibition, drinking water standards, definitions and location criteria, well filling and sealing requirements, requirements of new pump installations and water treatment, standards for existing installations, and variance conditions.

5. Plain language analysis:

The proposed rules amend chs. NR 146 and NR 812, Wis. Adm. Code, to create specific requirements for property transfer well inspections to help protect sources of drinking water as well the health of consumers. The proposed rules do not require inspections of wells at time of property transfer, but sets uniform minimum standards if an inspection is performed. The proposed rule changes will reduce the amount of time staff currently spend answering questions and writing variances because several requirements for existing wells have been simplified and/or eliminated. Inspection forms and laboratory reports will not be submitted to the department.

The proposed rules make other changes in chs. NR 146 and 812 to conform the provisions of the rules to existing statutes. Specifically, the rule order includes provisions in NR 146 for:

1. The qualifications and training for a registered water well drilling rig operator to become a licensed water well driller.
2. The requirements for department issuance of citations related to water well drilling and pump installing.
3. The qualifications for performing property transfer well inspections and well filling and sealing.

The proposed order includes provisions in NR 812 for

1. Procedures and requirements for property transfer well inspections.
2. Well filling and sealing procedures.
3. Eliminating some separation distance requirements that are no longer considered a health hazard for wells.
4. Citation procedures

6. Summary and comparison with existing and proposed federal regulations.

No federal regulations currently apply to private water supply wells with regard to licensing, well inspections, well filling and sealing or citations for code violations.

7. Comparison of similar rules in adjacent states:

MINNESOTA
Minnesota Department of Health requires that the status of all wells on a property be disclosed at time of property transfer for the purpose of getting unused and noncomplying wells filled and sealed. There is no requirement to inspect the well or disclose its compliance with the well code at time of property transfer. Minnesota does not have citation authority for license or well or pump code violations, but can issue administrative orders with financial penalties for noncompliance. Minnesota does not require water well drilling rig operators to be registered. Minnesota requires that filling and sealing of wells be performed by a licensed contractor.

8. Summary of factual data and analytical methodologies:

Instances of drinking water and groundwater contamination have occurred in Wisconsin as a result of failure to properly fill and seal wells. 2005 Wisconsin Act 360 was prompted by concerns in the water well and pump industry that current regulation and licensing did not adequately address the inspection of water wells and pumps at time of property transfer and that inexperienced or even unqualified individuals were doing inspections. The Wisconsin Water Well Association took the lead, yet worked closely with the department to develop Act 360. The proposed rules amend NR 146 and NR 812 so that rule provisions are consistent with the statutory changes made in 2005.

9. Analysis and supporting documents used to determine effect on small business or in preparation of an economic impact analysis:

The proposed rules codify fee amounts set in statute. The current water well drilling license is $50.00 per year for an individual drilling license and/or $50.00 for the drilling firm business license. Administration of the water well driller license exam is currently done at no cost to the water well driller. No complaints of economic hardship or business impacts have been received during the collection of existing license fees. The water well drilling rig operator registration fee is $25 per year. Annual continuing education costs about $150 per year. The Wisconsin Water Well Association, representing many affected drillers, or individual drillers participating in the advisory committee to rule development, have not expressed any concern about the impact of the fees.

10. Effect on small business:

Economic impacts of this rule will be minimal. Actual costs to well drillers and pump installers are small and unlikely to affect decisions to offer a service or enter a business sector.

Overall economic impacts are uncertain. Additional protection of groundwater through better filling and sealing practices may reduce future costs of drinking water treatment or groundwater clean-up.

11. A copy of any comments and opinion prepared by the Board of Veterans Affairs under s. 45.03 (2m), Stats., for rules proposed by the Department of Veterans Affairs: [if not applicable, so state]

Not applicable.

12. Agency Contact (include email and telephone number):

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SECTION 1. CH. NR 146 (TITLE) IS AMENDED TO READ: WATER WELL DRILLER AND PUMP INSTALLER LICENSING AND REGISTRATION WATER WELL DRILLING RIG OPERATOR REGISTRATION

SECTION 2. NR 146.01(1) and (2) is amended to read:

NR 146.01(1) Purpose and applicability. (1) PURPOSE. This chapter is promulgated under chs. 280 and 281, Stats. The purpose of this chapter is to establish the criteria by which the department administers the water well driller and pump installer licensing and registration program and water well drilling rig operator registration program required by ch. 280, Stats. and the licensing requirements for: filling and sealing potable and nonpotable water supply wells; and locating or evaluating wells that need to be filled and sealed, and locating or evaluating water supply wells and pressure systems at time of property transfer.

SECTION 3. NR 146.01(1) (note) is created to read:

Note: The standards for water well drilling, pump installing, well filling and sealing and property transfer well inspections are in ch. NR 812.

SECTION 4. NR 146.01(2) and (note) are amended to read:

NR 146.01(2) APPLICABILITY. This chapter applies to any individual or person~~, firm, corporation or partnership~~ engaging in, or intending to engage in the business of water well drilling, ~~or~~ pump installing, filling and sealing of potable and nonpotable water supply wells, and locating or evaluating wells or drillholes that need to be filled and sealed, or locating or evaluating water supply wells and pressure systems at time of property transfer in the state of Wisconsin. ~~This~~ The license requirements of this chapter ~~does~~ do not apply to water well drilling or pump installing activities involving a well supplying water which is not used for, or is not intended to be used for, human consumption or for the washing or preparation of food or pharmaceutical products.

Note: Any person constructing a water well or installing a pump, regardless of whether ~~he or she~~ that person is required to be licensed or registered under this chapter, is required to comply with applicable ~~statutory and administrative code requirements~~ laws and rules and with any plans, specifications, variance and approvals approved by the department for water well construction and pump installation. For example, ch. NR 812 contains water well construction and pump installation requirements for private and noncommunity water systems and chs. NR ~~108~~810 and 811 contain water well construction and pump installation requirements for ~~public~~ community water systems.

SECTION 5. NR 146.02(1) is renumbered to (1s)

SECTION 6. NR 146.02 (1e) and (1m) are created to read:

NR 146.02(1e) "Advance notification" means notification to the department via fax, e-mail or telephone at least one working day before commencing any work.

(1m) "Certificate of supervision" means a department form, signed by the owner of a water well drilling or pump installing business and by the licensed supervisory individual water well driller or pump installer,

which assigns supervisory, legal, financial and compliance responsibilities for a registered water well drilling or pump installing business.

SECTION 7. NR 146.02(3) is amended to read:

NR 146.02(3) "Direct supervision" means actual physical presence and supervision by a Wisconsin ~~registered~~ licensed individual water well driller during all water well drilling ~~activity~~ activities or by a Wisconsin ~~registered~~ licensed individual pump installer during all pump installing ~~activity~~ activities.

SECTION 8. NR 146.02(3m) and (note) are created to read:

NR 146.02(3m) "Driven point well" means a well constructed by joining a drive point with lengths of pipe, and driving the assembly into the ground with percussion equipment or by hand, but without first removing material below the 10-foot depth.

Note: A "driven point" is also known as a sand point well.

SECTION 9. NR 146.02(4) is amended to read:

NR 146.02(4) "Engage in the business of" includes advertising, bidding, contracting, preparing plans and specifications, supervising ~~well drilling or pump installing activities~~, performing ~~well drilling or pump installing activities~~, billing or receiving payment for ~~work done~~ water well drilling, pump installing, filling and sealing or property transfer well inspection activities.

SECTION 10. NR 146.02(4b), (4d), (4f), (4h), (4j), (4L), (4n) and (note), (4p), (4r), (4t) and (4v) are created to read:

NR 146.02(4b) "Experience period" means the two or three years during which a water well drilling rig operator gained experience toward obtaining a water well drilling license."

(4d) "Filling and sealing" means to fill a well, drillhole, pit or reservoir with a material or materials so the well, drillhole, pit or reservoir will not act as a vertical conduit to contaminate another well, groundwater or an aquifer.

(4f) "Licensed pump installer" means any individual who has obtained a license under s. 280.15 (2m), Stats., and s. NR 146.04, as a pump installer and has paid the annual license fee under s. 280.15 (2m)(c)2.

(4h) "Licensed water well driller" means any individual who has obtained a license under s. 280.15 (2m); Stats., and s. NR 146.04, as a water well driller and has paid the annual license fee under s. 280.15 (2m)(c)1.

(4j) "Person" means an individual, firm, business, corporation, limited liability corporation, company, association, cooperative, trust institution, partnership, state, public utility, municipality, or federal, state or interstate agency.

(4L) "Place of business or retail outlet" means every place for which a person would be required to have a seller's permit from the Department of Revenue.

(4n) “Potable water” means water supplied for human consumption, or water supplied for sanitary use or for the washing or preparation of food or pharmaceutical products.

Note: The term “water for human consumption” is used interchangeably with the term “potable water.”

(4p) “Property transfer well inspection” means an inspection, for compensation, for the purpose of locating or evaluating wells that need to be filled and sealed and water supply wells or pressure systems on real property in contemplation of a transfer of the real property.

(4r) “Property transfer well inspector” means an individual licensed as a water well driller or pump installer who performs a property transfer well inspection, completes the form required in s. NR 812.44(3) and collects the water samples required in s. NR 812.44(4).

(4t) “Pump installation” means the pump and its associated pressure system including any equipment and material needed to withdraw, obtain, discharge and store water from a well or a spring. The pump installation includes the spring box, reservoir, pump, pump drop pipe, check valves, well cap or seal, pitless adapter, pitless receiver tank, pitless unit, above-ground discharge unit, associated discharge piping and associated connections, valves and appurtenances, pressure tank, sampling faucet, water storage or pressure vessel or structure, the electrical wiring and controls needed to operate the pump or pressure system, and any chemical addition, water treatment device or yard hydrant upstream of the water storage or pressure vessel or building control valve.

(4v) “Pump installer registrant” means a person registered to engage in the business of pump installing in Wisconsin under the supervision of a licensed individual pump installer.

SECTION 11. NR 146.02(5) is repealed and recreated to read:

NR 146.02(5) “Pump installing” has the meaning specified in s. 280.01 (5), Stats., and includes installing, repairing, replacing or reinstalling a: spring box, reservoir, pump, pump drop pipe, check valve, well cap or seal, pitless adapter, pitless receiver tank, pitless unit, above-ground discharge unit, associated discharge piping and associated connections, valves and appurtenances, pressure tank, sampling faucet, water storage or pressure vessel or structure, the electrical wiring and controls needed to operate a pump or pressure system, and any chemical addition, water treatment device or yard hydrant upstream of the water storage or pressure vessel or building control valve; attaching well casing pipe to extend the well casing pipe to a complying height above grade, or up and out of a pit or a subsurface pumproom or alcove; or bailing or chemically conditioning a well to return it to its original capacity, production capability or water quality. Pump installing does not include installation of a temporary test pump by a water well driller for the purpose of determining well capacity or water quality and does not include the installation, by a well driller, of a well cap or seal. Opening a well cap or well seal to inspect or chlorinate a well is not considered pump installing unless the well cap or seal is replaced with a different cap or seal, or unless the well has a hand pump installed on it.

SECTION 12. NR 146.02(5)(note) is created to read:

Note: Section 280.01(5), Stats., defines “Pump installing” to mean the industry and procedure employed in the placement and preparation for operation of equipment and materials utilized in withdrawing or obtaining water from a well for consumption or use, including all construction involved in making entrance to the well and establishing such seals and safeguards as are necessary to protect such water from contamination.

SECTION 13. NR 146.02(7) is amended to read:

NR 146.02(7) "Regulation" means the laws, rules and conditions under which any registration, license or variance is issued or plans and specifications are approved by the department.

SECTION 14. NR 146.02(7g), and (7r) are created to read:

NR 146.02(7g) "Under the supervision" means employed by a licensed individual or by a registered person, employing or contracting with a licensed supervisory individual who is legally and financially responsible for compliance with all applicable laws and rules and any plans, specifications, variances and approvals approved by the department, and who has advance and specific knowledge of water well drilling, pump installing or filling and sealing activities.

(7r) "Water well drilling rig operator" means an individual registered with the department to operate a drilling rig to construct potable wells under the general or direct supervision of a licensed individual water well driller.

SECTION 15. NR 146.02(9) is amended to read:

NR 146.02(9) "Well" has the meaning ~~designated~~ specified in s. 280.01 (6), Stats.

SECTION 16. NR 146.02(9) (note), (9g) and (9r) are created to read

NR 146.02(9) (note) Note: s. 280.01 (16), Stats., defines "well" to mean an excavation or opening into the ground made by digging, boring, drilling, driving or other methods for the purpose of obtaining groundwater for human consumption.

(9g) "Well and pressure system" means the water supply and pump installation upstream of a building control valve or pressure tank and including any pressure tank.

(9r) "Well driller registrant" means a person registered to engage in the business of water well drilling in Wisconsin under the supervision of a licensed individual water well driller.

SECTION 17. NR 146.02(10) is amended to read:

NR 146.02(10) "Well drilling" has the meaning ~~designated~~ specified in s. 280.01 (8), Stats., and includes any activity which requires the use of a well drilling rig or similar equipment~~,~~; or any activity which is conducted using a well drilling rig or similar equipment with the exception of the driving of points~~,~~having pipe and casing smaller than three inches in diameter. Well drilling also includes constructing a well or performing any activity which changes the ~~character~~ characteristics of a drilled well~~. Activities for which the department may require a Wisconsin well driller registration include~~ including constructing, reconstructing or deepening a well, sealing the annular space of a well, joining or welding together lengths of well casing pipe or liner pipe, ~~installing~~ installation of a liner, installing or replacing a screen, well rehabilitation, hydrofracturing, blasting and chemical conditioning.
Note: Section 280.01(8), Stats., defines "Well drilling" to mean the industry and procedure employed in obtaining groundwater from a well by digging, boring, drilling, driving or other methods but not including the driving of points for the purpose of obtaining ground water. It shall also include all construction work and installation of well casings in said well involved therein for the protection of such well water against pollution.

SECTION 18. NR 146.03 (1) is amended to read:

NR 146.03 (1) ~~Registration~~ License or registration. **(1)** REQUIRED. No individual or person~~, firm, corporation or partnership~~ may engage in the business of water well drilling, ~~or~~ pump installing or filling and sealing, or property transfer well inspections, or hold himself, herself or itself out as or act temporarily or otherwise as a water well driller, or pump installer~~,~~ or well or drillhole filler and sealer, or property transfer well inspector in the state of Wisconsin without first obtaining either a water well driller or pump installer license or a water well driller or pump installer registration from the department.

SECTION 19. NR 146.03(2) is repealed and recreated to read:

NR 146.03(2) EXCEPTIONS**. (a)** A Wisconsin individual water well driller license is not required for any of the following:

1. An individual performing water well drilling on real estate owned or leased by that individual, but the well and the work done on the well shall comply with the applicable laws and rules and with any plans, specifications, variances and approvals approved by the department.

2. Competent sanitary engineers preparing plans and specifications or supervising the installation of water wells by a licensed individual water well driller or a registered water well drilling business for which the engineer prepared plans and specifications.

3. Superintendents of waterworks systems preparing plans and specifications or supervising the installation of water wells by a licensed individual water well driller or a registered well drilling business, for which the superintendent is responsible.

4. An individual who is employed by a licensed individual water well driller.

5. An individual who is employed by a person that is registered as a business to perform water well drilling.

6. An individual constructing nonpotable water supply wells.

(b) A Wisconsin water well driller business registration is not required for any of the following:

1. An individual who is a licensed water well driller who does not operate as corporation, partnership or LLC.

2. An individual performing water well drilling on real estate owned or leased by that individual, but the well and the work done on the well shall comply with the applicable laws and rules and with any plans, specifications, variances and approvals approved by the department.

3. Competent sanitary engineers preparing plans and specifications or supervising the installation of water wells by a licensed individual water well driller or a registered water well drilling business for which the engineer prepared plans and specifications.

4. Superintendents of waterworks systems preparing plans and specifications or supervising the installation of wells by a licensed individual water well driller or a registered well drilling business, for which the superintendent is responsible.

5. An individual who is employed by a licensed individual water well driller.

6. An individual who is employed by a person that is registered as a business to perform water well drilling.

7. A person constructing nonpotable water supply wells.

(c) A Wisconsin individual pump installer license is not required for any of the following:

1. Competent sanitary engineers preparing plans and specifications or supervising the installation of water systems by a licensed individual pump installer or registered pump installing business, for which the engineer prepared plans and specifications.

2. Superintendents of waterworks systems preparing plans and specifications or supervising the installation of water systems by a licensed individual pump installer or registered pump installing business, for which the superintendent is responsible.

3. An individual who is employed by a licensed individual pump installer.

4. An individual who is employed by a person that is registered as a business to perform pump installing.

5. A person installing pumps in nonpotable water supply wells.

6. A welder installing a welded pitless adapter or pitless unit under contract with or employed by a licensed individual pump installer or registered pump installing business.

(d) A Wisconsin pump installer business registration is not required for any of the following:

1. An individual who is a licensed pump installer who does not operate as corporation, partnership or LLC

2. Competent sanitary engineers preparing plans and specifications or supervising the installation of water systems by a licensed individual pump installer or registered pump installing business, for which the engineer prepared plans and specifications.

3. Superintendents of waterworks systems preparing plans and specifications or supervising the installation of water systems by a licensed individual pump installer or registered pump installing business, for which the superintendent is responsible.

4. An individual who is employed by a licensed individual pump installer.

5. An individual who is employed by a person that is registered as a business to perform pump installing.

6. A person installing pumps in nonpotable water supply wells.

7. A welder installing a welded pitless adapter or pitless unit under contract with or employed by a licensed individual pump installer or registered pump installing business.

(e) A pump installer license or registration is not required for a licensed water well driller or registered water well drilling business if the licensed well driller or the employee of a registered water well drilling business installs a temporary test pump for the purpose of determining well capacity or water quality or installs or replaces a well cap or seal.

SECTION 20. NR 146.03(3) is amended to read:

NR 146.03(3) PERFORMANCE STANDARDS. All water well drilling, ~~and~~ pump installing, filling and sealing and property transfer well inspections ~~work~~ shall ~~conform to statutory and administrative code requirements~~ comply with the applicable laws and rules and ~~to~~ with any plans, ~~and~~ specifications, ~~or variance~~ variances and approvals approved by the department.

SECTION 21. NR 146.03(4) is created to read:

NR 146.03(4) EXPIRATION. All licenses and registrations expire on December 31 and are not transferable.

SECTION 22. NR 146.04 (title), (1)(a), (b) and (d) are amended to read:

NR 146.04 Initial applications for licenses or registrations.

(1) GENERAL REQUIREMENTS. **(a)** All new license and registration applications shall be submitted on forms ~~provided~~ specified by the department for this purpose. An applicant for a water well drilling rig operator registration shall be at least 18 years old. An applicant for an individual water well driller license shall be at least 20 years old.

Note: Pursuant to 29CFR 570.58 and Hazardous Occupations Order #7, persons under the age of eighteen are not lawfully permitted to operate a power-driven hoisting apparatus.

(b) All information on an application shall be complete, true and accurate. The department may request ~~a registration~~ an applicant to ~~verify~~ provide proof of any information submitted on the application ~~submitted~~.

(d) ~~Registration~~ The license or registration shall be effective on the date the ~~permit~~ license or registration is issued by the department and expires on December 31 of each year. ~~Registrants~~ Licensees and registrants shall inform the department no later than 15 business days after any changes in the information on the application submitted to the department, including any change in status or ability of the licensed supervisory individual water well driller or licensed supervisory individual pump installer to perform their supervisory responsibilities.

SECTION 23. NR 146.04(2)(title), (intro), (a) and (b) are amended to read:

NR 146.04(2) WATER WELL DRILLER ~~REGISTRATION~~ LICENSE. To be eligible for ~~a~~ an individual water well driller ~~registration~~ license, an applicant shall meet all of the following requirements:

(a) Have 2 years of potable water well drilling experience, within the last 5 years, under the supervision of a Wisconsin ~~registered~~ licensed individual water well driller who provided direct supervision during the construction of the applicant's first 10 wells listed on the application and at least general supervision on the remaining water wells drilled during the experience period. The name and address of the supervisory

water well driller, the dates of apprenticeship and a description of the activities conducted shall be provided to the department.

(b) Have ~~drilled~~ operated the drilling rig performing all the water well drilling activities during the drilling of at least 30 potable wells; or for large-diameter, potable community water supply wells, performed at least 1500 hours of well drilling activities as defined in s. NR 146.02 (10), in 2 years, a minimum of 10 wells or 750 hours ~~in any single~~ each year. The water well drilling experience shall extend throughout the two- or three-year experience period. To fulfill this requirement ~~the~~, all wells drilled by the applicant during the experience period, including those not on the experience voucher, shall be constructed in accordance with ~~statutory and administrative code requirements and any department approved plans and specifications or variances~~ all laws and rules and with any plans specifications, variances and approvals approved by the department, including water samples and report submittal.

SECTION 24. NR 146.04(2)(c) and (note) is renumbered to NR 146.04(2)(i) and (note) and amended to read:

NR 146.04(2)(i) ~~Demonstrate~~ After fulfilling pars (a) to (h) and receiving a notice of eligibility from the department, demonstrate his or her ability, understanding and competency to engage in the business of water well drilling in Wisconsin by passing an exam administered by the department~~, and~~.

Note: Exam topics may include scope of department rules, water well construction, reconstruction, rehabilitation and locational requirements as well as sampling and reporting requirements. The department will solicit exam topics and questions from ~~registered~~ licensed water well drillers.

SECTION 25. NR 146.04(2)(cm) is created to read:

NR 146.04(2)(cm) For a period of three months, have provided the department with at least 24-hour notice before starting any water well drilling activities.

SECTION 26. NR 146.04(2)(d) is amended to read:

NR 146.04(2)(d) Submit a completed application ~~and an application fee of $50~~. The water well driller ~~registration~~ license application shall include ~~information regarding the well driller apprenticeship such as~~ the name, address and signature of the supervisory water well driller, the dates during which a water well drilling rig operator registration was held, a description of the water well drilling activities performed, the names of well owners, their addresses and phone numbers, the legal descriptions of the locations of the wells, the dates the wells were constructed, the types and hours of activities for which the supervisory water well driller was present, and a recent photo of the applicant operating a well drilling rig during the construction of a water well in which his or her face can be seen clearly.

SECTION 27. NR 146.04(2)(e), (f), (g),(h), (j), (k), (L) and (2m) are created to read:

NR 146.04(2)(e) Have no record of any unlicensed water well drilling activities during the last five years.

(f) Have no unresolved violations, judgments, court or administrative orders or settlements from previous water well drilling, pump installing, well filling and sealing or property transfer well inspection activities in Wisconsin and have no violations that were repeated following notice from the department, and have no outstanding well construction reports, water samples or well filling and sealing reports from the past five years.

(g) Have held a water well drilling rig operator registration during the two- to three-year experience period and attended the Department sponsored or Department sanctioned continuing education for well drillers during the two- to three-year experience period.

(h) Except as provided in par. (j), for applications submitted after January 1, 2020, have completed online, classroom or hands-on coursework approved or sponsored by the department in each of the following subject areas for the specified number of hours:

1. Cement or Bentonite Grouting of Wells—6 hours
2. Drilling Fluids—6 hours
3. Geology of Wisconsin—3 hours
4. The Well Codes—6 hours
5. Well Filling & Sealing—3 hours
6. Safety & First Aid—3 hours
7. Welding—6 hours

(j) In lieu of completing the coursework under par. (h)2., an applicant may pass the NGWA exams on Rotary Mud and Rotary Air Drilling.

(k) Submit the license application fee of $50.

(L) Meet with a department staff member to review and sign a list of compliance expectations. The applicant will receive the license at the conclusion of the meeting.

(2m) If the applicant fails to take and pass the exam under sub. (2)(i) within two years of receiving a notice of eligibility from the department, the application becomes void. If a water well driller applicant fails to pay the license fee within two years of passing the exam, the application will become void.

SECTION 28. NR 146.04(3)(title) and (intro.) are amended to read:

NR 146.04(3) PUMP INSTALLER ~~REGISTRATION~~ LICENSE. (intro.) To be eligible for a pump installer ~~registration~~ license an individual applicant shall meet all of the following requirements:

SECTION 29. NR 146.04(3)(a) is renumbered to NR 146.04(3)(c) and amended to read**:**

NR 146.04(3)(c) After meeting the requirements of pars.(a) and (b), demonstrate ability, understanding and competency to engage in the business of pump installing in Wisconsin by passing an exam administered by the department~~, and~~.

Note: Exam topics may include scope of department rules, well location and pump installation requirements and sampling and reporting requirements. The department will solicit exam topics and questions from ~~registered~~ licensed pump installers.

SECTION 30. NR 146.04(3)(a) is created to read:

NR 146.04(3)(a) Have no unresolved violations, judgments, court or administrative orders or settlements from previous water well drilling, pump installing, well filling and sealing or property transfer well inspection activities in Wisconsin, have no violations that were repeated following notice from the

department and have no outstanding water samples or well filling and sealing reports from the past five years.

SECTION 31. NR 146.04(3)(b) is amended to read:

NR 146.04(3)(b) Submit a completed application to the department ~~and an application fee of $25~~.

SECTION 32. NR 146.04(3)(d), (e) and (3m) are created to read:

NR 146.04(3)(d) Submit a license application fee of $25 to the department.

(e) If requested by the department, meet with a department staff member to review and sign a list of compliance expectations. The applicant will receive the license at the conclusion of the meeting.

(3m) If a pump installer applicant fails to pass an examination under sub. (3)(c) within one year after receiving a notice of eligibility from the department, the application will become void. If a pump installer applicant fails to pay the license fee within one year of passing the exam, the application will become void.

SECTION 33. NR 146.04(4) is repealed and recreated to read:

NR 146.04(4) WATER WELL DRILLER BUSINESS REGISTRATION. **(a)** All persons engaging in the business of water well drilling in Wisconsin shall obtain a business registration for each place of business or retail outlet.

(b) To be eligible for a business registration to engage in the business of water well drilling, the business applicant shall meet all of the following requirements:

1. At least one of the following conditions shall be met:
   a. The person operating the business is an individually licensed water well driller.
   b. An individually licensed water well driller has an ownership interest in the business.
   c. An individually licensed water well driller is employed by the business.
   d. The business contracts with an individually licensed water well driller.

2. The licensed individual water well driller under subd 1. is available to provide adequate general and direct supervision of water well drilling activities and has signed an certificate of supervision for the water well drilling business registration as part of the application.

3. The licensed individual water well driller and any registered business for which the driller is or was the supervisory water well driller has a pattern of practice that complies with water well drilling, well filling and sealing and property transfer well inspection laws and rules.

4. The licensed individual water well driller and any registered business for which the water well driller is or was the supervisory water well driller has no unresolved violations, judgments, court or administrative orders or settlements from previous water well drilling, pump installing, well filling and sealing or property transfer well inspection activities, has no violations that were repeated following notice from the department, and has no outstanding well construction reports, water samples or well filling and sealing reports from the past five years.

5. The licensed individual water well driller has previous water well drilling experience with the drilling method, grouting method and type of machine that will be used by the business registration applicant.

(c) A completed business registration application for each place of business or retail outlet, signed by both the designated supervisory licensed individual water well driller and the owner of the business, shall be submitted by the applicant to the department with the $50 application fee.

(d) If requested by the department, the business owner shall meet with a department staff member to review and sign a list of compliance expectations. The business owner will receive the registration at the conclusion of the meeting.

SECTION 34. NR 146.04(4m), (5), (6), (7), and (8) are created to read:

NR 146.04(4m) The designated supervisory licensed individual water well driller is responsible for ensuring that potable well drilling and water well filling and sealing work performed by the business and its employees is conducted in compliance with all applicable laws and rules and with any plans, specifications, variances and approvals approved by the department. The designated supervisory licensed individual water well driller may be held legally and financially responsible for any corrections needed to noncomplying potable well drilling work or noncomplying water well filling and sealing work. The registered water well drilling business may also be held responsible for such corrections. The designated supervisory licensed individual water well driller shall have advance and specific knowledge of the potable well drilling and water well filling and sealing activities for all individuals which they are responsible to supervise.

(5) PUMP INSTALLER BUSINESS REGISTRATION. **(a)** All persons engaging in the business of pump installing, well filling and sealing, or property transfer well inspections in Wisconsin shall obtain a business registration for each place of business or retail outlet.

(b) To be eligible for a business registration to engage in the business of pump installing, well filling and sealing, or property transfer well inspections, the business applicant shall meet all of the following requirements:

1. At least one of the following conditions shall be met:
   a. The person operating the business is an individually licensed pump installer.
   b. An individually licensed pump installer has an ownership interest in the business.
   c. An individually licensed pump installer is employed by the business.
   d. The business contracts with an individually licensed pump installer.

2. The licensed individual pump installer under par. (a) is available to provide adequate general and direct supervision of pump installing activities and has signed a certificate of supervision for the pump installing business registration as part of the application.

3. The licensed individual pump installer and any registered business for which the pump installer is or was the supervisory pump installer shall have a pattern of practice that complies with pump installing, well filling and sealing and property transfer well inspection laws and rules.

4. The licensed individual pump installer and any registered business for which the pump installer is or was the supervisory pump installer shall have no unresolved violations, judgments, court or administrative orders or settlements from previous well drilling, pump installing, well filling and sealing or property transfer well inspection activities and have no violations that were repeated following notice from the department. There shall also be no outstanding water samples or water well filling and sealing reports from the past five years.

(c) A completed business registration application, signed by both the designated supervisory licensed individual pump installer and the owner of the business shall be submitted by the business owner to the department for each place of business or retail outlet with the $25 application fee.

(d) If requested by the department, the business owner shall meet with a department staff member to review and sign a list of compliance expectations. The business owner will receive the business registration at the conclusion of the meeting.

(6) The designated supervisory licensed individual pump installer is responsible for ensuring that potable pump installing and water well filling and sealing work performed by the business and its employees and welders is conducted in compliance with all applicable laws and rules and with any plans, specifications, variances or approvals approved by the department. The designated supervisory licensed individual pump installer may be held legally and financially responsible for any corrections needed to noncomplying potable pump installations and noncomplying water well filling and sealing work, The registered pump installing business may also be held responsible for such corrections. The designated supervisory licensed individual pump installer shall have advance and specific knowledge of the potable pump installing activities and water well filling and sealing work for all individuals which they are responsible to supervise.

(7) No individual or person may engage in the business of water well filling and sealing without either a water well drilling license or registration, or a pump installer license or registration.

(8) WATER WELL DRILLING RIG OPERATOR REGISTRATION

(a) To be eligible to become a registered water well drilling rig operator, the applicant shall have no unresolved violations, judgments, court or administrative orders or settlements from previous water well drilling, pump installing, well filling and sealing or property transfer well inspection activities in Wisconsin, shall have no outstanding well construction reports, water samples or well filling and sealing reports from the past five years and shall not have engaged in the business of well drilling without a license within the past two years.

(b) An individual who seeks registration as a water well drilling rig operator shall apply to the department on a form specified by the department. The application shall be signed by the licensed individual supervisory well driller. The applicant shall include an application fee of $25.

(c) In order to retain registration as a water well drilling rig operator an individual shall comply with the requirements for continuing education in s. NR 146.07(3). The individual shall apply for registration renewal and pay a fee of $25 annually on or before January 1. The renewal application shall be signed by the licensed individual supervisory well driller.

(d) An individual who files an application for registration renewal or who pays the required annual fee after January 1 shall pay a late penalty of $15.

(e) Registered water well drilling rig operators may not engage in the business of water well drilling, except for performing water well drilling activities.

(f) An individual who is not a licensed water well driller or a registered water well drilling rig operator may only perform well drilling activities if the individual is employed by a licensed individual well driller or a registered water well drilling business and the individual is under the direct supervision of a licensed water well driller or a registered water well drilling rig operator who is on site during all water well drilling activities.

SECTION 35. NR 146.05(title), (1) and (note), and (2) are amended to read:

NR 146.05 ~~Registration~~ License and registration conditions and emeritus.

(1) CONDITIONS. The department may condition a ~~well driller or pump installer~~ license, registration or renewal issued under this chapter based on the experience, ~~and~~ qualifications, equipment and compliance history of the applicant or of the licensed supervisory individual. Conditions which may be imposed by the department include ~~prior department notification of well drilling or pump installing activities~~ restriction of water well drilling to specific methods, equipment or geologic formations, or advance notification to the department of drilling, pump installing, well filling and sealing or property transfer well inspection activities.

Note: A notification condition may be fulfilled by a water well driller or pump installer by ~~phoning~~ telephoning, e-mailing or faxing the notification to the office of the designated department employee.

(2) EMERITUS STATUS. A Wisconsin ~~registered~~ licensed individual water well driller or pump installer in good standing may request to be listed with the department as an emeritus if the water well driller or pump installer is no longer engaged in the business or businesses for which a Wisconsin ~~registration~~ license is held. An emeritus individual is not required to earn the continuing education credits described in s. NR 146.07 and shall continue to receive codes, bulletins or other documents prepared and printed by the department. If an emeritus individual has not earned the annual continuing education requirements during the years for which the license was in emeritus status but wishes to reactivate his or her license to engage in water well drilling, pump installing, well filling and sealing, or property transfer well inspections, the individual must pass the appropriate exam. An individual in emeritus status is not eligible to be a supervisory water well driller or pump installer.

SECTION 36. NR 146.06 is amended to read:

NR 146.06 Out of state water well drillers. ~~Well~~ Water well drillers ~~licensed or registered to engage in the business of well drilling~~ who hold an individual license to drill potable wells in states other than Wisconsin are eligible ~~for a~~ to obtain an individual Wisconsin water well driller ~~registration~~ license if all of the following requirements are met:

(1) The department determines that the water well drilling ~~regulations~~ construction standards and licensing ~~registration program~~ laws and rules in effect at the time of licensure in at least one of the ~~state~~ states in which the applicant is currently licensed ~~or registered is~~ were substantially similar to Wisconsin's,

(2) The applicant is in good standing in ~~the state~~ all states in which ~~he or she~~ the applicant is or was licensed or registered to ~~engage in the business of well drilling~~ drill potable wells,

(3) The applicant demonstrates competency to engage in the business of potable well drilling in Wisconsin by passing an exam administered by the department, and

(4) ~~A completed~~ The applicant completes an application which is true and accurate and submits it with an application fee of $50 ~~are submitted~~ to the department.

(5) The applicant meets with a department staff member to review and sign a list of compliance expectations. The applicant will receive the license at the conclusion of the meeting.

SECTION 37. NR 146.07(1)(a), (b) and (e) are amended to read:

NR 146.07(1)(a) Renewals. (1) APPLICATION. (a) To renew ~~an individual or business well driller or pump installer~~ a license or registration, the licensee or registrant shall submit a true and complete

renewal application to the department on or before January 1 of each year. The department may require that proof of compliance with continuing education credit requirements under ~~sub. (2)~~ sub. (3) be submitted with the renewal application.

(b) Renewal applications shall be submitted on forms ~~provided~~ specified by the department and accompanied by an application fee of $50 for each water well driller license or registration; ~~and~~ $25 for each pump installer license or registration and $25 for each water well drilling rig operator registration.

(e) A renewal is effective on the date the licensee or registrant receives a permit from the department and expires on December 31 of each year.

SECTION 38. NR 146.07(1) (f), (g), (h) and (i) and are created to read:

NR 146.07(1)(f) A drilling rig operator registration expires when the individual becomes a licensed individual water well driller.

(g) A drilling rig operator registration is not valid unless the rig operator is employed by a licensed driller licensed or a drilling business registered for the type of drilling designation held by the rig operator.

(h) The renewal application for a business registration shall be signed by both the licensed supervisory individual and the owner.

(i) The renewal application for a registered drilling rig operator shall be signed by the rig operator's employer.

(j) The department may require registered water well drilling or pump installing businesses and their licensed supervisory individuals to complete an updated certificate of supervision with a renewal application.

SECTION 39. NR 146.07(2)is repealed and recreated to read:

NR 146.07(2) ELIGIBILITY.

(a) Only individuals holding valid Wisconsin licenses or registrations on December 31 who have met the continuing education credit requirements of this section are eligible for renewal in the following year.

(b) An individual whose license or registration is not in effect on December 31, due to any of the following reasons, is not eligible to renew the license or registration:

1. Failure to attend continuing education.

2. Failure to renew during the calendar year.

3. Department of revenue hold on license, registration or renewal lasting longer than one calendar year for failure to pay state income taxes.

4. Department of family services hold on license, registration or renewal lasting longer than one calendar year for failure to pay child support.

5. Suspension lasting longer than one calendar year.

(c) If a license or registration is not renewed because of the reasons under par. (b), the individual whose license or registration is not renewed must take and pass the appropriate exam and comply with s. NR 146.04(5)(a)7. to become licensed again.

(d) If a water well or heat exchange license is not renewed for 5 or more years, the applicant shall meet the requirements in effect for obtaining a new water or heat exchange driller license.

(e) Only registered persons who have a licensed supervisory individual who has met the continuing education credit requirements of this section are eligible for renewal in the following year.

(3) CONTINUING EDUCATION. Each calendar year, licensed and registered ~~persons~~ individuals are required to earn six continuing education hours by attending ~~training~~ continuing education sessions sponsored or sanctioned by the department. ~~At least 6 hours each year shall be earned by attending department sponsored or sanctioned training sessions.~~ Continuing education hours shall be earned between January 1 and December 31 of each year beginning January 1, 1989 for water well drillers and pump installers, and beginning January 1, 2009 for registered water well drilling rig operators. Continuing education hours are not required during the first calendar year in which an individual becomes licensed or registered for the first time, except that registered water well drilling rig operators shall earn continuing education hours during the year in which they are first registered if they include their first year as a drilling rig operator toward their experience to obtain the applicable drilling license.

Note: The department will consult with water well drillers and pump installers in developing continuing education programs. One of the department sponsored continuing education sessions for water well drillers and pump installers will be held in conjunction with the annual Wisconsin Water Well Association conference.

(4) ENGAGING IN BUSINESS. ~~A~~ An individual or person ~~or business~~ applying for a renewal under this section may not engage in the business of water well drilling, ~~or~~ pump installing, well filling and sealing or property transfer well inspections after a ~~permit~~ license or registration has expired until ~~he or she~~ the individual or person has received a renewed water well driller or pump installer license or registration from the department.

SECTION 40. NR 146.08 is amended to read:

NR 146.08 ~~Registrant~~ Licensee and registrant responsibilities. All water well driller and pump installer ~~registrants~~ licensees and registered water well drilling rig operators shall do all of the following if applicable to the individual's license or person's registration:

(1) Perform work in compliance with, and ensure that work performed under their supervision is conducted in compliance with, all applicable ~~statutory and administrative code requirements and any department approved plans and specifications or variance~~ laws and rules and with any plans specifications, variances and approvals approved by the department; and perform work in a sanitary manner.

(2) Upgrade any noncomplying ~~existing~~ water well or pump installation feature on which work is performed. The ~~work~~ upgrade shall ~~conform to~~ comply with the ~~statutory and administrative code requirements~~ laws and rules and with any plans, specifications, variances and approvals approved by the department in effect at the time the ~~work~~ upgrade is performed. Water well drillers shall be responsible for corrections relating to well location, construction and reconstruction. Pump installers shall be responsible for corrections relating to the pump installation. Noncomplying water systems features forms shall be completed for other noncomplying features that are apparent and known, with the exception of pars (9) to (13).

(3) Complete any corrections ordered by the department ~~on~~ for any water well construction, ~~or~~ pump installation or filling and sealing on which the licensee or registrant performed work ~~on~~, supervised work ~~on~~ or signed a well construction report ~~for~~. Water well drillers shall be responsible for corrections relating to well location, construction and reconstruction. Pump installers shall be responsible for corrections relating to the pump installation. Water well drillers and pump installers shall be held responsible for correcting their well filling and sealing violations.

(4) Submit any report or form required to be submitted by ~~statute, administrative rule~~ applicable laws and rules and by any plans, specifications, variances approvals or order in the time period required and notify the department of any change in information submitted on water well driller or pump installer license, registration and renewal applications. Reports and forms shall be complete, true and accurate.

(5) Clearly identify the name, and license or registration number of the licensed supervisory individual or the registered person~~, firm, corporation or partnership~~ in all advertising, estimates, invoices and receipts and on any well drilling rig, pump installation truck or similar equipment. The identification of equipment shall be at least 2 inches in height with at least 1/4 inch wide brush stroke. The identification shall have a sharp color contrast with the background on which it is applied. The identification shall remain legible and maintained without deterioration.

(6) Refuse to contract for water well drilling, ~~or~~ pump installing or filling and sealing for, or lease or lend water well drilling, ~~or~~ pump installing or water well filling and sealing equipment to, an unlicensed individual or unregistered person~~, firm, corporation or partnership~~ without having an employee/employer relationship and without directly supervising the water well drilling, ~~or~~ pump installing or filling and sealing activities of the unlicensed individual or unregistered person, ~~firm, corporation or partnership~~, ~~and~~.

(7) Refuse to contract for water well drilling, ~~or~~ pump installing or filling and sealing for, or lease or lend water well drilling, ~~or~~ pump installing or filling and sealing equipment to, ~~a~~ an individual or person whose license or registration was suspended or revoked, ~~well driller or pump installer~~ without having an employee/employer relationship and without directly supervising the ~~well~~ drilling, ~~or~~ pump installing or filling and sealing activities of the individual or person whose license or registration has been suspended or revoked ~~well driller or pump installer~~.

SECTION 41. NR 146.08(8) to (19) are created to read**:**

NR 146.08 (8) Licensed individual water well drillers shall provide direct supervision on the first 10 water wells drilled by any employee or any individual which the licensed driller is responsible to supervise, if the employee or individual has no water well drilling experience, has no experience in a water well drilling method which is new to the employee or individual or has no experience in a grouting method which is new to the employee or individual.

(9) Before extending any well casing pipe out of a pit, or deepening a well constructed by another individual, the water well driller or the pump installer shall measure the well casing pipe depth to verify that the casing depth complies with the code in effect at the time the well casing was installed. Well details, including location, well casing pipe depth, total well depth, distances to possible contaminant sources and well owner information shall be entered on a form and submitted to the department in accordance with ss. NR 812.22(10) or NR 812.41(4).

(10) When doing any pump work involving replacement of the pressure tank or work involving the water supply piping inside the basement or building, upstream of the pressure tank, the pump installer shall install a complying sample faucet if one is missing, or replace any sample faucet that does not comply with the requirements of s. NR 812.34, including replacement of any threaded sample faucet with a sample faucet without threads.

(11) When doing any water well work or pump installing work that involves entry into a well located outside a building, the water well driller or pump installer shall extend the well casing pipe in accordance with the requirements of s. NR 812.42 to at least:

(a) 12 inches above grade for any well that is less than 8 inches above grade and was installed before February 1, 1991.

(b) 12 inches above grade for any well that is less than 12 inches above grade and was installed on or after February 1, 1991.

(12) When doing any water well work or pump installing work that involves entry into a well, the water well driller or pump installer shall replace any non-vermin proof well cap with an approved vermin-proof cap or sanitary well seal.

(13) When any water well drilling work or pump installing work is performed involving entry into a well that has a nonpressure conduit, the water well driller or pump installer shall evaluate the integrity of the nonpressure conduit and its connection to the well casing pipe by performing a pressure test. If the nonpressure conduit fails the pressure test, the installation shall be changed to a pitless connection in accordance with s. NR 812.42(11)(e).

(14) Verify that the appropriate well notification, county well location permit, department approval and/or variance has been obtained before commencing any well construction or reconstruction.

(15) Be legally and financially responsible for correcting any noncomplying work not corrected by individuals or persons which the licensee or registrant supervises or employs.

(16) Have advance and specific knowledge of work being done by any individual for whom they are responsible to supervise.

(17) Be adequately equipped to perform water well drilling, pump installing, well filling and sealing and property transfer well inspections in compliance with applicable laws and rules and with any plans, specifications, variances and approvals approved by the department.

(18) Ensure that either a licensed water well driller or a registered water well drilling rig operator is on site at all times during water well drilling activities.

(19) Water well drillers, pump installers and well constructors shall, when requested by the department, give notice to the department, as specified in the notice of request, at least on the department work day prior to the day upon which any well construction or reconstruction or any part thereof, any well filling and sealing operation or the installation of any pumping equipment, will be commenced.

SECTION 42. NR 146.09 is amended to read:

NR 146.09 Suspension and revocation.(1) BASES FOR ACTION. The department may suspend or revoke a ~~well driller or pump installer~~ license or registration under this chapter for any of the following reasons:

(a) ~~A~~ The licensee or registrant made a material misstatement in the application for ~~a~~ the license, registration, or any application for renewal of the license or registration.

(b) ~~A demonstrated~~ The licensee or registrant demonstrated incompetency to act in the ~~business or businesses~~ industry or industries for which ~~a Wisconsin registration is held~~ the license or registration was issued.

(c) ~~Two willful violations of~~ The licensee or registrant willfully violated a second time or more any provision of ch. 280, Stats., or any rule, regulation or order prescribed by the department~~; or~~ .

(d) ~~Conviction~~ The licensee or registrant was found guilty in any civil or criminal proceeding of any action constituting fraud in connection with water well drilling or pump installing activities or operations.

(2) SUSPENSION AND REVOCATION ACTIVITIES. No individual or person~~, firm, corporation or partnership~~ whose license or registration has been suspended or revoked may engage in the business of ~~well~~ drilling or pump installing during the suspension or revocation period unless all of the following apply:

(a) ~~Well~~ Water well drilling activities are performed under the direct supervision of a Wisconsin ~~registered~~ licensed individual water well driller and pump installing activities are performed under the direct supervision of a Wisconsin ~~registered~~ licensed individual pump installer.

(b) The water well driller whose license or registration was suspended or revoked ~~well driller or pump installer~~ shall be an employee of the Wisconsin ~~registered~~ licensed water well driller ~~or pump installer directly supervising~~ providing direct supervision of his or her activities or shall be an employee of a Wisconsin registered water well drilling business whose licensed supervisory individual water well driller is providing direct supervision to the water well driller whose license or registration was suspended or revoked. The pump installer whose license or registration was suspended or revoked shall be an employee of the Wisconsin licensed pump installer providing direct supervision of his or her activities or be an employee of a Wisconsin registered pump installing business whose licensed supervisory individual pump installer is providing direct supervision to the pump installer whose license or registration was suspended or revoked. A copy of the employment contract shall be provided to, and approved by the department before any water well drilling, ~~or~~ pump installing or well filling and sealing activities are commenced. An employment contract entered into to meet the requirements of this chapter shall include the assignment of responsibility for supervision, submission of reports and the completion of work in ~~conformance~~ compliance with all applicable ~~statutory and administrative code requirements~~ laws and rules and with any plans, specifications, variances and approvals approved by the department to the Wisconsin ~~registered~~ licensed individual supervisory water well driller or pump installer.

(c) ~~The suspended or revoked registrant notifies~~ The individual or person whose license or registration was suspended or revoked shall notify the department of the location of any water well drilling or pump installation the ~~registrant~~ individual or person whose license or registration was suspended or revoked will be working on at least 48 hours in advance, except that emergency pump installations shall be reported before 8:00 a.m. on the first business day following the work.

(d) ~~The suspended or revoked registrant notifies~~ The individual or person whose license or registration was suspended or revoked shall notify the department of the location of each water well drilling rig or pump installation truck owned, leased or used by the individual or person whose license or registration was suspended or revoked ~~registrant~~ and of any change in the location of any rig or truck during the suspension or revocation period.

(3) REINSTATEMENT. (a) ~~A registrant who has been~~ An individual whose license was suspended based on incompetency to act in the ~~business or businesses~~ industry or industries for which a Wisconsin ~~registration~~ license was issued shall demonstrate competency to engage in the ~~business or businesses~~ industry or industries by passing an exam administered by the department.

(b) ~~A revoked registrant~~ An individual whose license has been revoked may apply for a new ~~registration~~ license one year or thereafter after the date of revocation. A ~~registration~~ license application ~~by a revoked registrant~~ from an individual whose license was revoked is not a renewal. A person whose registration has been revoked may apply for a new registration one year or thereafter after the date of revocation.

SECTION 43. NR 146.09 (3) (c) and (d) are created to read:

(c) An individual whose water well drilling or pump installing license was revoked for any reason shall demonstrate the individual's knowledge to engage in the industry by passing an exam administered by the department. An individual whose water well drilling or pump installing license was revoked for incompetency is not eligible to become licensed again until after the individual has demonstrated competency in the activity for which the individual was deemed incompetent. In the alternative, the department may grant a conditional license to the applicant, which restricts the individual from engaging in the activity for which the individual was deemed incompetent. Competency shall be demonstrated by performing the activity while working under the direct supervision of an individual licensed for that activity for at least two years without violations.

(d) An individual whose license was suspended for willful violations and has failed to comply with requirements of the suspension order so that the suspension extends longer than one calendar year, shall take and pass the exam to become licensed, as provided in s. NR 146.07(2).

SECTION 44. NR 146.10 is created to read:

NR 146.10 WELL FILLING AND SEALING.

(1) This section applies to all water supply wells used for any potable or nonpotable purpose.

(2) An individual may not fill and seal a water supply well, or verify and report that a well was properly filled and sealed, unless at least one of the following applies:

(a) The individual is a licensed water well driller or licensed pump installer.

(b) The individual is under the supervision of a licensed water well driller or licensed pump installer as their employee or the employee of a registered water well drilling or pump installing business.

(c) The individual is a water system operator certified under s. 281.17 (3), Stats., and the well is within the service area of the local governmental water system for which the water system operator works.

(d) The individual is under the supervision of a water system operator certified under s. 281.17 (3), Stats., the well is within the service area of the local governmental water system for which the certified water system operator works, and the individual being supervised is an employee of the local governmental water system.

(3) The licensed or certified individual is not required to be present during the filling or sealing of a well except that the licensed or certified individual is responsible if the filling and sealing is not done in compliance with ch. NR 812.

(4) Property owners may not fill and seal their own wells.

SECTION 45. NR 146.11 is created to read:

NR 146.11 PROPERTY TRANSFER WELL INSPECTIONS

(1) This section applies to all water supply wells as defined in s. 280.30, Stats., used for any potable or nonpotable purpose.

(2) An individual may not for compensation, in contemplation of a transfer of real property, conduct an inspection of the real property for the purpose of locating or evaluating water supply wells or pressure systems or wells that must be filled and sealed on the real property unless the individual is a licensed individual water well driller or a licensed individual pump installer. Only licensed individual water well drillers or licensed individual pump installers may make any statement or offer any opinions regarding the

existence or nonexistence of wells that need to be filled and sealed; or the location, compliance, condition, capacity or performance of a well and pressure system for compensation, at time of property transfer.

(3) No license is required if the only work being done is collecting a water sample for analysis at time of property transfer provided the water quality test results are reported by the certified laboratory on a laboratory form and no other statements are made or opinions offered by the individual or laboratory regarding the location, compliance, condition, capacity or performance of the well or pressure system or the location or existence or nonexistence of wells that must be filled and sealed.

(4) Inspectors shall conduct well and pressure system inspections in compliance with Subchapter VI of ch. NR 812.

(5) Inspectors shall provide the person requesting the inspection with the completed property transfer well inspection form specified by the department. The inspector may also attach their own forms or letters, provided those forms are not represented to be part of the department form. The well and pressure system inspection form is not to be submitted to the department except in the case of a variance request.

(6) Businesses engaging in the business of property transfer well inspections are required to hold a business registration in accordance with s. NR 146.04(4) or 146.04(5).

Note: Every individual performing property transfer well inspections is required to be licensed except as noted in sub. (7).

(7) County employees are not required to obtain a water well driller or pump installer license to conduct property transfer well inspections if the county has adopted a Level 3 county delegation program under ch. NR 845 and the inspections are conducted as part of their duties as county employees. Property transfer well inspections performed by Level 3 delegated county employees shall be conducted in compliance with the standards in subchapter VI of NR 812 and using department form #3300-221.

(8) Requests for property transfer inspections of spring or surface water supplies shall be referred to the department's private water supply section.

SECTION 46. NR 146.12 is created to read:

NR 146.12 Citations

(intro.) The department may take appropriate enforcement action against any person who violates any of the provisions listed in sub. (1). The Department shall consider the severity, duration, frequency, and environmental or health risks of the violation. The Department will evaluate and address violations in accordance with the Department stepped enforcement process. The Department shall provide written notice of a violation and provide an opportunity to meet pursuant to s. 290.98(4), Stats., before issuance of a citation.

(1) Citations may be issued for violations relating to any of the following:

(a) Licensing and registration as provided in this chapter, ch. 280, Stats. or s. NR 812.26(9).

(b) Disinfection requirements, as provided under ss. NR 812.22(4), 812.27(5), 812.41(1) or 812.42(13).

(c) Sampling and reporting requirements, as provided under ss. NR 812.04(2), 812.09(4)(a)3., 812.10 (11) or (12), 812.22(6), (7), (8), (9) or (10), 812.26 (3) or (8), 812.27(6), 812.41(3) or (4), 812.42(13), or 812.44(3) or (4).

(d) Water systems that were installed before February 1, 1991, as provided under s. NR 812.42.
(e) Well or drillhole filling and sealing, as provided under ss. NR 812.09(4)(a)5. or 812.26.

(2) Prior to issuing a citation under par. (b), the Department shall do all of the following:
(a) Issue a written warning outlining the violation.
(b) Schedule an enforcement conference with the alleged violator. The alleged violator is allowed to bring a representative to the enforcement conference.

(3) If the alleged violator does not attend the enforcement conference or make alternative arrangements to the Department's satisfaction, the Department shall consider the requirement of s. 280.98, Stats., to be met, and shall base its enforcement decision on all available information.

SECTION 47. NR 812.01(1)(c) is created to read:

NR 812.01(1)(c) Evaluating, locating and identifying wells and pressure systems at the time of a property transfer.

SECTION 48. NR 812.01(2) is amended to read:

NR 812.01(2) This chapter shall govern the location, construction or reconstruction ~~and~~, maintenance and inspection of wells and water systems, the ~~abandonment~~ filling and sealing of wells and drillholes and the installation and maintenance of pumping and treatment equipment.

SECTION 49. NR 812.02(1)(b) and (2) are amended to read:

NR 812.02(1)(b) ~~Community~~ Any community water ~~systems~~ system governed under chs. NR 809, 810 and ~~NR~~ 811~~, and~~.

(2) For the purposes of ~~abandonment~~ filling and sealing, the provisions of this chapter apply to all drillholes and wells including, but not limited to, elevator shaft drillholes, unsuccessful or noncomplying heat exchange drillholes, mining exploration drillholes not regulated by ch. NR 132~~,~~ and wells and drillholes not regulated by s. NR 141.25 ~~and elevator shaft drillholes~~.

SECTION 50. NR 812.03(1) is amended to read:

NR 812.03(1) Well drillers, pump installers and well constructors shall, when requested by the department, give notice to the department, as specified in the notice of request, at least on the department work day prior to the day upon which any well construction or reconstruction or any part thereof, any well ~~abandonment~~ filling and sealing operation or the installation of any pumping equipment, will ~~commence~~ be commenced ~~or be completed~~.

SECTION 51. NR 812.03(2) is repealed.

SECTION 52. NR 812.05(2)(b) is amended to read:

NR 812.05(2)(b) The placement consists of grouting, sealing or ~~abandonment~~ filling and sealing materials as specified in s. NR 812.20 or 812.26; grouting or ~~abandonment~~ filling and sealing materials as specified in s. NR ~~811.16 or 811.17~~ 811.13; annular space sealing or ~~abandonment~~ filling and sealing materials specified in s. NR 141.13 or 141.25; or other similar materials containing additives approved under sub. (3).

SECTION 53. NR 812.07(1d), (1h), (1p) and (1t) are created to read:

NR 812.07(1d) "Advance notification" means notification to the department via fax, e-mail or telephone at least one working day before commencing any work.

(1h) "Agricultural crop field" means land where there is evidence that agricultural crops were or are being grown.

(1p) "Air-gap" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank or plumbing fixture and the flood level rim or spill level of the receptacle.

(1t) "Animal barn" means a covered, paved or unpaved area in which animals are kept. This includes an area where an individual animal is kept, but does not include a single pet house or single pet kennel housing 5 or fewer adult pets on a residential lot.

SECTION 54. NR 812.07(3), (4), (6) and (10) are amended to read:

NR 812.07(3) "Animal yard" means an uncovered, paved or unpaved area in which animals are kept ~~or manure is loaded~~. This includes an area where an individual animal is kept, but does not include a single pet kennel enclosing ~~3~~ 5 or fewer adult pets on a residential lot. An animal yard includes any fenced area where animals are kept or have access including pastures, feed lots, pens, calf hutches, lanes and riding corrals.

(4) "Animal shelter" means a covered, paved or unpaved area in which animals are kept. This includes an area where an individual animal is kept, but does not include a single pet house or single pet kennel housing ~~3~~ 5 or fewer adult pets on a residential lot.

(6) "API" means the American ~~petroleum institute~~ Petroleum Institute.
Note: The API address is 1220 L Street NW, Washington DC 20005-4070.

(10) "ASTM" or "ASTM International" means the organization formerly known as the American ~~society for testing materials.~~ Society for Testing and Materials.
Note: The ASTM or ASTM International address is 100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania 19148-2959.

SECTION 55. NR 812.07(10m), (17m) and (19m) are created to read:

NR 812.07(10m) "AWWA" means the American Water Works Association.
Note: The AWWA address is 6666 West Quincy Avenue, Denver, Colorado 80235.

(17m) "Batch chlorination" means the process of disinfecting a well by injecting, in one continuous pour, a chlorine solution that equals or exceeds the volume of standing water in the well and by using a process that recirculates the solution through the pump and pump discharge piping system back into the well.

(19m) "Chemical conditioning" means using department-approved chemicals or products to restore a well to its original capacity, production capability or water quality.

SECTION 56. NR 812.07(23) and (24) are amended to read:

NR 812.07(23) "Clear water ~~waste~~" means wastewater other than storm water, having no impurities or where impurities are below a minimum concentration considered harmful by the department of safety and

professional services, including but not limited to noncontact cooling water and condensate drainage from refrigeration compressors and air-conditioning equipment, ~~wastewater~~ drainage ~~from~~ of water used for equipment chilling ~~processes,~~ purposes, and cooled condensate from steam heating systems or other equipment~~, foundation drainage water and other water containing no contaminants~~.

(24) "Community water system" means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. Any ~~public~~ water system serving 7 or more single family homes, 10 or more mobile homes, 10 or more apartment units, 10 or more duplex living units or 10 or more condominium units shall be considered a community water system unless information satisfactory to the department is ~~available to indicate~~ provided by the owner indicating that 25 year-round residents will not be served.

SECTION 57. NR 812.07 (27t) and (29m) are created to read

NR 812.07 (27t) "Cross connection" means a connection or potential connection between any part of a water supply system and another environment containing substances that, under any circumstances, would allow the substances to enter the water supply system by means of back siphonage or back pressure.

(29m) "DR" means dimension ratio and is used as a substitute for standard dimension ratio (SDR).

SECTION 58. NR 812.07 (35) is amended to read:

NR 812.07(35) "Driven point well" ~~or "sand point well"~~ means a well constructed by joining a drive point with lengths of pipe, and driving the assembly into the ground with percussion equipment or by hand, but without first removing material below the 10-foot depth.
Note: A "driven point well" is also known as a sand point well.

SECTION 59. NR 812.07(35e) is created to read:

(35e) "Dual-rotary drilling method" means a drilling system that uses a drilling machine with two separately-operated rotary-drive mechanisms, a top drive that rotates the drill string and bit, and a lower drive unit that clamps onto the casing pipe, rotates it and advances it into the geologic formation.

SECTION 60. NR 812.07(38) is amended to read:

NR 812.07(38) "Existing installations" means wells and water systems which were constructed, ~~or~~ reconstructed or installed before ~~February 1, 1991~~ the effective date of this section [legislative reference bureau inserts date].

SECTION 61. NR 812.07(41m) is created to read:

NR 812.07(41m) "Filling and sealing" means to fill a well, drillhole, pit or reservoir with a material or materials so the well, drillhole, pit or reservoir will not act as a vertical conduit to contaminate another well, groundwater or an aquifer.
Note: The term "filling and sealing" replaces the term "abandonment," previously used in this chapter.

SECTION 62. NR 812.07(42) is amended to read:

NR 812.07(42) "Filter strip" means an area of vegetation designed and constructed in accordance with

Soil Conservation Service Standard 393 adjacent to an animal yard or animal shelter or adjacent to a manure storage facility, used to remove sediment and organic matter from the runoff from the facility.

Note: The term "Vegetated treatment area" in now used instead of the term "filter strip."

SECTION 63. NR 812.07 (47m) is created to read:

NR 812.07(47m) "Foundation drain" means a subsoil drain that serves the area of the foundation of a building.

SECTION 64. NR 812.07(49) is amended to read:

NR 812.07(49) "Groundwater' means ~~subsurface water in a zone of saturation.~~ any of the waters of the state, as defined in s. 281.01 (18), Stats., occurring in a saturated subsurface geological formation of rock or soil.

SECTION 65. NR 812.07(51) is renumbered to be **NR 812.07(52)**.

SECTION 66. NR 812.07(52) is renumbered to be **NR 812.07(51)**

SECTION 67. NR 812.07(53) and (54) are amended to read:

NR 812.07(53) "High capacity well system" means one or more wells, drillholes or mine shafts used or to be used to withdraw water for any purpose on one property, if the total pumping or flowing capacity of all wells, drillholes or mine shafts on one property is 70 or more gallons per minute based on the pump curve at the lowest system pressure setting, or based on the highest flow rate from a flowing well or wells.

(54) "Holding tank" means a ~~water tight~~ watertight receptacle used for the collection and holding of ~~sewage.~~ wastewater.

SECTION 68. NR 812.07(54g), (54r) and (55m) are created to read:

NR 812.07(54g) "Hung liner" means a well casing pipe which is placed into an existing larger diameter well casing pipe or into an existing drillhole, installed in a manner not extending all the way to the bottom of the well.

(54r) "Hung well casing pipe" means a casing pipe that is smaller in diameter than the enlarged drillhole into which it is placed and installed in a manner so it does not extend all the way to the bottom of the enlarged drillhole.

(55m) "Junkyard" means a business or a property which is used for storing, processing, buying or selling scrap, automobile bodies or parts if the facility will continually have like materials on the premises. This term does not include litter or debris scattered along or upon a roadway, temporary outdoor storage of junk for limited duration, or smaller accumulations of junk on residential lots for personal use.

SECTION 69. NR 812.07(57m) is amended to read:

NR 812.07(57m) ~~"Licensed"~~ "Licensed pump installer" means ~~registered by the department to engage in the business of well drilling or pump installing in Wisconsin~~ any individual who has obtained a license

under s. 280.15 (2m), Stats., and s. NR 146.04, as a pump installer and has paid the annual license fee under s. 280.15 (2m)(c)2., Stats.

SECTION 70. NR 812.07(57s) is created to read:

NR 812.07(57s) "Licensed water well driller" means any individual who has obtained a license under s. 280.15 (2m), Stats., and s. NR 146.04, as a water well driller and has paid the annual license fee under s. 280.15 (2m)(c)1., Stats.

SECTION 71. NR 812.07(60) is amended to read:

NR 812.07(60) "Liquid waste disposal system" means a facility for disposing of liquid wastes consisting of a ridge and furrow system, a landspreading system including sludge drying beds at a wastewater treatment plant, a wastewater spray irrigation system, or an absorption, seepage, retention, storage or treatment pond, ~~or~~ lagoon or a wastewater slow sand filter or filters.

SECTION 72. NR 812.07(61g) is created to read:

NR 812.07(61g) "Manure loading area" means an area where manure is transferred from an animal shelter unloader or a barn unloader onto a pad or into a receptacle.

SECTION 73. NR 812.07(64), (67), (72) and (74)(b) are amended to read:

NR 812.07(64) "Non-community water system" means a public water system that ~~serves fewer than 25 year-round residents~~ is not a community water system. A non-community water system may be either a non-transient non-community water system or a transient non-community water system.

(67) "NSF" or "NSF International" means ~~national sanitation foundation~~ means the organization formerly known as the National Sanitation Foundation.
Note: The NSF or NSF International address is PO Box 130149, 789 N. Dixboro Road, Ann Arbor, Michigan 48113-0140.

(72) "Person" means an individual, firm, business, corporation, limited liability corporation, company, association, cooperative, trust institution, partnership, state, public utility, municipality, or federal, state or interstate agency.

(74)(b) "~~Factory assembled pitless~~ Pitless unit" means a pitless ~~unit~~ adapter device assembled and pressure tested for leakage at ~~the~~ a factory~~, including a unit fabricated with a pitless receiver tank~~ and designed to be attached, in the field, to the top of the cut-off portion of the well casing pipe.

SECTION 74. NR 812.07(74)(c), (74)(d), (74)(e), (75c), (75g), (75L), (75p), (75t), (75x) (79e), (79p) and (note) and (79t) are created to read:

NR 812.07(74)(c) "Clamp-on or bolt-on pitless adapter" is a pump installation discharge equipment device having a saddle designed to be attached to cover the outside of an opening that has been cut through the well casing pipe, to allow the saddle to be connected with nuts to the ends of a threaded U-bolt or U-strap that will surround the well casing pipe.

(74)(d) "Bolt-through pitless adapter" is a pitless device that includes two gasketed metal segments that are to be attached with a threaded coupling and designed to extend through and plug a hole that has been cut through the polyvinyl chloride or ABS thermoplastic well casing pipe.

(74)(e) “Pitless receiver tank” means a pitless unit having a permanently attached steel pressure tank surrounding the casing pipe as an integral part of the unit and installed, as a unit, at a factory.

(75c) “Potable water” means water supplied for human consumption, or water supplied for sanitary use or for the washing or preparation of food or pharmaceutical products.
Note: The term “water for human consumption” is used interchangeably with the term “potable water.”

(75g) “POWTS” means a private onsite wastewater treatment system.
Note: A “POWTS” may include, but is not limited to, a substitute for a septic tank or soil absorption field or a substitute for a holding tank.

(75L) “POWTS component” means any subsystem, subassembly or other system designed for use in or as part of a private onsite wastewater treatment system which may include treatment, dispersal, or holding and includes any related piping.

(75p) “POWTS dispersal unit” means a device or method intended to promote the assimilation of treated wastewater by the environment.

Note: The terms “absorption field” and “sewage disposal unit” have been used in previous versions of this rule to describe these types of units.

(75t) “POWTS holding component” means any receptacle intended to collect wastewater for a period of time, including holding tanks and dosing tanks.

(75x) “POWTS treatment component” means a device or method that is intended to reduce the contaminant load of wastewater.

(79e) “Pressure system” means that portion of a pump installation that is upstream of a building control valve or upstream of a pressure tank, including the pressure tank.

(79p) “Property transfer well inspection” means an inspection, for compensation, for the purpose of locating or evaluating wells that need to be filled and sealed and water supply wells or pressure systems on real property in contemplation of a transfer of the real property.

(79t) “Property transfer well inspector” means an individual licensed as a water well driller or pump installer who performs a property transfer well inspection, completes the form required in s. NR 812.44(3) and collects the water samples required in s. NR 812.44(4).

SECTION 75. NR 812.07(80) (intro.), (a), and (b) are amended to read:

NR 812.07(80) (intro.) “Public water system” means a system for the provision to the public of piped water for human ~~consumptions~~ consumption through pipes or other constructed conveyances if ~~such~~ the system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days ~~per~~ out of the year. A public water system is either a “community water system” or a “non-community water system.” ~~Such~~ A system ~~includes~~:

(a) ~~Any~~ Includes any collection, treatment, storage, and distribution facilities under control of the operator of ~~such~~ the system and used primarily in connection with ~~such~~ the system, and

(b) ~~Any~~ Includes any collection or pretreatment storage facilities not under ~~such~~ the system’s control which are used primarily in connection with ~~such~~ the system.

SECTION 76. NR 812.07(80m) is created to read:

NR 812.07(80m) "Pump installation" means the pump and its associated pressure system including any equipment and material needed to withdraw, obtain, discharge and store water from a well or a spring. The pump installation includes the spring box, reservoir, pump, pump drop pipe, check valves, well cap or seal, pitless adapter, pitless receiver tank, pitless unit, above-ground discharge unit, associated discharge piping and associated connections, valves and appurtenances, pressure tank, sampling faucet, water storage or pressure vessel or structure, the electrical wiring and controls needed to operate the pump or pressure system, and any chemical addition, water treatment device or yard hydrant upstream of the water storage or pressure vessel or building control valve.

SECTION 77. NR 812.07(82) is repealed and recreated to read:

NR 812.07(82) "Pump installing" has the meaning specified in s. 280.01 (5), Stats., and includes installing, repairing, replacing or reinstalling a: spring box, reservoir, pump, pump drop pipe, check valve, well cap or seal, pitless adapter, pitless receiver tank, pitless unit, above-ground discharge unit, associated discharge piping and associated connections, valves and appurtenances, pressure tank, sampling faucet, water storage or pressure vessel or structure, the electrical wiring and controls needed to operate a pump or pressure system, and any chemical addition, water treatment device or yard hydrant upstream of the water storage or pressure vessel or building control valve; attaching well casing pipe to extend the well casing pipe to a complying height above grade, or up and out of a pit or a subsurface pumproom or alcove; or bailing or chemically conditioning a well to return it to its original capacity, production capability or water quality. Pump installing does not include installation of a temporary test pump by a well driller for the purpose of determining well capacity or water quality and does not include the installation, by a well driller, of a well cap or seal. Opening a well cap or well seal to inspect or chlorinate a well is also not considered pump installing unless the well cap or seal is replaced with a different cap or seal, or unless the well has a hand pump installed on it

Note: Section 280.01(5), Stats., defines "Pump installing" to mean the industry and procedure employed in the placement and preparation for operation of equipment and materials utilized in withdrawing or obtaining water from a well for consumption or use, including all construction involved in making entrance to the well and establishing such seals and safeguards as are necessary to protect such water from contamination.

SECTION 78. NR 812.07(84) is amended to read:

NR 812.07(84) "Quarry" means an open or surface working in bedrock for the extraction of nonmetallic materials, usually construction stone, including those no longer in operation .

SECTION 79. NR 812.07(85m) is created to read:

NR 812.07(85m) "Recycling facility" means a facility where waste materials are recycled including a facility where waste has been generated.

SECTION 80. NR 812.07(86), (90), (91), (93)(intro) and (93)(a) are amended to read:

NR 812.07(86) "Regional flood" means a flood determined to be representative of large floods known to have ~~generally~~ occurred in Wisconsin ~~and~~ or which may be expected to occur on a particular lake, river or stream ~~because of like physical characteristics. The flood frequency of the regional flood is such that there is a one percent chance of a flood in any given year.~~ once in every 100 years.

(90) "Sanitary building drain" means ~~the~~ horizontal piping ~~which conveys only sewage located~~ within or under a building, ~~and~~ which conveys wastewater consisting in part of domestic wastewater, and which is installed below the lowest fixture ~~on~~ or the lowest floor level from which fixtures can drain by gravity to the building sewer.

(91) "Sanitary building sewer" means that part of the drain system ~~which conveys only sewage, is~~ not ~~located~~ within or under a building~~, and~~ which conveys its discharge of wastewater consisting in part of domestic wastewater to a public sewer, private interceptor main sewer, private ~~sewage~~ onsite wastewater treatment system or other point of ~~disposal~~ discharge or dispersal.

(93)(intro.) "Sanitary condition" means, when referring to a well ~~or~~, reservoir or spring:

(93)(a) That the construction of the well ~~or~~, reservoir or spring and the installation of the pumping equipment are such that the well ~~or~~, reservoir or spring is effectively protected against entrance of surface contamination, and

SECTION 81. NR 812.07(94) is amended to read:

NR 812.07(94) "School" means a public or private educational facility in which a program of educational instruction is provided to children in any grade or grades from five-year old kindergarten through the 12th grade. Water systems serving athletic fields, school forests, environmental centers, home-based schools, day-care centers and Sunday schools are not school water systems.

SECTION 82. NR 812.07(94g), (94r), and (96g) are created to read:

NR 812.07(94g) "Scrap metal processing facility" means a facility at which machinery or equipment, or both, are used for the processing and manufacturing of iron, steel or nonferrous metallic scrap into prepared grades and whose principal product is scrap iron, scrap steel or nonferrous scrap for sale for resmelting purposes.

(94r) "Septage" means the wastewater or contents of septic or holding tanks, dosing chambers, grease interceptors, seepage beds, seepage pits, seepage trenches, privies or portable restrooms.

(96g) "Sludge" means the accumulated solids generated during the biological, physical or chemical treatment of potable water or wastewater.

SECTION 83. NR 812.07(104), (105), (106), (107) and (108) are amended to read:

NR 812.07(104) "Storm building drain" means horizontal piping within or under a building which conveys storm water ~~wastes~~, clear water ~~wastes~~ or ~~other similar water from roofs, area ways, courtyards, canopies, enclosed parking areas and other sources within or under any building or structure,~~ both, and which is installed below the lowest fixture or the lowest floor level, from which fixtures or sources can drain by gravity to the building sewer.

(105) "Storm building sewer" means that part of the ~~building sewer~~ drain system not within or under a building which conveys its discharge of storm water ~~waste~~, ~~or~~ clear ~~wastes~~ water, or both, ~~discharge from storm building drains, parking lots, yard fountains or other similar sources, is not located within or under a building and which discharges~~ to a ~~storm collector~~ public sewer, private interceptor main sewer, private ~~sewage~~ onsite wastewater system or other point of ~~disposal~~ discharge or dispersal.

(106) "Storm collector sewer" means a storm sewer ~~serving~~ that collects storm water, storm waste, clear water wastes or other similar water from 2 or more storm ~~building sewers~~ sewer inlets or catch basins.

(107) "Subsoil drain: means that part of ~~the~~ a drain system~~, including foundation drains, which~~ that conveys ~~the ground or seepage water from the footings of walls or below the basement floor under buildings~~ groundwater to ~~the storm sewer or other~~ a point of ~~disposal.~~ discharge or dispersal.

(108) "Sump" means a tank or ~~other receptacle which~~ pit that receives ~~sewage or liquid wastes and which is located below the normal grade of the gravity system and~~ wastewater that must be emptied by mechanical means.

SECTION 84. NR 812.07(108r) and (110s) are created to read:

NR 812.07(108r) "Surface water" means all water which is open to the atmosphere and subject to surface runoff.

(110s) "Temporary outer casing" means a string of casing pipe that is driven, turned or placed from the ground surface into the surficial geological formation or formations as part of the process of constructing an upper enlarged drillhole and which is not intended to be left in place as a permanent well casing pipe.

SECTION 85. NR 812.07(112g) is renumbered as NR 812.07(111m).

SECTION 86. NR 812.07(112m) and (112v) are created to read:

NR 812.07(112m) "Upstream" means, with respect to the pump installation discharge and pressure system, in a direction back towards the well.
Note: In previous versions of this rule the term "prior to" was used in lieu of the term "upstream."

(112v) "Vegetated treatment area" means a component of an agricultural waste management system that is an area or strip of herbaceous vegetation designed and constructed to Natural Resources Conservation Service (NRCS) Standard 635 specifications, located adjacent to an animal barn, animal barn pen, animal shelter, animal yard or a manure storage facility and which is intended to improve water quality by reducing pollutants associated with animal manure and other agricultural wastewater runoff. Note: In previous versions of this rule the term "Filter strip" was used instead of the term "Vegetated treatment area."

SECTION 87. NR 812.07 (122) is amended to read:

NR 812.07(122) "Well constructor" means any person~~, firm or corporation~~ that constructs a well which is not required to be constructed by a licensed individual water well driller or a registered water well drilling business.

SECTION 88. NR 812.07(119g) is created to read:

NR 812.07(119g) "Well and pressure system" means the water supply and pump installation upstream of a building control valve or pressure tank and including any pressure tank.

SECTION 89. NR 812.07(124) is repealed and recreated to read:

NR 812.07(124) "Well drilling" has the meaning specified in s. 280.01(8), Stats., and includes any activity which requires the use of a well drilling rig or similar equipment, or any activity which is conducted using a well drilling rig or similar equipment with the exception of the driving of points having pipe or casing smaller than three inches in diameter. Well drilling also includes constructing a well or performing any

activity which changes the characteristics of a drilled well including constructing, reconstructing or deepening a well, sealing the annular space of a well, joining or welding together lengths of well casing pipe or liner pipe, installation of a liner, installing or replacing a screen, well rehabilitation, hydrofracturing, blasting and chemical conditioning.

Note: Section 280.01(8), Stats., defines "Well drilling" to mean the industry and procedure employed in obtaining groundwater from a well by digging, boring, drilling, driving or other methods but not including the driving of points for the purpose of obtaining ground water. It shall also include all construction work and installation of well casings in said well involved therein for the protection of such well water against pollution.

Note: Attaching well casing pipe to the upper portion of a well to extend the well out of a pit is not considered well drilling.

SECTION 90. NR 812.07(124m) and (note) are created to read:

NR 812.07(124m) "Well Notification" means a notice provided by a prospective well owner or well driller to the department in accordance with s. 281.34, Stats., before any new private well is constructed.

Note: The Well Notification does not apply to proposed high capacity wells, school wells or wastewater treatment plant wells.

SECTION 91. NR 812.08(1) (intro.), (b) and (d) are amended to read:

NR 812.08(1) GENERAL. Any potable or nonpotable well, ~~or~~ reservoir or spring shall be located:

(b) At the highest point on the property consistent with the general layout and surroundings if reasonably possible, but in any case protected against surface water flow and flooding. ~~and not downslope from a contamination source on the property or on an adjacent property regardless of what was installed first, the well or the contamination source. When a contamination source is installed upslope from a well in violation of this section after the well construction has been completed, the violation is not the responsibility of the well driller, except if the well driller knew or should have known of the proposed upslope installation of the contamination source. When there is no location on the property where this requirement can be met, a well may be constructed without a variance if it is constructed with a minimum of 20 or more feet of well casing pipe than is required by ss. NR 812.12 and 812.13 and Tables I and II or with a minimum of 60 feet of well casing pipe provided that the minimum well casing pipe depth requirements of s. NR 812.12 or 812.13 and Table I or II are met. This exception does not apply to high capacity, school or wastewater treatment plant wells. A well or reservoir is located downslope from a contamination source, regardless of the presence or absence of a structure between the well and the contamination source, if:~~

~~1. The ground surface elevation at the well or reservoir is lower than the elevation at the contamination source, and~~

~~2. Surface water that washes over the contamination source would travel within eight feet of the well or reservoir, or over the well or reservoir.~~

(d) Such that any potential contaminant source, not identified in this section or in Table A, is a minimum of 8 feet from the well, ~~or~~ reservoir or spring.

SECTION 92. NR 812.08(1)(f) is created to read:

NR 812.08(1)(f) In a manner to meet the additional location and construction specifications of s. NR

812.12(3), (15), (16) and (17).

SECTION 93. **NR 812.08(2)(a)** is amended to read:

NR 812.08(2)(a) When a well is located outside ~~and adjacent to a building,~~ it shall be located ~~so that the center line of the well extended vertically will clear any projection from the building by not less than 2 feet and~~ so that the top of the well casing pipe extends at least 12 inches above the final established ground grade and in a manner such that it is not directly in line with a rainwater downspout outlet or other similar clear water discharge that creates a sanitary hazard to the well.

Note: The department recommends that when a well is located adjacent to a building, it be located so the center line of the well extended vertically will clear the overhang of any building by not less than 2 feet to allow for well reconstruction and for pulling the pump.

SECTION 94. NR 812.08(2)(b) and (2)(c) are amended to read:

NR 812.08(2)(b) When a structure is built over a drilled well, it shall have an ~~access hatch or~~ easily removable access hatch, or provide other practicable access to allow for pulling and servicing ~~of~~ the pump. The well casing pipe shall extend at least 12 inches above ~~the floor and be~~ ground grade or above the ground-grade floor of the building and shall be sealed watertight at the point where it extends through the floor.

(2)(c) No well may be located, nor a building constructed, such that the well casing pipe will terminate in a basement or extend through the basement of any building or terminate under the floor of a building having no basement. ~~The top of a well casing pipe may terminate in a walkout basement meeting the criteria of s. NR 812.42 (9) (b) 1. to 4~~. A well may not terminate in or extend through a crawl space having a below ground grade depression or excavation.

SECTION 95. NR 812.08(2)(c) (note) and (note), (d), (e), (f) and (g) are created to read:

NR 812.08(2)(c) (note) Note: Wells terminating in basements and below-grade crawl spaces often pose a sanitary hazard to safe drinking water so they have not been allowed to be constructed, nor have screens been allowed to be replaced since April 10, 1953. Many wells terminating in basements or crawl spaces do not meet the requirements of Subchapter IV.

Note: This paragraph does not apply to wells located in alcoves or subsurface pumprooms adjoining a basement.

(2)(d) The top of a well casing pipe may terminate in a walkout basement if the following conditions are met:
1. It is possible to walk directly outside from the walkout basement without walking upstairs or upslope.
2. The surface of the ground around the outside exit door of the walkout basement slopes down away from the door.
3. The well and pump installation are accessible for repair and removal.
4. The well produces water continuously free from contaminants in excess of the drinking water standards of s. NR 812.06.
5. The well casing pipe depth meets the requirements of s. NR 812.42(1)(b).
6. The well and pump installation are in compliance with all other requirements of this chapter.
7. The walkout basement is not subject to flooding
8. The walkout basement is not in a floodway or floodplain.

(e) A well may not terminate in or extend through a crawl space having a below grade depression or excavation.

(f) If a well must be located in a driveway, parking area, walkway or other high traffic area due to lot size or to meet minimum required separation distances between the well and contaminant sources, the well may be contained within a driveway ramp structure without department approval providing the driveway ramp meets the specifications of s. NR 812.36. Driveway ramps may not be constructed or located in a floodway or floodplain.

(g) A yard hydrant may not be installed within or on a well.

SECTION 96. NR 812.08(4)(intro.), and (a)1. and 2. are amended to read:

NR 812.08(4)(intro.) RELATION TO CONTAMINATION SOURCES. Minimum separating distances between any new potable or nonpotable well, reservoir or spring and existing sources of contamination; or between new sources of contamination and ~~existing~~ potable or nonpotable wells, reservoirs or springs shall be maintained as described in this subsection. The minimum separating distances of this subsection do not apply to dewatering wells approved under s. NR 812.09(4)(a). Greater separation distances may be required for wells requiring plan approval under s. NR 812.09. Separation distance requirements to possible sources of contamination will not be waived because of property lines. Separation distances shall be measured from the edge of the well, reservoir or spring, to the nearest edge of the contamination source. Minimum separating distances are listed in Table A and are as follows:

(a)1. Buried gravity flow sanitary ~~or storm~~ building drain having pipe conforming to ch. SPS 384;

(a)2. Buried gravity flow sanitary ~~or storm~~ building sewer having pipe conforming to ch. SPS 384;

SECTION 97. NR 812.08(4)(a)3. is repealed:

SECTION 98. NR 812.08(4)(a)4. is repealed.

SECTION 99. NR 812.08(4)(a)5. is repealed.

SECTION 100. NR 812.08(4)(a)6. is repealed.

SECTION 101. NR 812.08(4)(a)8. is repealed.

SECTION 102. NR 812.08(4)(a)11. Is amended to read:

NR 812.08(4)(a)11. Fertilizer or pesticide storage tank with a capacity of less than 1,500 gallons, but only ~~when~~ if the well is nonpotable and if the tank is not buried;
Note: For potable wells and buried tanks, see par. (d)1.

SECTION 103. NR 812.08(4)(a)13. is repealed.

SECTION 104. NR 812.08(4)(a)14. and 15. are amended to read:

NR 812.08(4)(a)14. Swimming pool, measured to the nearest edge of the water~~, or~~;

15. Dog or other small pet house, pet animal shelter or kennel housing not more than ~~3~~ 5 adult pets on a residential lot~~.~~;

SECTION 105. NR 812.08(4)(a) and (note), 16., 17., and 18. are created to read:

NR 812.08(4)(a) 16. A ditch, but not including a river or stream.
Note: For the minimum separating distance to a river or a stream, see par. (b)7.

17. Buried liquid propane (L.P.) gas tank as specified in ch. SPS 340.

18. Buried storm collector sewer or stormwater culvert.

SECTION 106. NR 812.08(4)(b)2., 3., 4. and 7. are amended to read:

NR 812.08(4)(b)2. ~~Septic~~ A septic tank, a POWTS treatment component, or a wastewater sump.

Note: A POWTS treatment component includes a private wastewater treatment tank.

3. ~~holding~~ A holding tank or POWTS holding component.

4. Buried sanitary building drain or sanitary building sewer having pipe not conforming to ch. SPS 384~~, wastewater sump, or non-watertight clear water waste sumps,~~ ;

7. Lake, pond, river, stream~~, ditch~~ or stormwater detention ~~pond or~~ basin, measured to the regional high water elevation in the case of a lake or ~~stormwater detention~~ pond, to the edge of the floodway in the case of a river or stream, or to the edge in the case of a ~~ditch or~~ stormwater detention basin;

Note: The separation distance requirements of this subsection do not apply to synthetically-lined decorative yard ponds located on residential lots.

SECTION 107. NR 812.08(4)(b)9. and 10. are repealed.

SECTION 108. NR 812.08(4)(b)12. is amended to read:

NR 812.08(4)(b)12. ~~Buried fuel~~ Fuel oil tank, serving a single family residence including any associated surface or buried piping;

SECTION 109. NR 812.08(4)(b)13. is repealed.

SECTION 110. NR 812.08(4)(b)15. is amended to read:

NR 812.08(4)(b)15. Buried sanitary ~~or storm~~ collector sewer serving 4 or fewer living units ~~or~~ ~~and~~ or [CORRECTED 2-18-2014] having a diameter of 6 inches or less.

SECTION 111. NR 812.08(4)(b)16. and (note), and 17. are created to read:

NR 812.08(4)(b)16. Surface or basement liquid petroleum product tank with a capacity less than 1,500 gallons.

Note: The department recommends that potable wells be installed at least 25 feet from an agricultural crop field, sludge or septage landspreading or drying area.

SECTION 112. NR 812.08(4)(c)1., 2., 4. and 10. are amended to read:

NR 812.08(4)(c)1. ~~Soil~~ POWTS dispersal component or a soil absorption unit receiving less than ~~8,000 gallons/day~~ 12,000 gallons per day of design wastewater flow, including any existing, replacement or abandoned ~~or alternate~~ POWTS dispersal component or a soil absorption unit, within 3 years of abandonment, but not including a school soil absorption unit~~;~~ or a POWTS dispersal component . This subdivision includes absorption units both regulated and not regulated by ch. SPS 383, but does not include a separation requirement for school wells .

Note: For ~~school~~ the minimum separation requirement for soil absorption units relative to school wells, see par. (e); for soil absorption units or POWTS dispersal components receiving more than ~~8,000 gallons/day~~ 12,000 gallons per day of design wastewater flow see par. (f) 3.

2. Privy or pit privy;

4. Animal barn or animal shelter;

10. Buried sanitary ~~or storm~~ collector sewer serving more than 4 living units or larger than 6 inches in diameter ~~except that wells may be located or sewers installed such that a well is less than 50 feet, but at least 25 feet, from gravity collector sewers smaller than 16 inches in diameter or from force main collector sewers 4 inches or smaller in diameter provided that within a 50-foot radius of the well the installed sewer pipe meets the allowable leakage requirements of AWWA C600 and the requirements for water main equivalent type pipe as follows:~~ .

~~a. For sewers > 4~~ diameter, but < ~~shall meet AWWA C900 with elastomeric joints having a standard dimension ratio of 18 or less; PVC pipe > 12~~ ~~astomeric joints having a~~ diameter shall meet A ~~standard dimension ratio of 18 or less; Ductile iron pipe shall meet AWWA C115 or AWWA C151 having a thickness class 50 or more~~.

~~b. For sewers < 3~~ diameter, the pi ~~Tubing for Water Services and Private Water Mains," including approved ABS, brass, cast iron, CPVC, copper (not including type M copper) ductile iron, galvanized steel, polybutylene (PB), polyethylene (PE), PVC, or stainless steel pipe.~~ The Department's Bureau of Watershed Management, under s. s. 281.41, Stats., may approve the installation of a collector sewer at a distance of less than 50 feet from a well if the sewer is installed a distance of at least 25 feet from the well, and if, within a 50-foot radius of the well, the sewer pipe meets the AWWA requirements for water main equivalent type, and if the sewer is installed in a manner that meets the leakage requirements of AWWA C600.

Note: AWWA C600 is a standard for the "Installation of Ductile-Iron Water Mains and Their Appurtenances" and provides, in section 5.2, hydrostatic water-pressure testing methods and the allowable leakage allowances.

~~**Note**: The minimum separating distance between a well or reservoir and a lift station is based on the presence of a sewer force main at the lift station.~~

SECTION 113. NR 812.08(4)(c)16., 17., 18., 19., 20. and 21. are created to read:

NR 812.08(4)(c)16. Bulk surface storage tank or other container with a capacity less than or equal to 1,500 gallons for any solid, semi-solid or liquid product, including any associated above ground piping, but not including any associated buried piping regulated under par. (d)1. This subdivision includes, but is not limited to petroleum barrels, drums, product tanks and waste oil tanks. This subdivision does not include septic, holding, and manure reception tanks; tanks regulated under par. (a) 11, fuel oil tanks regulated under par. (b) 12 or liquid propane tanks regulated under (a)17.

17. Barn gutter.

18. Animal barn pen.

19. Outlet from a milk house drain.

20. Vegetated treatment area.

SECTION 114. NR 812.08(4)(d)1., 4., and 6. are amended to read:

NR 812.08(4)(d)1. Bulk surface storage tank with a capacity greater than 1,500 gallons or any bulk buried storage tank ~~regardless of capacity,~~ including, for both surface or buried tanks, regardless of capacity, any associated buried piping, for any solid, semi-solid or liquid product but not including those regulated under par. (b) 12. or (c) 16. This subdivision includes, but is not limited to petroleum product tanks, waste oil tanks and pesticide or fertilizer storage tanks not regulated under par. (a) 11. This subdivision does not include septic, holding and manure reception tanks~~, or liquified petroleum gas tanks as specified in ch. SPS 340~~.

4. Dry fertilizer or pesticide storage building or area when more than 100 pounds of either or both materials are stored, in packages or in bulk;

6. Stormwater infiltration basin or system;

SECTION 115. NR 812.08(4)(d)10., 11., and 12. are created to read:

NR 812.08(4)(d)10. Recycling facility or scrap metal processing facility.

11. Liquid-tight sludge drying bed.

12. Pesticide or fertilizer mixing or loading area.

SECTION 116. NR 812.08(4)(f)2., 7. and 8. are amended to read:

NR 812.08(4)(f)2. Earthen or excavated manure storage structure or waste storage facilities.

Note: Variances from the separating distances may be granted as specified in s. NR 812.43 for earthen storage and manure stacks constructed and maintained to the previous specifications of Soil Conservation Standards No. 425 or 312, ~~respectively~~ or for waste storage facilities constructed and maintained to the present specifications of Natural Resources Conservation Service Standard No. 313.

7. Salvage yard or junkyard.

8. A salt or deicing material storage area including the building structure and the surrounding area where the material is transferred to vehicles. This subdivision includes those structures or areas that store deicing material mixtures of sand and salt that have a salt content at or exceeding 5%, but does not include bagged deicing material.

SECTION 117. NR 812.08(4)(fm) is created to read:

NR 812.08(4)(fm) Five hundred feet between a well and an existing quarry or proposed quarry expansion.

SECTION 118. NR 812.08(4) Table A is amended to read:

TABLE A

MINIMUM SEPARATION DISTANCE REQUIREMENTS BETWEEN POTABLE OR NONPOTABLE WELLS, RESERVOIRS, SPRINGS AND POSSIBLE SOURCES OF CONTAMINATION

For the list according to separation distance, see s. NR 812.04(4)

New installations shall meet the separation requirements in the far-right column. Existing installations shall meet the separation requirements in effect at the time of construction, those in effect at the time of installation of the possible source of contamination, if later, or ~~to~~ the requirements adopted on ~~October 1, 1994~~ the effective date of this table [legislative reference bureau inserts date].`

Source	Prior to@ Oct. 1975	Oct. 1975 to Oct. 1981	Oct. 1981 to Jan. 1991	Feb. 1991 to Oct. 1994	~~After~~ Oct. 1994	After [the effective date of this section [legislative reference bureau inserts date]
Absorption Unit (field), soil [See Soil Absorption Unit] (Also known as a POWTS dispersal component)	50	50	50	50	50	50
Agricultural crop field Note: Not a requirement—only a recommendation	None	None	None	None	None	25' recommended
Air shaft-heating/air conditioning (Vertical, Below grade)	None	None	None	None	25′	25′
Animal Barn	--	--	--	--	--	50'
Animal Barn Pen ~~with Concrete Floor~~	None** (25/20)**	25′	25′	25′	25′	~~25′~~ 50′
Animal Shelter (not including small residential pet shelter or pet kennel housing ~~3~~ 5 or fewer adult pets)	None** (50/25)**	50′	50′	50′	50′	50′
Animal Yard—Includes Calf Hutch (but not including residential lot dog kennel enclosing ~~3~~ 5 or fewer adult pets)	None**	50′	50′	50′	50′	50′
Barn, Animal	--	--	--	--	--	50'
Barn Gutter ~~Liquid-Tight~~	None** (25/18)**	25′	25′	25′	25′	~~25′~~ 50′
Building Overhang (from centerline of well)	2′	2′	2′	2′	2′	None ^
Cemetery Grave Sites	None*	100′	100′	50′	50′	50′

Cistern	10′	10′	10′	8′	8′	8′
Coal Storage (greater than 500 tons)	None*	None*	None*	1,200′	1,200′	1,200′
Composting Site (See Solid Waste Processing Facility)	None	None	None	None	250′	250′
Culvert, stormwater	None	None	None	None	None	8’
Discharge to ground from a Water Treatment Device	None	None	None	25’	25’	None
Ditch-Edge of	None	None	None	None	25′	8′
Doghouse or kennel housing ~~3~~ 5 or fewer adult pets on residential lot	None	None	None	50′	8′	8′
Downspout Outlet (Rainwater, including the discharge therefrom)	10′	10′	10′	8′	8′	None
Drain- ~~Sewerage~~ Sanitary building (having pipe conforming to ch. SPS 384) (Buried)	10’	8’	8’	8’	8’	8’
Drain- ~~Sewerage~~ Sanitary building (not having pipe conforming to ch. SPS 384) (Buried)	10′	25′	25′	25′	25′	25′
~~Drain~~ DRAIN (any material) (Buried)						
-- Clear Water ~~Waste~~ Drain	10′	10′	10′	8′	8′	None
-- Building-Foundation Drain	10′	10′	10′	8′	8′	None
-- Building-Foundation Drain—Sewer Connected	15′	15′	15′	8′	8′	None
Drillhole used for the underground placement of any waste, surface water or any substance as defined in s. 160.01 (8), Stats.	None	None	None	None	100′	100′
Fertilizer or Pesticide Storage Tank (any size, surface or buried) (This distance applies only for nonpotable wells)	None	None	None	8’	8′	8′
Fertilizer or Pesticide, any size Buried Storage Tank ~~(Buried tank~~ or surface tank >1,500 gal.~~)~~ (This distance applies only for potable wells)	None	None	None	100′	100′	100′
Filter Strip	None	None	None	50′	50′	50’
Fuel Oil Tank—Buried	None*	100′ (25′ Allowed for Private Res. Lots Only)	100′ (25′ Allowed for Private Res. Lots Only)	100′ (Including any associated buried piping) (25′ allowed for ~~those~~ tanks serving single family residences)	100′ (Including any associated buried piping) (25′ allowed for ~~those~~ tanks serving single family residences)	100′ (Including any associated buried piping) (25′ allowed for tanks serving single family residences)
Fuel Oil Tank Serving a Single Family Residence	None	25′ Allowed for Private Res. Lots Only	25′ Allowed for Private Res. Lots Only	25′	25′	25′ (Including any associated piping)
Fuel Oil Tank—Surface (>1,500 gallons) (including any associated ~~buried~~ piping)	None*	None*	None*	100′	100′	100’ (Including any associated piping)
Fuel Oil Tank—Surface (<1,500 gallons)	None*	None*	None*	None*	None*	25′
Fertilizer or Pesticide (Dry) Storage Area or Building (more than 100 pounds)	None	None	None	None	100′	100′
Gasoline or Other Petroleum or Liquid Product Tank — Buried (~~not including L.P.~~ Does not apply to separation distance between Liquid Propane tanks and wells serving single family residences)	None*	100′	100′	100′ (Including any associated buried piping)	100′ (Including any associated buried piping)	100′ (Including any associated piping)
Gasoline or Other Petroleum or Liquid Product Tank— Surface (< 1,500 gallons, including any associated buried piping)	None	None	None	None	None	25′
Gasoline or Other Petroleum or Liquid Product Tank— Surface (>1,500 gallons, including any associated ~~buried~~ piping)	None*	None*	None*	100′	100′	100′
Glass Lined Feed Storage Facility (Harvester-Type Silos)	None**	25′	25′	50′	50′	50′
Grease Interceptor (Trap) (Buried)	25′	25′	25′	25′	25′	25′
Hazardous Waste Treatment Facility Regulated by DNR	None*	None*	None*	1,200′	1,200′	1,200′
Heat exchange drillhole	None	None	None	None	None	None

Holding Tank (~~Sewage~~ Wastewater) (Also known as a POWTS holding component)	None	25′	25′	25′	25′	25′
Infiltration basin or system, Stormwater	None	None	None	None	100′	100′
Junkyard or Scrap Yard	None	None	None	250’	250’	250′
Kennel on residential lot enclosing ~~3~~ 5 or fewer adult pets	None	None	None	50′	8′	8′
Kennel, other than above	None	None	None	50′	50′	50′
Lagoon, Treatment (See liquid waste disposal system)	—	—	—	—	—	--
Lake Shoreline (Measured to the edge of the floodway)	None*	25′	25′ (60′ For Schools and High Cap. Wells)	25′	25′	25′
Landfills (existing, proposed or abandoned) (Distance to Nearest Fill Area of abandoned landfills if Known; Otherwise to the Property Line)	None*	400 yards	400 yards	1,200′	1,200′	1,200′
Lift Station##	--	--	--	##	100′	100′
Liquid Propane (L.P.) gas tank (buried) (Applies only to wells serving a single family residence. For other wells see NR 812.04(4)(d)1.)	None	None	None	None	None	8’
Liquid Waste Disposal System	None	250′	250′-300′	250′#	250′#	250′#
Manure Hopper or Reception Tank—Liquid-Tight	None*	75′	75′-150′	50′	50′	50′
Manure Loading Area	None	None	None	None	50′	50′
Manure Stack,—Temporary	None	100′	100′	250′	150′	150′
Manure—Storage Structure (Earthen, Excavated or Non-liquid tight)	None*	250′	250′-300′	250′***	250′***	250′***
Manure Storage Structure (Fabricated, Liquid-Tight)	None*	100′	100′-175′	100′	100′	100′
Manure—Storage Basin—Liquid-Tight Concrete Floor with an Acceptable Drainage Facility	None*	100′	150′-300′	Now in category of Manure Storage Structure	Now in category of Manure Storage Structure	Now in category of Manure Storage Structure
Milk house drain outlet	None**	None**	None**	None**	None**	50’
Mound System (Measured to the toe of the mound) (Also known as POWTS dispersal component.)	50′	50′	50′	50′	50′	50′
Nonpotable Well	None*	None*	None*	8′	8′	8′
Pesticide or Fertilizer (Dry) Storage Area or Building (More than 100 Pounds)	None	None	None	None	100′	100′
Pesticide or Fertilizer Storage Tank (not buried)—less than 1,500 gallons (this distance applies only for nonpotable wells)	None	None	None	8′	8′	8′
Pesticide or Fertilizer Storage Tank—Buried tank, any size, or any surface tank >1,500 gal (this distance applies only for potable wells)	None	None	None	100′	100′	100′
Pet Waste Pit Disposal Unit	None*	50′	50′	50′	50′	50′
Pet animal shelter or kennel on residential lot and housing not more than 5 adult pets.	None	None	None	50’	8’	8’
Pet animal shelter or kennel housing more than 5 adult pets or not on residential lot.	None	None	None	50’	50’	50’
Petroleum Product Tank—Surface - less than 1,500 gallons capacity	None*	None*	None*	None*	None*	25′
Petroleum Product Tank—Surface - greater than or equal to 1,500 gallons capacity	None*	None*	None*	None*	None*	100’
Pits—Noncomplying	None	10′	10′ (20′ For Schools, WWTP′s, and High Capacity-Including Approved Pits)	8′	8′	8′
Plastic Silage Storage and Transfer Tube	None	None	None	8′	8′	8′
Pond (Measured to nearest high water edge)	None	None	None	None	None	25′

Pond, Stormwater detention (Edge of)	None	None	None	None	25′	25′
Pond, synthetically-lined decorative yard pond on a residential lot	--	--	--	--	--	None
Pond, treatment (See liquid waste disposal system)	--	--	--	--	--	--
POWTS holding component (Also known as a holding tank.)	25’	25’	25’	25’	25’	25′
POWTS treatment component (Includes septic tanks, aerobic treatment units or filters)	25’	25’	25’	25’	25’	25′
POWTS dispersal component (Also known as a soil absorption unit or mound.)	50’	50’	50’ (200’ for schools)	50’ (200’ for schools)	50’ (200’ for schools)	50’ (200’ for schools)
Privy (Also known as pit privy)	50′ (Sewage Disposal Units)	50′	50′	50′	50′	50′
Quarry (See s. NR 812.12 (16) for ~~well casing depth~~ well construction requirements for wells to be constructed within ~~1,200~~ 500 feet of a quarry.)	--	--	--	###	###	500′
Recycling Facility	None	None	None	None	None	100′
Reservoir—Noncomplying	10′ (Cistern)	10′	10′	8′	8′	8′
Ridge and Furrow System (See liquid waste disposal system)						
River or Stream Edge (Measured to the edge of the floodway)	None*	25′	25′ (60′ For Schools and High Cap. Wells)	25′	25′	25′
Salt or Deicing Material Storage Area (Including structure and area surrounding where material is transferred to vehicles) (This category includes sand & salt mixtures if salt content of mixture is 5% or more)	None*	None*	None*	250′	250′	250′
Salvage Yard	None*	None*	None*	250′	250′	250′
Scrap Metal Processing Facility	None	None	None	None	None	100′
Septage Landspreading Area Note: Not a requirement—only a recommendation	None	None	None	None	None	25’ recommended
Septic Tank (Also known as a POWTS treatment component)	25′	25′	25′	25′	25′	25′
~~Sewer~~ SEWER (ch. SPS 384 Materials) (Buried)						
—Manure/Gravity sewer	8′	8′	8′	25′	25′	25′
—Manure/Pressurized sewer	8′	8′	25′	25′	25′	25′
—Sanitary ~~or Storm~~ Building/Gravity sewer	8′	8′	8′	8′	8′	8′
—Sanitary Building/Pressurized sewer	8′	25′	25′	25′	25′	25′
—Sanitary Collector sewer~~.~~° (Serving ≤ 4 living units ~~or~~ ~~and~~ or [CORRECTED 2-18-2014] ≤ 6″diameter)	8′	50′	50′	50′	25′	25′
—Sanitary Collector sewer~~.~~° (Serving > 4 living units or > 6″ diameter)	8′	50′	50′	50′	50′	50′
—Influent sewer	50′	50′	50′	50′	50′	50′
—Storm Collector sewer (≤ 6″ diameter)	8′	50′	50′	50′	25′	25′
—Storm Collector sewer (> 6″ diameter)	8′	50′	50′	50′	50′	50′
~~Sewer~~ SEWER (not ch. SPS 384 Materials) (Buried)						
—Manure/Gravity sewer	25′	25′	25′	25′	25′	25′
—Manure/Pressurized sewer	25′	50′	50′	50′	50′	50′
—Sanitary Building/gravity sewer	25′	25′	25′	25′	25′	25′
—Sanitary Building/Pressurized sewer	25′	25′	25′	25′	50′	50′
—Storm Building sewer	25′	25′	25′	25′	8′	None
—Sanitary Collector sewer °	~~50′~~ 25′	50′	50′	50′	50′	50′
—Storm Collector sewer	25′	50′	50′	50′	50′	8’

—Influent sewer	50′	50′	50′	50′	50′	50′
Shoreline—Lake, River or Stream [Measured as indicated in subd. (4) (b) 7.]	None*	25′	25′ (60′ For Schools and High Capacity Wells)	25′	25′	25′
Silage Storage, Earthen Trench or Pit	None*	100′	100′- 175′	250′	250′	250′
Silage Storage Structure (Fabricated liquid-tight) (In-ground or surface)	None	None	None	None	100′	100′
Silage Storage—Surface, Uncovered	None	None	None	None	100′	100′
Silage Storage Tube (Plastic)	None	None	None	8′	8′	50’
Silo With Pit	None**	50′	50′	50′	50′	50′
Silo Without Pit But With Concrete Floor and Drain	None**	25′	25′	50′	50′	50′
Single application landspreading of petroleum-contaminated soil	--	--	--	--	250′	250′
Sludge Drying Bed, Liquid-tight	None	None	None	None	None	100
Sludge Landspreading or Drying Area Note: Not a requirement—only a recommendation	None*	200′	200′	250′	250′	25’ recommended
Soil Absorption Unit (~~< 8,000~~ <12,000 gal/day, includes alternate unit) (Also known as POWTS dispersal component)	50′	50′	50′ (200′ for schools as of 1978)	50′ (200′ for schools)	50′ (200′ for schools)	50′ (200′ for schools)
Soil Absorption Unit (~~< 8,000~~ ≥ 12,000 gal/day, existing or abandoned) (Also known as POWTS dispersal component)	50′	50′	50′ (200′ for schools as of 1978)	250′	250′	250′
Solid Waste Processing Facility (Including composting facilities)	None	None	None	None	250′	250′
Solid Waste Site ~~(Distance to Nearest Fill Area or Proposed Fill Area If Known; Otherwise to the Property Line)~~ (See Landfill)	~~None~~	~~400 yards~~	~~400 yards~~	~~1,200′~~	~~1,200′~~	~~1,200′~~
Solid Waste Transfer Facility	None	None	None	None	250′	250′
Spray Irrigation Waste Disposal Site (See liquid waste disposal system)						
Stormwater detention pond or basin	None	None	None	None	25′	25′
Stormwater infiltration basin or system	None	None	None	None	100′	100′
Sump—~~Watertight clear~~ Clear water	None	None	None	8′	8′	None
Sump—Wastewater (Watertight) (~~form.~~ formerly cast-iron ~~equiv.~~ equivalent)	None*	8′	8′	25′	25′	8’
Sump—Wastewater (not watertight or ~~equiv.~~ equivalent to cast iron)	None*	25′	25′	25′	25′	25′
Swimming Pool (from edge of water)	None*	25′ (Below ground)	25′ (Below ground)	25′ (Below ground)	8′ (above or below ground)	8′ (above or below ground)
Temporary Manure Stack	None	100′	100′	250′	150′	150′
Vegetated Treatment Area (Previously known as a Filter Strip)	None	None	None	50’	50’	50
Waste Disposal Site (See Landfill)						
Wastewater Treatment Plant Effluent Pipe	None	None	None	50′	50′	50′
Wastewater Treatment Plant Structure, Conveyance or Treatment Unit	None*	None	150′	100′	100′	100′
Well ~~approved~~ or drillhole used for underground placement of any waste, surface water or any substance as defined in s. 160.01, Stats.	None	None	None	None	100′	100′
Yard Hydrant	None	10′	10′	8′	8′	None, but not allowed to be installed in or on well.

^ The department recommends that a well be separated from any adjacent building such that the centerline of the well, extended vertically, will clear any projection of the building by not less than two feet.

ºThe minimum separating distance between a well and a collector sewer serving more than 4 living units or larger than 6 inch diameter is 50 feet regardless of whether the well or the sewer was installed first. ~~However for such sewers less than 16-inch diameter, wells may be located or sewers installed such that a well is less than 50 feet, but at least 25 feet from gravity collector sewers smaller than 16 inches in diameter or from force main collector sewers 4 inches or smaller in diameter provided that within a 50-foot radius of the well the installed sewer pipe meets the allowable leakage requirements of AWWA C600 and the requirements for water-main equivalent type pipe as follows:~~

~~For sewersw 4″ diameter, but < 16″ diameter:~~

~~° PVC pipe 4″ diameter, but v12″ diameter shall meet AWWA C900 with elastomeric joints having a standard dimension ratio of 18 or less;~~

~~° PVC pipe u 12″ diameter, but < 16″ diameter shall meet AWWA C905 with elastomeric joints having a standard dimension ratio of 18 or less.~~

~~° Ductile iron pipe shall meet AWWA C115 or AWWA C151 having a thickness class 50 or more.~~

~~For sewers < 3″ diameter, the pipe shall be any rigid pipe in the ch. ILHR 84 "Table for Pipe and Tubing for Water Services and Private Water Mains," including approved ABS, brass, cast iron, CPVC, copper, (not including type M copper), ductile iron, galvanized steel, polybutylene (PB), polyethylene (PE), PVC, or stainless steel pipe.~~

* "None" Although there were no minimum separation distances required by the code between these possible sources of contamination and a well or reservoir prior to 1975, and in some cases, prior to 1981, it is strongly recommended that the present standard minimum separation distance requirements be met whenever possible.

** Distances were developed under the Public Health Service Grade A Milk Ordinance and have been used by the department of agriculture, trade and consumer protection field inspectors.

***Variances from these separating distances may be granted for earthen manure storage and temporary manure stacks meeting specifications of Soil Conservation Service Standards No. 425 and 312, respectively.

\# Variances from this minimum separating distance may be granted for treatment ponds or for storage or treatment lagoons constructed and maintained to the requirements of an approval granted under ch. NR 213.

After Feb. 1, 1991 and prior to October 1, 1994 the minimum separating distance between a well or reservoir and a lift station is based on the presence of a sewer force main at the lift station.

Between Feb. 1, 1991 and the effective date of this subsection [legislative reference bureau inserts date] NR 812.12(16) required that when a quarry was located within 1200 feet of any proposed well, the upper enlarged drillhole and well casing pipe depth requirements were to be referenced from the bottom of the quarry. Effective[legislative reference bureau inserts effective date of this code] NR 812.12(16) states the requirements for when a quarry is located within 500 feet of any proposed water well.

@@While there is no minimum separation distance requirement between a potable well and a heat exchange drillhole, if the construction or operation of a geothermal heat exchange drillhole system adversely affects the operation of any private wells on neighboring properties, the Department approval of the geothermal heat exchange drillhole system will not negate the protection to which private well owners are entitled under Wisconsin case law relating to groundwater. The department approval also does not relieve the well driller, property owner or geothermal heat exchange drillhole system operator of any liability which may result from injury or damage suffered by any person upon operation of the geothermal heat exchange drillhole system. (This means that if a nearby property owner can demonstrate that their water supply well has been adversely affected by the construction or operation of the geothermal heat exchange drillhole system, there is case-law precedent that would help support a claim brought by a neighbor to try to mitigate any negative impacts caused by the construction or operation of the system. The injured party may seek relief under the modified reasonable use doctrine set forth in *State of Wisconsin v. Michels Pipeline Construction, Inc.*, 63, Wis. 2nd, 278 (1974).

@ There are several code revisions prior to 1975. The dates of these revisions and the minimum separating distances were as follows:

Contamination Source	April 24, 1936	March 1939	July 1951	April 10, 1953	May 1, 1971
Building Overhang	2′	2′	2′	2′	2′
Cistern	None	None	10′	10′	10′
Downspout	None	None	10′	10′	10′
Drain					
—Building Foundation	10′	10′	10′	10′	10′
—Sewer Connected Building Foundation	10′	10′	15′	15′	15′
—Clear Water	None	None	10′	10′	10′
—Cast Iron (With Lead Joints)	10′	10′	10′	10′	10′
Grease Trap (Watertight)	None	None	25′	25′	25′
Septic Tank	None	None	25′	25′	25′
Sewage Disposal Unit (Absorption Field)	None	None	50′	50′	50′
Sewer					
—Cast Iron (With Lead Joints)	10′	10′	8′	8′	8′
—Not Cast Iron or equivalent	25′	25′	25′	25′	25′

SECTION 119. NR 812.09(4)(a)5., (L), and (r) are amended to read:

NR 812.09(4)(a)5. High capacity test drillholes may be constructed without approval to test for aquifer yield to determine if a high capacity well or well system is feasible. The well casing pipe for such test drillholes shall not exceed 6-inch diameter unless the well driller notifies the department. High capacity test drillholes may be test pumped at a rate of 70 gallons per minute or more if the test does not last more than a total of 72 hours. After testing, the drillhole shall be ~~abandoned~~ filled and sealed, according to the requirements of s. NR 812.26 or shall be converted, ~~with~~ following approval, to a high capacity well or well system which meets the requirements of this chapter or ch. NR 811 and of any approved plans and specifications within 90 days.

(L) The use of well drilling aids and additives, grout, sealing or well ~~abandonment~~ filling and sealing materials and additives and well rehabilitation materials.

(r) The continued operation of a well or drillhole that meets the criteria in s. NR 812.26 (2) that requires permanent ~~abandonment~~ filling and sealing of the well or drillhole.
.

SECTION 120. NR 812 SUBCHAPTER II (TITLE) is amended to read:

NR 812 SUBCHAPTER II (TITLE) New Water Well Construction and Reconstruction and Filling and Sealing

SECTION 121. NR 812.10(2) and (8) are amended to read:

NR 812.10(2) LOCATION. Well drillers and well constructors shall be responsible for proper location of a well. Wells shall be located in sanitary locations and meet the minimum separation requirements specified in s. NR 812.08. Separation distance requirements to possible sources of contamination will not be waived because of property lines. ~~Wells~~ Water wells may not be constructed within 1,200 feet of a landfill site without a variance. Variances from ~~location~~ minimum separation distance requirements require approval. ~~Well drillers and well constructors shall contact the diggers hotline not less than 3 business days prior to constructing or reconstructing a well on a property. If the property is located within the service area of a municipally owned water system, the well driller or well constructor shall contact the department before constructing or reconstructing a well, to determine if the property on which the well is or will be located is listed on the department's geographic information system registry of closed remediation sites.~~ If the property is located within the area served by a municipally owned water system, the water well driller or well constructor shall notify the well owner of the need to obtain a private well operational permit from the municipality.

~~**Note:** The Department of Natural Resource's GIS Registry of Closed Remediation Sites can be found at http://www.dnr.state.wi.us/org/aw/rr on the DNR's internet site. Information that appears on the GIS Registry of Closed Remediation Sites can also be accessed by calling the nearest regional DNR office~~.

(8) NONCOMPLYING WELLS. When a water well driller or well constructor has constructed a water well not initially located or constructed in compliance with this chapter, the water well driller or well constructor shall pay all costs for bringing the well into compliance with this chapter, including ~~abandonment~~ the costs of filling and sealing the well, if necessary, other than those costs that would have been charged for an initial complying well construction.

SECTION 122. NR 812.10(11) is repealed and recreated to read:

NR 812.10(11) COMPLETION OF WELL. In accordance with all requirements of s. NR 812.22 (6), the water well driller or his or her agent or the well constructor shall collect a water sample or samples, using his or her test pump, the well owner's pump, air-lift equipment or bailer, from any new or newly reconstructed,

rehabilitated, redeveloped or reconditioned potable well, including driven point wells, no later than 30 days following completion of the well or work on the well. Each water sample shall be analyzed for coliform bacteria, nitrate and any water tests required when performing well construction or reconstruction in a special well casing depth area. Each water sample shall be analyzed for coliform bacteria by a laboratory certified by DATCP for bacteriological analysis of drinking water and having an agreement with the department for electronic submission of laboratory test reports to the department no later than 30 days after completion of the analysis, or to the Wisconsin state laboratory of hygiene. Each water sample shall also be analyzed for nitrate by a laboratory certified by the department for nitrate analysis of drinking water and having an agreement with the department for electronic submission of laboratory test reports to the department no later than 30 days after completion of the analysis. The water well driller or well constructor shall disinfect, flush and seal the well. The water well driller shall provide a copy of the laboratory test report(s) to the well owner no later than 10 days after receipt of the report(s) by the well driller. The water well driller or well constructor shall submit a well construction report to the well owner and to the department within 30 days following the date of completion of the well construction or reconstruction.

SECTION 123. NR 812.10(12) and (13) are created to read:

NR 812.10(12) WELL NOTIFICATION REPORT VERIFICATION. A water well driller or well constructor shall either obtain a Well Notification or verify that the well owner has obtained a department Well Notification including the Notification Number, by obtaining a copy of the notification report, before the well construction operation is started.

(13) PERMIT VERIFICATION. A water well driller, well constructor, pump installer or contractor shall obtain required permits from counties authorized to administer this chapter under ch. NR 845.

SECTION 124. NR 812.11(1) is amended to read:

NR 812.11(1) ADEQUACY OF EQUIPMENT. ~~Well~~ Water well drillers, water well businesses and well constructors shall be adequately equipped to enable ~~him or her~~ the individual, business and those who are supervised to fully comply with all legal requirements applicable to any well or drillhole construction, reconstruction or well ~~abandonment~~ filling and sealing which is undertaken by ~~him or her~~ the licensee or registrant and any employees.

SECTION 125. NR 812.12(2)(e) is created to read:

NR 812.12(2)(e) The well casing pipe depth requirements of ss. NR 812.13 to 812.16 and of Tables I to IV are such that the installed well casing pipe depth is referenced and measured from the ground surface, not from the top of the well casing pipe, at the time of completion of the well. A well is completed when all operations that require the use of drilling, driving or annular space sealing equipment have been completed.

SECTION 126. NR 812.12(16) is amended to read:

NR 812.12(16) When a quarry is within ~~1,200~~ 500 feet of any proposed water well, the upper enlarged drillhole and well casing pipe depth requirements shall be referenced from the bottom of the quarry and an additional 20 feet of upper enlarged drillhole, well casing pipe and cement grout shall be installed over the amount required in Table II and Table III. When the bottom of ~~the existing or~~ the ~~proposed~~ quarry is or will be at an elevation higher than the elevation of the ground surface at the well site, this requirement does not apply. This requirement does not apply if the quarry is no longer used and is permanently filled with water.

SECTION 127. NR 812.13(3)(b)7. is amended to read:

NR 812.13(3)(b)7. If the thermoplastic well casing pipe extends to above the ~~frost line~~ ground surface, the upper terminus of the well ~~shall~~ may be contained in a well house or in a capped oversized steel casing pipe~~. The pipe shall extend~~ which extends from the top of the thermoplastic well casing pipe to a depth below the frost level.

SECTION 128. Figures 5(b)1., 6(b)1., 7(b)1., 8(b)1., 9(b)1. and 10(b)1. are repealed and recreated:

Figure 5. (b)1. Percussion method for flowing well construction - confined unconsolidated aquifer more than 40 feet below the ground surface with an unconsolidated confining bed.

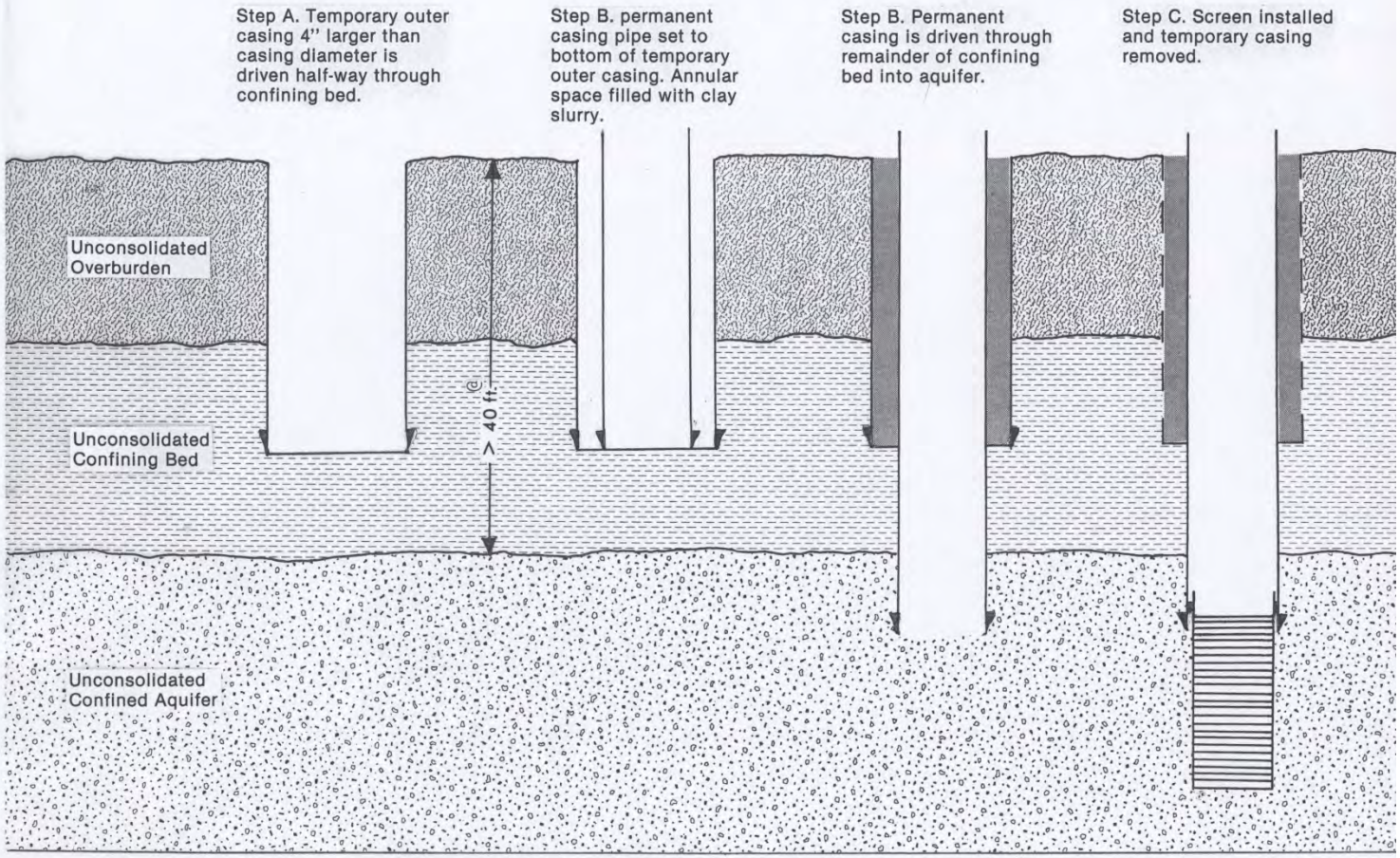


Figure 6. (b)1. Percussion method for flowing well construction - confined bedrock aquifer more than 40 feet below the ground surface with an unconsolidated confining bed.

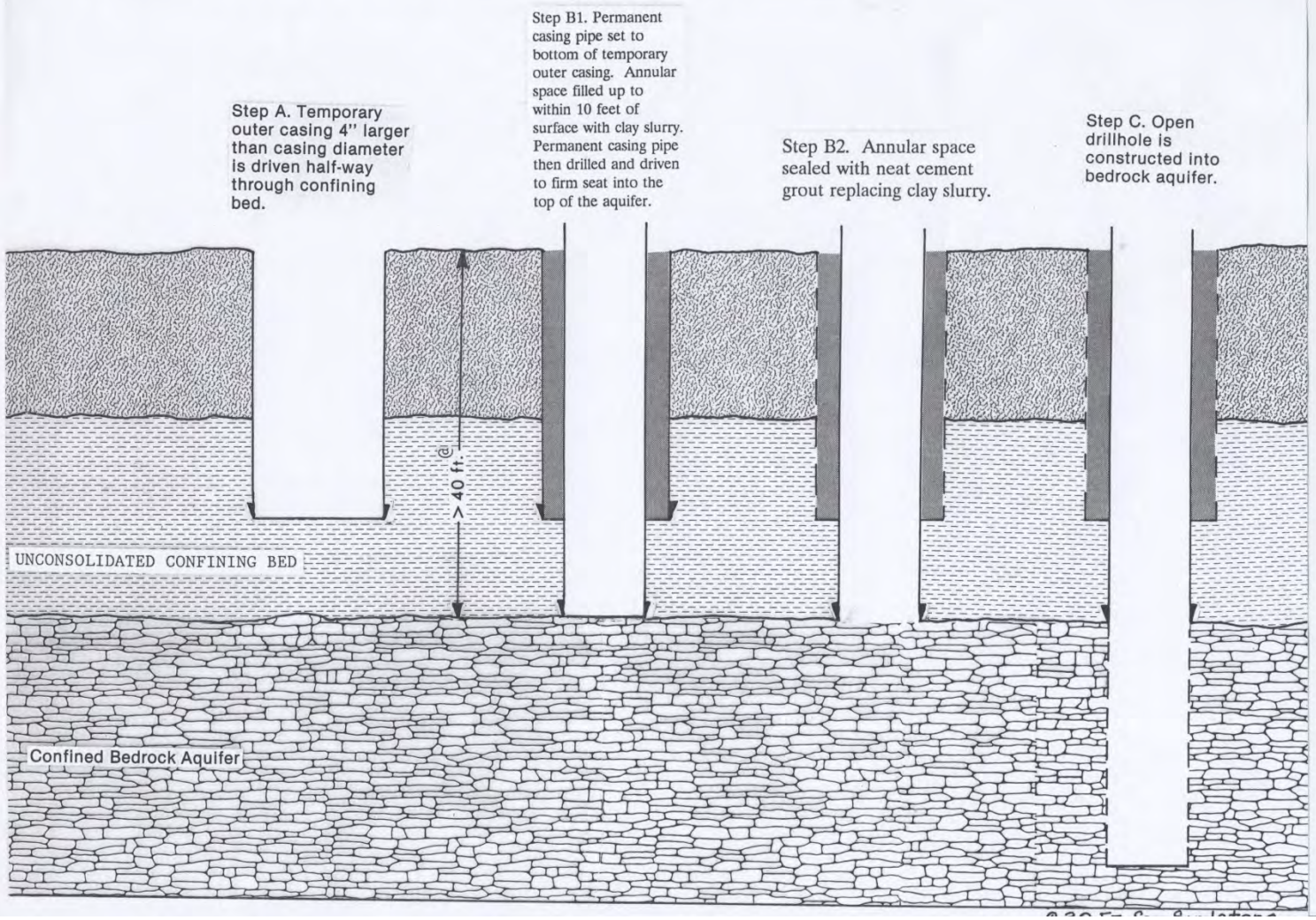
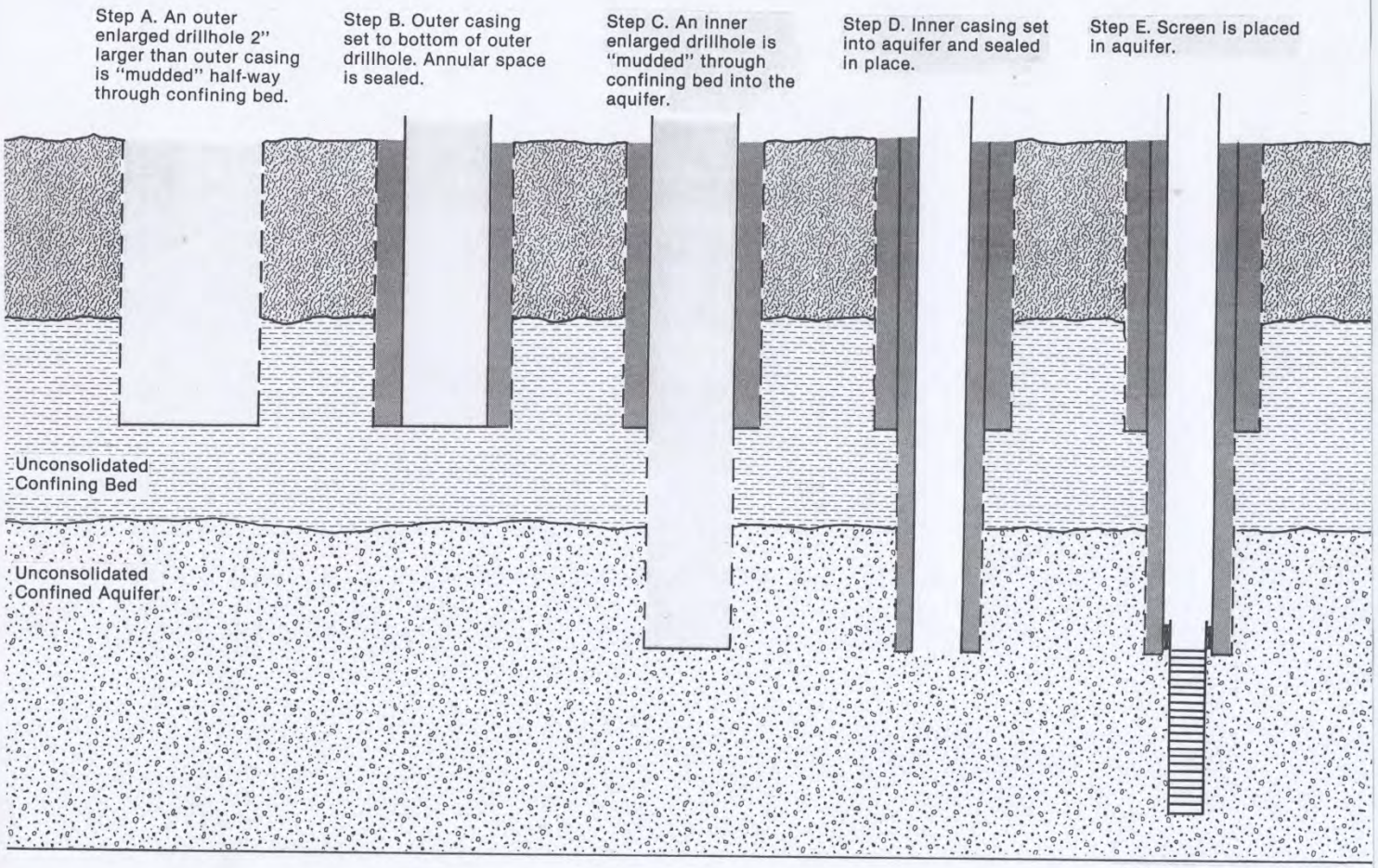
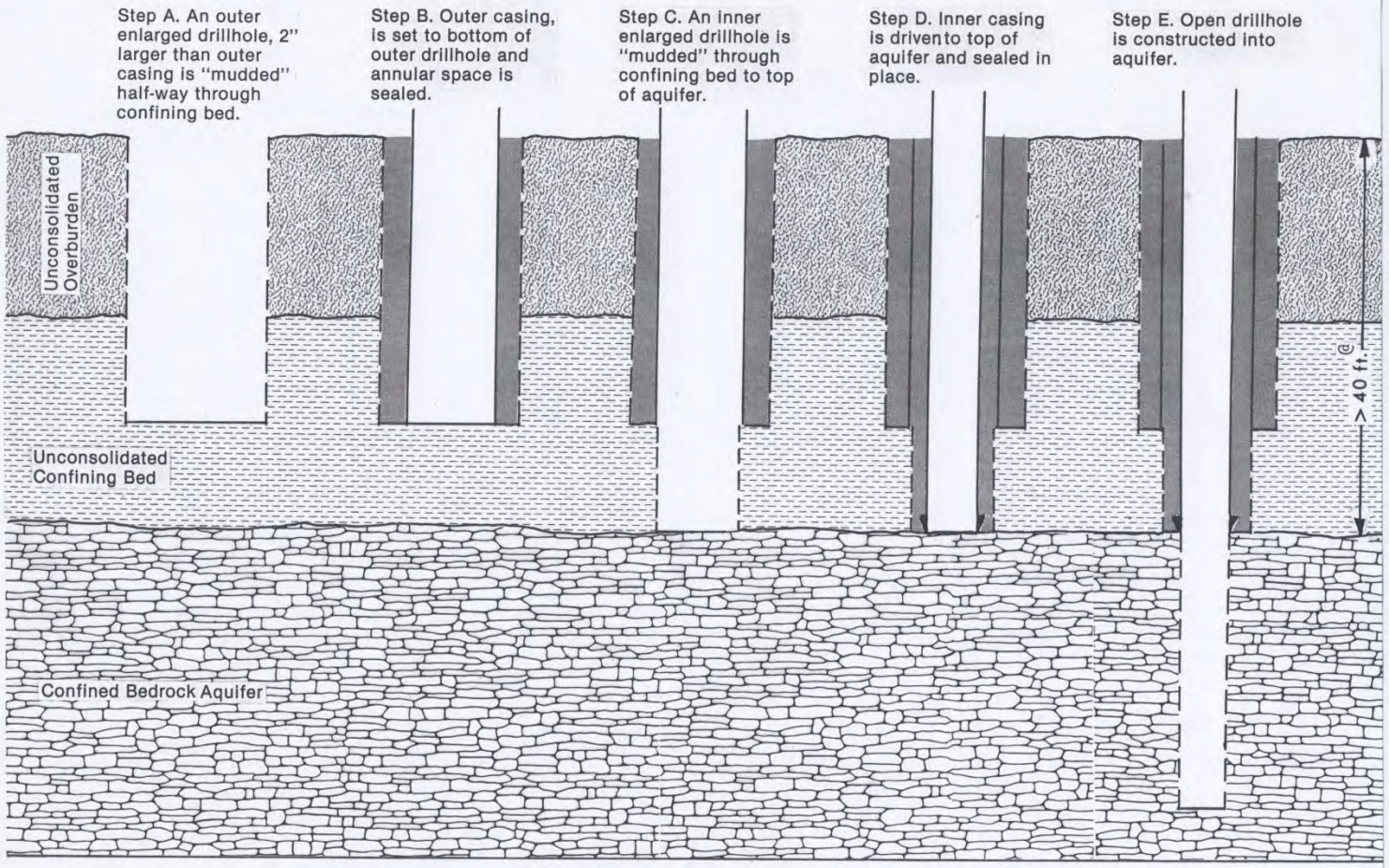


Figure 7. (b)2. Rotary method for flowing well construction - confined aquifer more than 40@ feet below the ground surface - both confining bed and aquifer are unconsolidated - double casing construction.



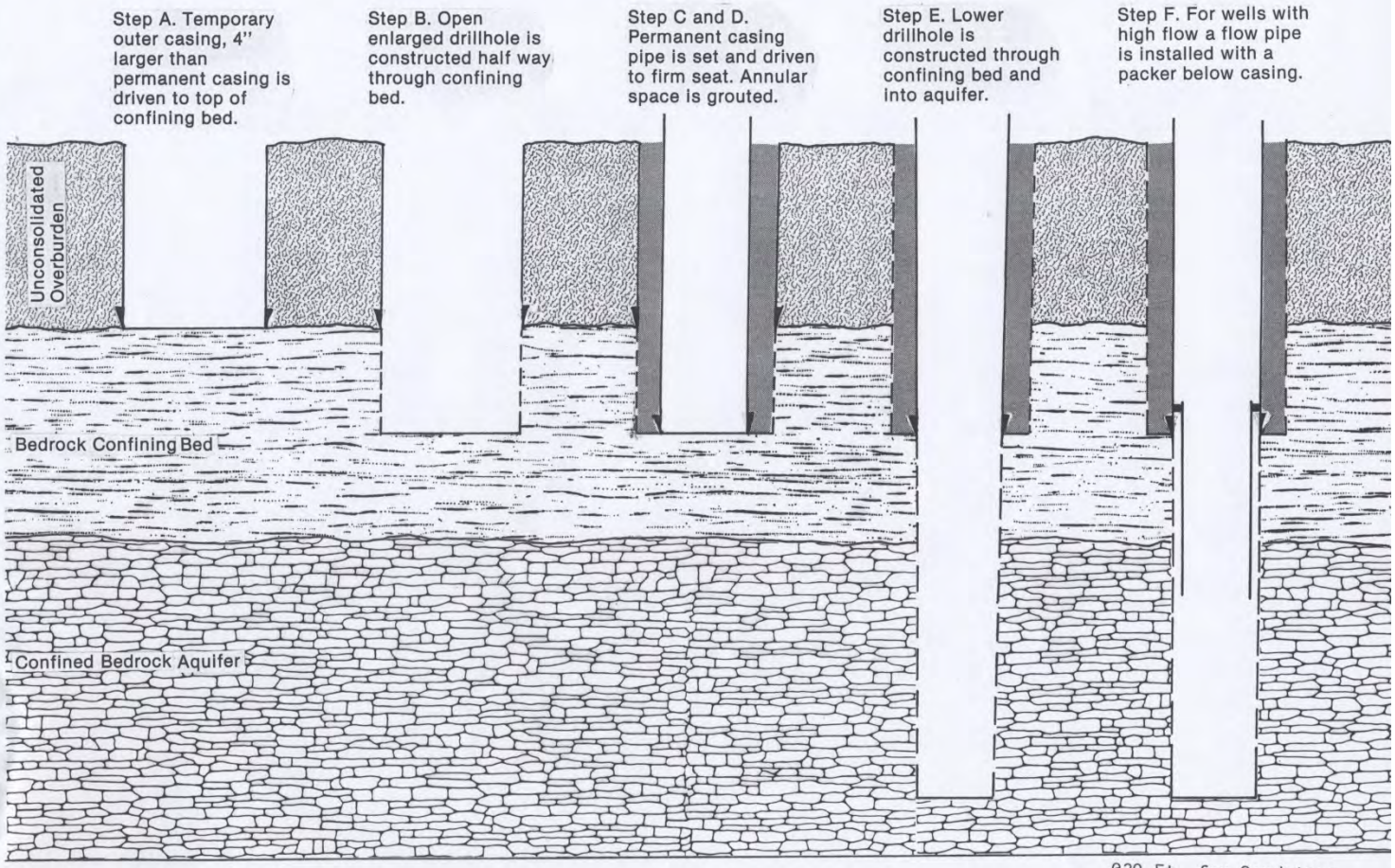
@30 Ft. for Sandstone.

Figure 8. (b)2. Rotary method for flowing well construction - confined bedrock aquifer more than 40@ feet below the ground surface with an unconsolidated confining bed.



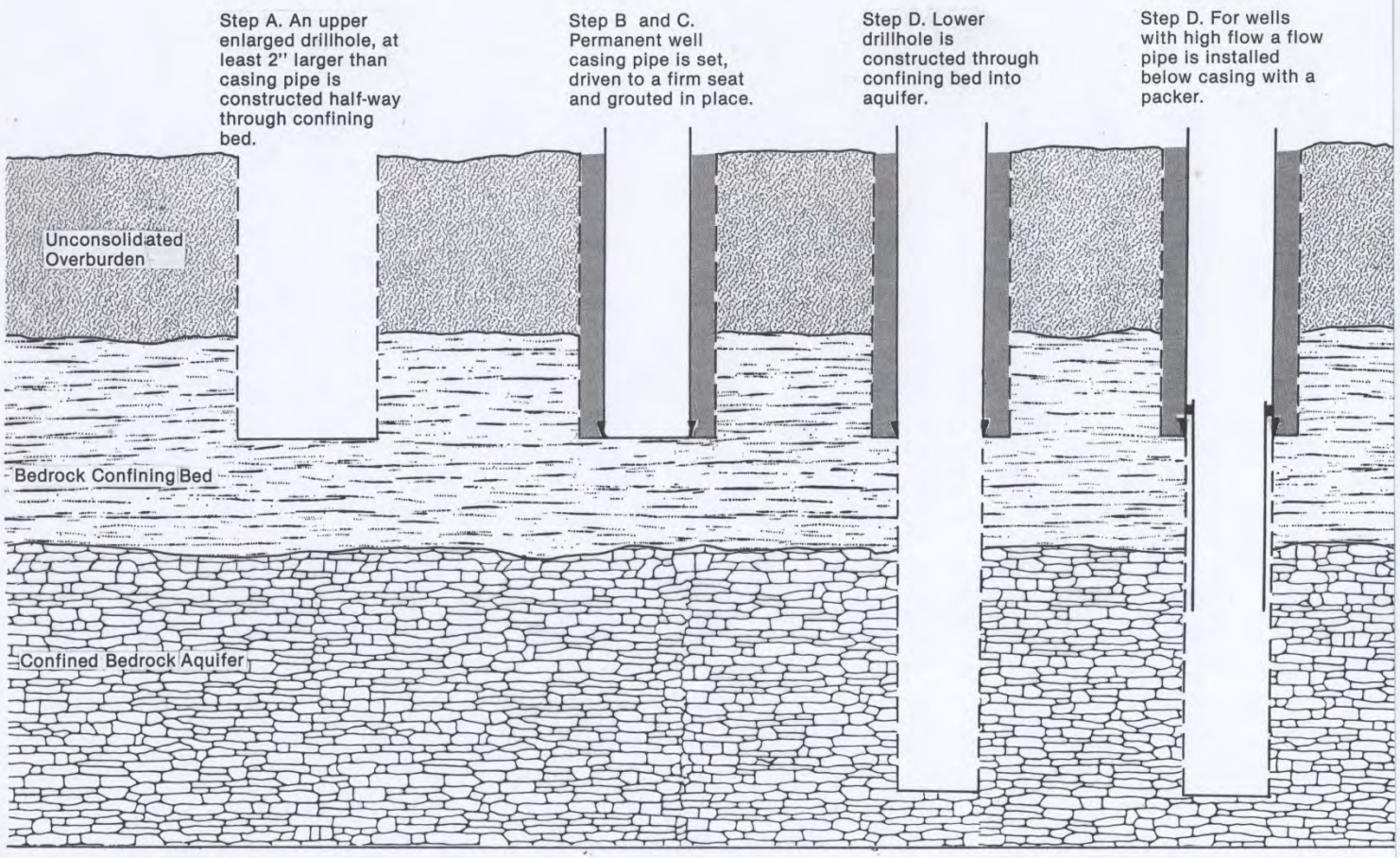
@30 Ft. for sandstone.

Figure 9. (c)1. Percussion method for flowing well construction - confined bedrock aquifer more than 40@ feet below the ground surface with a bedrock confining bed.



@30 Ft. for Sandstone.

Figure 10. (c)2. Rotary method flowing well construction - confined bedrock aquifer more than 40@ feet below the ground surface with a bedrock confining bed.



@30 Ft. for Sandstone.

SECTION 129. NR 812.22(6) is repealed and recreated to read:

NR 812.22(6) BACTERIOLOGICAL, NITRATE AND SPECIAL WELL CASING DEPTH AREA WATER SAMPLES. (a) The water well driller or his or her agent or the well constructor of any potable well, including driven point wells, shall collect water samples to be analyzed for coliform bacteria and nitrate, using the well driller's, well constructor's or well owner's pump, air-lift equipment or with a bailer, from any new or newly reconstructed, rehabilitated, redeveloped or reconditioned potable well. Thereafter water samples for coliform bacteria and nitrate shall also be collected after the well is entered for the purpose of measuring or diagnosing any feature or problem with the well or for the purpose of installing, replacing or repairing any equipment located within the well or when the casing height is raised. The water samples shall be collected and submitted for analysis no later than 30 days following completion of the well or following completion of any work described above. The well is completed when all operations that require the use of drilling, driving or annular space sealing equipment have been completed. If the water well driller uses the well owner as an agent to collect the water samples, the well driller shall provide the owner with a laboratory designated sample bottle and department specified form. The information submitted on the form shall be complete, true and accurate. If the water well driller uses the pump installer as an agent to collect the water samples, and the pump installer engages in the business of pump installing separately from the water well driller's business, the water samples from each business shall be in separate bottles and each must be submitted to the laboratory with their own department specified forms. Regardless of whether the water well driller delegates the collection and submission of the samples for analysis, the ultimate responsibility to ensure that these tasks are completed belongs to the water well driller. If the water well driller or well constructor is also the pump installer for that well, one set of water samples may be collected following the completion, disinfection and flushing after the pump installation. A water well driller or well constructor is not required to be licensed as a pump installer to install a test pump for well development and water sampling.

(b) The water sample shall be analyzed for coliform bacteria by a laboratory certified by DATCP under ch. ATCP 77 to perform coliform bacteriological analysis of drinking water and having an agreement with the department for electronic submission of laboratory test reports to the department no later than 30 days after completion of the analysis, or be analyzed by the Wisconsin state laboratory of hygiene. The water sample shall also be analyzed for nitrate by a laboratory certified by the department for nitrate analysis of drinking water and having an agreement with the department for electronic submission of laboratory test reports to the department no later than 30 days after completion of the analysis or be analyzed by the Wisconsin state laboratory of hygiene. The certified laboratory and water well driller or well constructor or their agent shall use forms specified by the department.

(c) For any water sample required in a Special Well Casing Depth Area, the analysis shall be performed by a laboratory certified by the department for that analysis and having an agreement with the department for electronic submission of laboratory test reports to the department no later than 30 days after completion of the analysis, or be analyzed by the Wisconsin state laboratory if hygiene. The certified laboratory and water well driller or well constructor or their agent shall use forms specified by the department.

(d) If the laboratory test report indicates that any test result is invalid for any reason, including improper sample bottle, improper collection technique or longer than 48 hours between sample collection and arrival at the laboratory, the water well driller is required to collect replacement samples no later than 30 days after receiving the invalid test report.

(e) The water well driller, well constructor or pump installer shall provide the well owner or the owner's agent with a copy of each laboratory test report no later than 10 days after the well driller's, well constructor's or pump installer's receipt of the laboratory test reports.

SECTION 130. NR 812.22(7)(b) is amended to read:

NR 812.22(7)(b) Well construction reports returned to the water well driller or well constructor for completion or when compliance with the construction requirements of this chapter is questionable shall be resubmitted to the department no later than 15 days ~~of~~ after receipt of the returned report. The original well construction report shall be resubmitted. Dry drillholes or unsuccessful wells drilled in conjunction with well construction and not immediately ~~abandoned~~ filled and sealed shall be reported on a well construction report ~~and on a well abandonment report form~~. The well driller or well constructor shall ensure proper ~~abandonment~~ filling and sealing methods and materials are used, according to s. NR 812.26, ~~of~~ for any drillhole constructed by the water well driller or well constructor that is not intended to provide water.

SECTION 131. NR 812.22(9) and (10) are created to read:

NR 812.22(9) WELL NOTIFICATION REPORT VERIFICATION. A well driller or well constructor shall either obtain a Well Notification or verify that the well owner has obtained a department Well Notification including the Notification Number, by obtaining a copy of the notification report, before the well construction operation is started.

NR 812.22(10) WELL CASING PIPE DEPTH VERIFICATION. When required to measure well casing pipe depth, due to lack of a confirmable well construction report, the well driller shall enter the well details, including location, well casing pipe depth, total well depth, distances to possible contaminant sources and well owner information on a form specified by the department and shall submit the report to the department no later than 30 days after performing the verification. A copy of the report shall also be provided to the well owner no later than 30 days after performing the verification.

SECTION 132. NR 812.26(title) and (1) are amended to read:

NR 812.26 (title) **Well and drillhole ~~abandonment~~ filling and sealing.** (1) PURPOSE. The ~~permanent abandonment~~ filling and sealing of noncomplying, unused, abandoned or contaminated wells or drillholes and noncomplying water systems is an important step in the protection of the local groundwater quality. Wells or drillholes, especially those with structural defects, may act as conduits for the vertical movement of contamination from or near the ground surface ~~to~~ into the groundwater or from one aquifer to another.

SECTION 133. NR 812.26(2)(a)(intro.), 1., 2. and 4. are amended to read:

NR 812.26(2)(a)(intro.) CRITERIA FOR ~~ABANDONMENT~~ FILLING AND SEALING. (a) The well owner shall hire a registered water well drilling or pump installing business or licensed water well driller or pump installer to ~~permanently abandon~~ fill and seal a well or a drillhole under any of the following conditions ~~unless the department approves the continued use of the well or drillhole~~:

1. The well water is contaminated with biological agents, bacteriological, viral or parasitic and 3 attempts at batch chlorination by a licensed or registered water well driller or pump installer fail to eliminate the problem.

2. The well or drillhole poses a hazard to health or safety, or to groundwater,

4. ~~The~~ No later than 90 days after the well or drillhole has been ~~taken out of~~ removed from service ~~or has not been used for 3 or more years and is not needed by the owner in the immediate future as a source of water for human consumption, sanitary purposes, commercial use or for stock watering~~. ~~As an alternative, the owner may temporarily abandon the well according to sub. (4)~~.
The 90-day time period in this subdivision does not apply to seasonal water systems or to high capacity irrigation wells.

SECTION 134. NR 812.26(2)(a)5. and 6. are created to read:

NR 812.26(2)(a)5. The well construction is noncomplying.

NR 812.26(2)(a)6. The pump installation is not operational or it does not comply with the requirements of this chapter.

SECTION 135. NR 812.26(2)(b), (c)(intro.) and (d), and (3) are amended to read:

NR 812.26(2)(b) The department may require the well owner to hire a registered water well drilling business or a licensed individual water well driller or a registered pump installing business or a licensed individual pump installer to ~~abandon~~ fill and seal a well or drillhole under the following conditions:

1. The well water is contaminated with a substance in exceedence of the drinking water standards specified in s. NR 812.06,
2. The well was not constructed by the well owner or by a licensed water well driller ~~or,~~ or registered water well drilling business~~.~~
~~3. The well has been temporarily abandoned for 2 or more years.~~

(c) (intro.) A water well driller or well constructor shall, no later than 30 days after receiving notice from the department, ~~abandon~~ fill and seal a well or drillhole, which ~~he or she~~ the individual constructed or reconstructed, under the following conditions: ~~except when the department approves the continued use of the well or drillhole:~~

(d) The department may require any person who has ~~abandoned~~ filled and sealed a well, with a method, material or in a manner not in compliance with this section, to ~~return and~~ hire a registered water well drilling business or licensed individual water well driller or a registered pump installing business or a licensed pump installer to take corrective action so that the well is ~~abandoned~~ filled and sealed ~~by him or her~~ in a complying manner.

NR 812.26(3) REQUIREMENTS FOR WELLS REMOVED FROM SERVICE. Any well or drillhole removed from service shall be properly ~~abandoned~~ filled and sealed according to the criteria and procedures in this section except as exempted by s. NR 123.23 (3) (c) ~~or by the department~~. Any well or drillhole removed from service shall be properly ~~abandoned~~ filled and sealed prior to any demolition or construction work on the property. A well driller or well constructor who removes a well from service or constructs a replacement well on a property shall inform the ~~well~~ property owner that the department requires that any well replaced or removed from service to be ~~permanently abandoned~~ filled and sealed according to the requirements of this section no later than 90 days after the well was removed from service or 90 days after the completion of the replacement well. A well driller or well constructor shall report, on the well construction report, any well he or she removes from service ~~on the well construction report~~ for any replacement well he or she constructs on the property.

SECTION 136. NR 812.26(4) is repealed.

SECTION 137. NR 812.26(5)(intro.) is amended to read:

NR 812.26(5)(intro.) WELL OR DRILLHOLE CASING PIPE. The well casing pipe or drillhole casing pipe shall be left in place when a well or drillhole is ~~permanently abandoned~~ filled and sealed, except under par. (a), (b), (c)~~,~~ or (d) ~~or (e)~~ and only if the well or drillhole is completely filled and sealed with the sealing material as the well casing pipe is pulled or before it is pulled; and only if any concrete or neat cement grout that settles in the well or drillhole is replaced.

SECTION 138. NR 812.26(5)(e) is repealed.

SECTION 139. NR 812.26(6) is amended to read:

NR 812.26(6) ~~Pre-abandonment requirements~~ REQUIREMENTS PRIOR TO FILLING AND SEALING A WELL OR DRILLHOLE. (a) All debris, pumps, piping, ungrouted liner pipe and any other obstruction known to be in the well or drillhole shall be removed if possible before the well or drillhole is ~~permanently abandoned~~ filled and sealed. When a pump is or becomes stuck within the well, a reasonable attempt using the best available technology shall be made to pull it out. If the pump cannot be pulled, a tremie pipe shall be placed in the well to a depth just above the top of the pump and neat cement grout shall be pumped in to entomb the pump and fill and seal the entire well.

(b) In a badly fractured or highly permeable geologic formation sodium bentonite drilling mud may be circulated in the drillhole or in the well prior to ~~permanent abandonment~~ the filling and sealing procedures ~~are undertaken~~.

(c) The sealing material to be used ~~in permanently abandoning~~ to fill and seal a well or drillhole ~~between 2-½ inches and 30~~ greater than 3 inches in diameter shall be placed through a conductor (tremie) pipe or by means of a dump bailer except when approved ~~chipped~~ bentonite chips ~~is~~ are used for wells 4 inches or larger in diameter. Conductor (tremie) pipe used shall be any of the following:

1. Metal pipe,
2. Rubber-covered hose reinforced with braided fiber or steel and rated for at least 300 psi, or
3. For use at depths less than 100 feet, thermoplastic pipe rated for at least ~~100~~ 160 psi including:

a. Polyvinyl chloride (PVC)
b. Chlorinated polyvinyl chloride (CPVC),
c. Polyethylene (PE),
d. Polybutylene (PB), and
e. Acrylonitrile butadiene styrene (ABS).

(d) The bottom end of the conductor pipe shall be submerged in the filling and sealing material at all times, except when an alternate procedure is approved by the department. ~~A conductor pipe shall also be used for wells or drillholes greater than 30 inches in diameter if water remains trapped above the sealing material as it is applied.~~

(e) The flow from a flowing well or drillhole shall be reduced as much as possible with a packer~~,~~ by extending the well casing pipe~~,~~ or by other approved means including those depicted in figures 20 to 22 before it is ~~permanently abandoned~~ filled and sealed.

(f) ~~Abandonment~~ Filling and sealing of wells or drillholes with inadequate grouting or sealing of the annular space outside the well casing pipe or liner shall be performed to ensure complete sealing of the annular space. Techniques are situation dependent and may include reaming a new annular space outside the well casing pipe, use of pressure grouting methods or perforation of the well casing pipe. When perforation of the well casing or liner pipe is undertaken, it shall be done in a manner according to par. (h).

(g) The well casing pipe and ~~abandonment~~ filling and sealing material may be terminated as much as 3 feet below the ground surface or to a depth below any future building foundation at the time of ~~permanent abandonment~~ the filling and sealing procedure.

SECTION 140. NR 812.26(6)(h) and (6)(i) are created to read:

NR 812.26(6)(h) When an ungrouted well casing pipe or liner cannot be pulled, it shall be perforated or ripped in place prior the filling and sealing according to the following procedures:

1. The casing pipe or liner shall be perforated using projectiles fired perpendicular to the length of the string of pipe. The perforations shall extend completely through the casing or liner pipe. As an alternative the casing pipe or liner may be vertically ripped.

2. Four perforation shots or one rip shall be provided for each 5-feet of casing or liner.

3. Each perforation shot shall be a minimum of 0.4 inches in diameter. Each rip shall have a minimum width of 0.25 inches and a minimum length of 12 inches.

4. The orientation of each successive perforation shot or rip shall be rotated by 90 degrees along the string of pipe.

5. After the well casing or liner has been perforated or ripped, the well shall be completely filled with neat cement from the bottom up to the ground surface. The well shall be filled both inside and outside the string of casing or liner pipe using a pressure grouting method in accordance with the requirements of s. NR 812.20

(i) When a well has a gravel pack that extends up to or within 20 feet of the ground surface, at least the top 20 feet of it shall be jetted out or removed in some other manner. Once the gravel pack has been removed the open annular space shall be filled and sealed with neat cement grout or concrete applied with a pressure method injected through a conductor (tremie) pipe.

SECTION 141. NR 812.26(7) is amended to read:

NR 812.26(7) ~~PERMANENT ABANDONMENT~~ FILLING & SEALING OF WELLS AND DRILLHOLES, METHODS AND MATERIALS.

(a) *Methods.* Once obstructions have been removed from a well or a drillhole, it shall be ~~permanently abandoned by filling~~ filled and sealed, from the bottom up, with the materials specified in this paragraph and in Table C with the use of a conductor (tremie) pipe, except where the use of a conductor pipe is specifically exempted, by using one of the following methods:

1. 'Wells and drillholes completed in unconsolidated formations'.

a. Drilled wells and drillholes or driven-point wells ~~2-1/2~~ larger than 3 inches ~~or larger~~ in diameter in unconsolidated formations shall be filled and sealed with neat cement grout, concrete (sand-cement) grout, concrete~~, or with clay or a sodium bentonite-water sand slurry with a mud weight of at least 11 pounds per gallon or as in subd. 3. When clay or sodium bentonite-water-sand slurry is used, the slurry shall have a sand content of at least 10%, but not more than 25% by volume of the slurry and at least the top 5 feet shall be filled with neat cement grout, concrete (sand-cement) grout, concrete or approved chipped bentonite~~ or with department-approved bentonite chips as provided and specified in subd. 3. for wells 4 inches or larger in diameter.

b. ~~Driven point wells~~ Wells and drillholes less than or equal to ~~2-½~~ 3 inches in diameter completed in unconsolidated formations shall be filled and sealed with neat cement grout which may be poured or pumped down the drive pipe or drillhole. The use of a conductor pipe is not required. ~~The drive pipe and screen may be removed before placement of the grout if the total well depth is 25 feet or less.~~

2. 'Filling and sealing bedrock wells and drillholes'. Wells and drillholes completed in bedrock formations shall be completely filled and sealed from the bottom up with neat cement grout, concrete (sand-cement) grout, concrete or approved bentonite chips as provided in subd. 3. As an alternative for uncontaminated bedrock wells and drillholes deeper than 250 feet, chlorinated, sand-free pea gravel may be used to fill and seal the well or drillhole from the bottom up to 20 feet below the bottom of the casing pipe, or up to the 250-foot depth, whichever is deeper. This alternative may be used provided that for wells ~~or~~ having drillholes extending through ~~more than one geologic~~ the Maquoketa Shale formation, a neat cement grout, concrete or bentonite chip plug at least 40 feet thick is placed and centered at the contact surface

between the Maquoketa Shale and adjacent geologic formations, both above and below. Additionally, a neat cement grout, concrete or bentonite chip plug at least 40 feet thick shall be placed and centered at the top of the uppermost Cambrian Sandstone formation and at the top of the Eau Claire Formation of the Cambrian Sandstone whenever these layers are present in the open bedrock drillhole. When pea gravel is used for this alternative, it may be poured without the use of a conductor pipe provided the well is sounded at 50-foot intervals to ensure that bridging of the gravel in the well does not occur.

3. 'Use of bentonite chips to fill and seal wells and drillholes.' Approved ~~slow-hydrating~~ bentonite chips may be used to fill and seal both unconsolidated formation and bedrock wells and drillholes ~~by using instructions provided by the department~~ with the following restrictions:

a. For wells and drillholes 4-inch diameter and larger the total depth may not be deeper than 500 feet and the number of feet of standing water in the well or drillhole may not be more than 350 feet. As an alternative for uncontaminated wells and drillholes deeper than 250 feet, chlorinated, sand-free pea gravel may be used to fill and seal the well or drillhole from the bottom up to 20 feet below the bottom of the casing pipe, or up to the 250-foot depth, whichever is deeper. This alternative may be used provided that for wells or drillholes extending through ~~more than one geologic~~ the Maquoketa Shale formation, a bentonite chip plug at least 40 feet thick is placed and centered at the contact surfaces between the adjacent geologic formations, both above and below. Additionally, a neat cement grout, concrete or bentonite chip plug at least 40 feet thick shall be placed and centered at the top of the uppermost Cambrian Sandstone formation and at the top of the Eau Claire Formation of the Cambrian Sandstone whenever these layers are present in the open bedrock drillhole. When pea gravel is used for this alternative, it may be poured without the use of a conductor pipe provided the well is sounded at 50-foot intervals to ensure that bridging of the gravel in the well does not occur.

b. Not allowed for wells and drillholes less than 4-inch diameter, and

c. Not allowed for any well or drillhole filled with drilling mud or bentonite slurry.

d. Fine particles and dust, typically present in the bags of chips, shall be prevented from entering the well by pouring the chips across a coarse-mesh screen such that they tumble under their own weight across the screen before falling into the well.

e. The chips shall be poured at a rate such that a 50-pound bag is emptied in a time period not less than 3 minutes. Once the chips rise above the water table, the rate of pour may be increased.

f. The depth of chips shall be monitored during the filling process, at a minimum of once every calculated 10 bags, to ensure the chips are not bridging in the well or drillhole. Any bridge of the chips shall be removed.

g. Water from a clean, bacteriologically safe and uncontaminated source shall be poured into the well in order to hydrate the chips. Water shall be introduced until the water level rises to the top of the well casing and the well will not accept any additional water at the time the individual who performs the filling and sealing operation leaves the site.

4. '~~Dug~~ Filling and sealing dug and bored wells'

a. Dug or bored wells shall have the cover removed and the top 5 feet of curbing or concrete wall removed. Rock curbing may be caved into the drillhole as the well is being sealed only if done in a manner to prevent bridging. The well shall be filled and sealed using clean clay or silt, clean native soil, approved ~~chipped~~ bentonite chips, concrete, concrete (sand-cement) grout or neat cement grout if constructed in unconsolidated formations.

b. Dug wells and drillholes constructed partially or completely into bedrock shall be filled and sealed with neat cement grout, concrete (sand-cement) grout, concrete or approved ~~chipped~~ bentonite chips to a point at least 2 feet
above the top of the bedrock. The remainder of the well or drillhole may be ~~abandoned~~ filled and sealed using any of the materials listed in subd. par. 4. a.

c. Dug or bored wells 18 inches in diameter and smaller shall be filled and sealed by means of a conductor (tremie) pipe, except when bentonite chips are used as specified in subd. 3. or when clean clay or silt or clean native soil is used and the dug or bored well is 25 feet deep or less.

5. 'Well pits'. When a well terminating in a pit is ~~abandoned~~ filled and sealed, the pit shall also be ~~abandoned~~ filled and sealed except when the pit is a subsurface pumproom (alcove) adjoining a basement. When a well terminating in a pit is extended above grade, the pit shall be filled and sealed.

Pits shall be properly ~~abandoned~~ filled and sealed by first removing from the pit, all water system features, including but not limited to the pressure tank, pump, discharge piping, electrical wiring and conduit, any treatment equipment, and then by perforating the floor, knocking out or perforating one wall with several holes and filling and sealing the pit with clean native soil less permeable than the soil surrounding the pit. If the pit will only be used for the purpose of housing valves and the pit complies with NR 812.36(1), the pit may be kept.

6. 'Non-pressure conduits'. When wells having non-pressure conduits are ~~abandoned and~~ filled and sealed, the basement end of the conduit shall be permanently sealed with a watertight cap or seal.

(b) *Materials.* 1. Neat cement grout~~,~~ or concrete (sand-cement) grout~~, clay slurry or sodium bentonite slurry~~ as described in s. NR 812.20 (1), or approved ~~chipped~~ bentonite chips shall be used to ~~permanently abandon~~ fill and seal wells and drillholes where the use of such materials are required in this section. The grout mixture shall be measured with a mud balance and shall have a slurry weight of at least 15.2 pounds per gallon unless powdered bentonite is added. ~~Powdered~~ Approved powdered bentonite may be added to the neat cement grout mixture, ~~up to~~ using a ratio of up to 5 pounds of bentonite per 94-pound bag of cement. When added, the resulting mixture shall meet the specifications of Table VI. Bentonite used for this purpose shall be 90-barrel per ton yield meeting the specifications of API 13A, Sec. 9. High yield drilling mud bentonite, also known as beneficiated bentonite, may not be used for this purpose. Any other ingredients or additives, to increase fluidity, control shrinkage or time of set may only be used with approval.

2. Concrete shall consist of a mixture of cement, water, sand, and gravel in the proportion of one bag Portland cement (94 pounds) (ASTM C 150, Type I or API-10A, Class A), an equal measure of sand and an equal measure of gravel, by weight or by volume, and not more than 6 gallons of water. As an alternative, a commercially prepared mix may be used providing the mix has at least 6 bags of cement per cubic yard. The gravel size may not exceed 1/3 of the inside diameter of the conductor (tremie) pipe used for ~~the~~ filling and sealing the well ~~abandonment~~ or drillhole.

SECTION 142. NR 812.26(7)(b)1. Table VI is created to read:

Table VI
(To Be Used When Adding Approved Powdered Bentonite to
Neat Cement Grout for the Purpose of Filling and Sealing a Well)

Final slurry density (pounds per gallon)	Gallons of H_2O needed per each 94-pound sack of cement	Pounds of bentonite per sack of cement	Percent bentonite of final slurry	Cubic feet of slurry per sack of cement
15.8	5.0 gal./sack	0 lb.	0 %	1.15 ft^3/sack
15.6	5.3 gal./sack	0 lb.	0 %	1.19 ft^3/sack
15.4	5.5 gal./sack	0 lb.	0 %	1.22 ft^3/sack
15.2	5.9 gal./sack	0 lb.	0 %	1.27 ft^3/sack
15.0	6.0 gal./sack	0 lb.	0 %	1.28 ft^3/sack
14.8	6.2 gal./sack	1 lb.	~ 1 %	1.32 ft^3/sack
14.7	6.5 gal./sack	2 lb.	~ 2 %	1.36 ft^3/sack
14.4	7.2 gal./sack	3 lb.	~ 3 %	1.46 ft^3/sack
14.1	7.8 gal./sack	4 lb.	~ 4 %	1.55 ft^3/sack
13.8	8.5 gal./sack	5 lb.	~ 5 %	1.64 ft^3/sack

Note: Table VI is based on Halliburton Cementing Tables

SECTION 143. NR 812.26 (7)(b)2 Table C Acceptable Materials and Methods for Well ~~Abandonment~~ Filling and Sealing is repealed and recreated to read:

Well Type		Materials							Methods
		Clean Clay or Silt or Clean Native Soil	Approved Bentonite Chips^	Neat Cement Grout	Concrete @	Sand-cement Grout	Bentonite-sand slurry w/ min. mud wt. 11 lbs gal	Chlorinated, sand-free pea gravel	
Unconsolidated Formation Wells	Driven-Point Wells & Drillholes ≤ 3" diam.~	No	No	Yes	No	No	No	No	Neat cement may be poured without using a conductor# pipe
	Wells & Drillholes > 3" diam.	No	Yes, provided well is 4" minimum diameter & 500'maximum depth	Yes	Yes	Yes	**No**	♦ Yes, but in depths below 250'	Conductor# pipe required except when bentonite chips or pea gravel is used
	Dug Wells ∞	Yes (top 5' of curbing must be removed following filling)	Yes	Yes	Yes	Yes	No	No	Conductor# pipe not required unless well is ≤ 18" diameter
Bedrock Wells	Bedrock wells not extending through Maquoketa Shale or Cambrian Sandstone	No	Yes, provided well is 4" minimum diameter & 500' maximum depth	Yes	Yes	Yes	No	♦ Yes, but in depths below 250'	Conductor# pipe required except when bentonite chips or pea gravel is used
	Bedrock wells extending through Maquoketa Shale or Cambrian Sandstone	No	Yes in top 500' & for 40' plugs at top & bottom of Maquoketa Shale contact surfaces+	Yes	Yes	Yes	No	♦ Yes, but in depths below 250', but not at Maquoketa Shale contact surfaces+	Conductor# pipe required except when bentonite chips or pea gravel is used
	Dug Wells ∞	Yes, but only in unconsolidated portion of well	Yes	Yes	Yes	Yes	No	No	Conductor# pipe required only for placement of grout or concrete; or if well is ≤ 18" diameter
Well Pits		Yes	Yes	Yes	Yes	Yes	No	No	Must perforate floor & knock out or perforate 1 wall of pit

~ **It is not permissible to remove the drive pipe and screen no matter how shallow the well is.**
∞ The top 5 feet of dug well curbing must be knocked out to provide a soil contact with the filling material.
@ When concrete is used, the grave size may not exceed 1/3 the inside diameter of the conductor pipe used.
# The terms conductor pipe and tremie pipe are synonymous. The bottom of the pipe must remain submerged in the grout throughout the filling procedure. Conductor pipe must be metal pipe, thermoplastic pipe rated for at least 100 psi or rubber-covered hose reinforced with braided fiber or steel and rated for at least 300 psi.
^ Bentonite chips may only be used for wells not deeper than 500 feet and having not more than 350 feet of standing water in them. [See s. NR 812.26(7)(a)3.] The chips shall be poured across a coarse mesh screen such that excess dust does not enter the well. Pour rate **shall not** be faster than 3 min. per 50 lb. bag to prevent bridging. **The depth of chips shall be monitored once every 10 bags Water shall be added until the water level rises to the top of the well casing.**
♦ 40 ' Impermeable plugs shall be provided for certain bedrock formation changes [See s. NR 812.26(7)(a)2.
+ See NR 812.26(7)(a)2. and 3. for requirements regarding Cambrian Sandstone contact surfaces.

SECTION 144. NR 812.26(8) is amended to read:

~~ABANDONMENT~~ WELL AND DRILLHOLE FILLING AND SEALING REPORTS. ~~An abandonment~~ A well and drillhole filling and sealing report shall be filed with the department no later than 30 days after the well or drillhole is ~~abandoned~~ filled and sealed. The ~~abandonment~~ filling and sealing report shall be filed by the person performing the ~~abandonment~~ filling and sealing work on forms ~~provided~~ specified by the department and shall include a complete, true and accurate detailed description of the location of the well or drillhole that was filled and sealed, materials and method of filling and sealing, construction and geologic features and Wisconsin Unique Well Number, if known. ~~Well~~ Water well drillers, well constructors and pump installers shall report ~~to the department~~ any unused ~~or unabandoned~~ wells or drillholes that are not filled and sealed ~~of~~ for which they have knowledge to the department. Beginning July 1, 2016 filling and sealing reports shall be filed with the department electronically.

SECTION 145. NR 812.26(9) is created to read:

NR 812.26(9) WELL AND DRILLHOLE FILLING AND SEALING LICENSE OR REGISTRATION REQUIREMENTS. In order to fill and seal a well or drillhole, or to verify that a well or drillhole was properly filled and sealed, a person must be licensed or registered in accordance with ch. NR 146 and ch. 280, Stats.

SECTION 146. NR 812.27(5) is amended to read:

NR 812.27(5) DISINFECTION AND WELL SEALS. The pump installer shall disinfect any potable well and water system according to s. NR 812.22 (4) and (5) upon completion of the original pump installation and thereafter, anytime the well is entered for the purpose of measuring or diagnosing any feature or problem with the well or after the well is entered for rehabilitation, redevelopment, reconditioning or cleaning or if the well is entered for the purpose of installing, replacing or repairing any equipment located within the well. Following disinfection, the disinfectant shall be flushed according to s. NR 812.22 (5). The disinfection and flushing shall be completed before the system is placed into service. The pump installer shall seal or cover the well with an approved vermin–proof cap or seal.
Note: The pump installer may designate the owner, the property lessee or any other person to flush the system.

SECTION 147. NR 812.27(6) is repealed and recreated to read:

NR 812.27(6) SAMPLING AND REPORTING REQUIREMENTS. In accordance with all requirements of s. NR 812.41 (3), the pump installer, or his or her agent, shall collect a water sample or samples from a potable well no later than 30 days following completion of the original pump installation and thereafter no later than 30 days after the well is entered for the purpose of measuring or diagnosing any feature or problem with the well or after the well is entered for rehabilitation, redevelopment, reconditioning or cleaning or if the well is entered for the purpose of installing, replacing or repairing any equipment located within the well. The water sample shall be analyzed for coliform bacteria by either a laboratory certified by DATCP for bacteriological analysis of drinking water and having an agreement with the department for electronic submission of laboratory test reports to the department no later than 30 days after completion of the analysis, or be analyzed by the Wisconsin state laboratory of hygiene. For pump work that involves entry into the well, other than the original pump installation, water samples shall also be collected by the pump installer and analyzed for nitrate and arsenic by laboratories certified for those analyses and having an agreement with the department for electronic submission of laboratory test reports to the department within 30 days after completion of the analyses, or analyzed by the Wisconsin state laboratory of hygiene. The pump installer may designate the owner, the property lessee or any other person to collect the samples and submit them for analysis. The pump installer shall provide a copy of the laboratory test report(s) to the well owner within 10 days of the receipt of the report(s) by the pump installer.

SECTION 148. NR 812.27(8) and (9) are amended to read:

NR 812.27(8) BACTERIOLOGICALLY UNSAFE WELLS. The pump installer shall return to the well site to attempt to correct a problem with a potable well that produces bacteriologically unsafe water. The pump installer shall return no later than 90 days after the pump installation is completed or 30 days after the pump is placed into service, whichever is longer. If noncomplying installation or ~~disinfection~~ failure to disinfect was not the cause of the problem, a fee may be charged by the pump installer for any corrective work.

(9) Potable water supplies shall be protected to prevent back-flow, back-siphonage and cross-connections according to the requirements in s. SPS 382.41 and s. NR 812.32(1)(f).

SECTION 149. NR 812.27(10) and (11) are created to read:

NR 812.27(10) When a pump installer has performed pump installation work not in compliance with this chapter, the pump installer shall return to bring the system into compliance. The pump installer shall pay all costs for bringing the installation into compliance with this chapter, other than those costs that would have been charged for an initially complying installation.

(11) A pump installer may not install a pump in a well having an open annular space that extends deeper than twice the depth of the pitless adapter or pitless unit. When an annular space is open to a depth greater than this depth, the pump installer shall inform the well driller so that the driller knows to return to the job site and seal the annular space according to s. NR 812.20. The pump installation shall not be completed until the well driller has resealed the annular space. If the annular space is open to a depth less than or equal to twice the depth of the pitless adapter, the pump installer may seal the open annular space with an approved granular bentonite hydrated with water from a known safe and uncontaminated source.

SECTION 150. NR 812.28 is amended to read:

NR 812.28 (title) **Pump installation equipment and supply pipe**. The department may prohibit the use of any water supply equipment if the department finds there is substantial evidence that the equipment poses a significant hazard to safe drinking water or the groundwater. The department shall state its decision and conclusions in writing to the manufacturer, the licensed pump installers and the industry representatives including the Wisconsin Water Well Association and the Wisconsin Pump and Well Suppliers Association. Unless otherwise specified, the prohibition of the use of any water supply equipment will take effect 12 months after the initial prohibition notice. Pump discharge and supply piping shall conform to the specifications in s. NR 812.17 for steel pipe or shall conform to the requirements in the "Pipe and Tubing for water services and private water mains" table in ~~ch. SPS 384~~ s. SPS 384.30, except that Type M copper pipe may not be installed underground. Pipe used for year-round installations shall be protected from freezing. Lead-based solder for pipe connections may not be used. The department recommends that galvanized pipe not be used when the water quality is known to be corrosive. Limitations on the use of plastic pipe are found in ~~ch. SPS 384~~ s. SPS 384.30, Plastic pipe may not be used for buried pipe in soils known to be contaminated with volatile organic chemicals. Plastic pipe may be used as drop pipe installed within a well or for discharge piping between the well and the building served, provided it meets ~~ch .SPS 384~~ s. SPS 384.30, standards and has a minimum pressure rating of 150 pounds per square inch. When plastic pipe extends through the seal of a well with an above-ground discharge, the portion of the plastic pipe extending above-ground from the well shall be protected from ~~the~~ sunlight or the plastic pipe used shall be of the type with inhibitors recommended for use in direct sunlight.

SECTION 151. NR 812.29 is amended to read:

NR 812.29 Height of finished well.

(1) For wells constructed after February 1, 1991, the pump installation shall be completed such that the watertight well casing pipe for all wells, except those located in a floodplain, shall terminate at least 12 inches above the established ground surface, above a pumphouse or building floor or above any concrete or asphalt platform surrounding the well casing.

(2) When a low capacity well is located in an area of traffic or where the well terminus is at risk of contact by vehicles, machinery, equipment or any other hazard that poses a significant threat of damage to the well terminus, the well shall be protected from physical damage by either using rigid metal posts or comparable barriers or by terminating it within a driveway ramp constructed in accordance with s. NR 812.36.

(3) For wells in floodplains, the top of a well and an overflow outlet from a flowing well shall terminate at least 2 feet above the regional flood elevation. Pits may not be installed to enclose a well or pump installation.

(4) A driveway ramp may not be installed in a floodplain. ~~Approval shall be obtained for termination of a well in a pit.~~

(5) The well casing pipe may not terminate in or extend through the basement or crawl space of a building, but may terminate in a walkout basement if the following conditions are met:

(a) It is possible to walk directly outside from the walkout basement without walking upstairs or upslope.
(b) The surface of the ground around the outside exit door of the walkout basement slopes down away from the door.
(c) The well and pump installation are accessible for repair and removal.
(d) The well produces water continuously free from contaminants in excess of the drinking water standards of s. NR 812.06.
(e) The well casing pipe depth meets the requirements of s. NR 812.42(1)(b).
(f) The well and pump installation are in compliance with all other requirements of this chapter.
(g) The walkout basement is not subject to flooding
(h) The walkout basement is not in a floodway or floodplain.

SECTION 152. NR 812.30(3) is amended to read:

NR 812.30(3) WELL VENT. A screened downward facing well vent or other vent ~~shall~~ may be provided for the well cap or seal for ~~all~~ drilled wells ~~except when~~. When the well is a flowing well and the well head must be maintained watertight or when there is concern for air entrained bacteria to enter the well through the vent, the vent opening may be plugged watertight with a threaded plug. ~~The well vent pipe or vent openings shall provide at least 0.25 square inches of open area, excluding the area occupied by the material of the screen.~~ Vent pipes extending above the well casing pipe shall terminate in a downward facing bend and shall be screened. Screens shall be made of material not easily corroded and shall be firmly seated in the vent opening. Vent openings incorporated as part of the underside of an approved well cap or seal are allowed.

Note: The department recommends a vent be provided for the well cap or seal of a well that has significant water level drawdowns during normal pump operation. This recommendation does not apply to flowing wells.

SECTION 153. NR 812.30(5) is repealed and recreated to read:

NR 812.30(5) CONDUIT FOR ELECTRICAL WIRING. Where electrical wiring emerges from an underground installation to supply well pump equipment it shall be protected from physical damage by installing conductors or cables within a nonmetallic or steel raceway. The raceway material shall be: Listed, Schedule 80 sunlight resistant Rigid Polyvinyl Chloride Conduit (Type PVC), Listed, Intermediate Metal Conduit (IMC), or galvanized Rigid Metal Conduit. The conduit shall be threaded tightly into the well cap or shall be secured and sealed in an equivalent manner. Where a direct buried electrical cable supplies the well, the bottom of the conduit providing physical protection shall extend a minimum of 2 feet below grade. The conduit shall be sealed above grade in a watertight manner with a listed fitting, or by use of 100% silicone, urethane or Butyl caulking. Where the conduit or raceway extends continuously from the well to a building or pump equipment enclosure, both ends of the conduit or raceway shall be sealed in a watertight manner as described in this paragraph.

SECTION 154. NR 812.30(6) is created to read:

NR 812.30(6) PREPARATION OF TOP OF THE WELL CASING PIPE. Any jagged edges or other significant irregularities in the top of the well casing pipe shall be removed by the well driller or the pump installer before the vermin-cap or seal is installed.

SECTION 155. NR 812.31(2)(a) and (b) are amended to read:

NR 812.31(2)(a) GENERAL REQUIREMENTS. A pitless subsurface pipe connection to a well casing pipe shall be made with an approved weld-on, clamp-on, ~~or~~ bolt-on or bolt-through pitless adapter or with an approved ~~factory-assembled~~ pitless unit, except that a bolt-through adapter may only be installed for a well constructed with polyvinyl chloride well casing pipe that has a permanently attached well screen. A clamp-on, bolt-on or bolt-through pitless adapter may only be installed for a well that will serve a single family residence. ~~Approved weld-on~~ Weld-on adapters or ~~approved~~ pitless units shall be welded or threaded to the well casing pipe according to sub. (3) or (4). All welding shall be performed in accordance with s. NR 812.18. ~~An approved clamp-on or bolt-on pitless adapter may only be installed for a well that will serve a single family residence. An approved clamp-on or bolt-on adapter may only be installed by a pump installer. It~~ A pitless adapter or pitless unit shall be installed according to any approval conditions and according to the manufacturer's instructions.
~~**Note:** The Department will reevaluate the effectiveness of clamp-on and bolt-on adapters over time and may request information from pump installers concerning location of installations, manufacturer's name and model number.~~

(b) The inside diameter of a pitless unit may not be smaller than the inside diameter of the well casing pipe. No part of a pitless adapter may extend into the inside of the well casing pipe ~~so that setting or removal of the pump, pump piping or other appurtenances is impeded~~, except that a bolt-through pitless adapter may be installed for a well with polyvinyl chloride well casing pipe having a permanently attached screen.

SECTION 156. NR 812.31(4)(e) is amended to read:

NR812.31(4)(e) When thermoplastic well casing pipe is extended above the ~~depth of the buried pump discharge line~~ ground surface, the thermoplastic pipe ~~shall~~ may be contained in a pumphouse or in an

oversized steel pipe extending from below the frost depth to the top of the thermoplastic pipe.

SECTION 157. NR 812.32(1)(a)(Intro.) is amended to read:

NR 812.32(1)(a)(intro.) ~~The installation of pumps~~ Pump installations shall be ~~planned and~~ carried out so the pump installation will be:

SECTION 158. NR 812.32(1)(e) and (f) are created to read:

NR 812.32(1)(e) All well pump electrical installations shall conform to the Wisconsin Electrical Code, incorporated by reference in the Wisconsin Electrical Code, ch. SPS 316, and the requirements specified in that chapter. In addition to these requirements, no electrical control box or any other electrical device shall be installed inside a well casing pipe, except where the device is directly incorporated into the manufactured pump assembly.

(f) For water systems with multiple wells interconnected to a common plumbing piping system, the department may require additional equipment to reduce the possibility of back-flow or back-siphonage between wells. This equipment may include a separate pressure tank for each well, additional check valves, air gaps, reduced pressure principle backflow preventers, pressure switches and electronic pump control devices.

SECTION 159. NR 812.32(2)(b) is amended to read:

NR 812.32(2)(b) *Pump height*. The ~~department recommends that the~~ pump impeller or cylinder for offset pumps ~~be located at an elevation above the established ground surface but~~ shall be located at an elevation ~~not subject to flooding and~~ at least one foot above the basement or pit floor.

SECTION 160. NR 812.32(4)(c) and (d) are created to read:

NR 812.32(4)(c) *Back-flow and back-siphonage prevention.* When a well is installed with a submersible pump and an above ground discharge, it shall contain an UL approved check valve and an air-vacuum relief valve prior to any buried portion of the discharge pipe. When water is pumped to a pond or other body of water, the end of the pump discharge pipe shall be terminated at least 2 feet above the highest elevation of the water in the pond or other body of water.

(d) *Other locational restrictions.* 1. A water discharge line may not be installed in, under or above sanitary sewer manholes, or under a POWTS treatment, holding or dispersal component, including a septic or holding tank, or any in-ground, at-grade or mound soil absorption unit.

2. A water discharge line shall be separated at least 10 feet horizontally from a POWTS treatment, holding or dispersal component, including but not limited to a septic or holding tank, or any in-ground, at-grade or mound soil absorption unit.

SECTION 161. NR 812.32(5)(b)3.b. and (6)(b) are amended to read:

NR 812.32(5)(b)3.b Oil lubricated lineshaft turbine pumps may be used for potable wells when the pumping water level is deeper than 250 feet except when the pump operation is expected to lower the water level in the well to a ~~point below~~ depth less than 5 feet above the bottom of the well casing pipe. Oil lubricated lineshaft turbine pumps may be used for ~~nonpotable~~ wells ~~providing~~ provided the lubricants are USDA or FDA approved food contact grade formulations.

NR 812.32(6)(b) *Nonpressurized.* ~~Buried discharge~~ Discharge lines from lineshaft turbine pumps ~~that are not maintained under system pressure at all times~~ shall contain an UL approved check valve ~~or shall contain~~ and an air-vacuum relief valve near the pump, and prior to any buried portion of discharge pipe. When water is pumped to a pond or other body of water, the end of the pump discharge pipe shall be extended at least 2 ~~pipe diameters~~ feet above the highest elevation of the water in the pond or other body of water.

SECTION 162. NR 812.32(9)(d) is created to read:

NR 812.32(8)(d) Illustrations of complying pump installations for flowing wells are shown in figures 41 to 43.

SECTION 163. NR 812.32(9)(c)3. is amended to read:

NR 812.32(9)(c)3. ~~Overflow~~ When necessary, overflow piping shall be installed to prevent flow of water up the outside of the well casing pipe or to prevent freezing of water inside the casing. When installed, the flow of water from the discharge pipe shall be limited to a minimum ~~to~~ so as to preserve groundwater and water pressure. The overflow pipe shall be installed to extend ~~at least 12 inches above ground grade~~ through the well cap or seal or shall extend ~~from~~ off a surge tank in the basement. The overflow pipe may be attached to the outside wall of the well casing pipe if both the point of exit from the well casing pipe and the terminus of the overflow are at least 12 inches above the ground grade and the connection to the well casing pipe is watertight. The overflow pipe shall terminate at least 2 pipe diameters above any drain inlet at the well site, in a building or in a building basement. If the overflow is installed at the well head, the overflow shall extend at least 2 feet above the regional flood elevation and ~~an~~ a free air gap of at least 2 pipe diameters above the drain shall be provided ~~at the well~~. ~~and the~~ The receiving drain shall discharge to the ground or to a gravel pocket at a point at least 8 feet from the well. A funnel receptacle shall be installed on the inlet of the drain to accept all of the overflow water, to prevent splashing and ~~to~~ prevent ponding of water around the well casing pipe. If a pump is installed in the well and the well stops flowing during pumping, a screen shall be installed on the overflow pipe.

SECTION 164. NR 812.33(1)(a)1. is amended to read:

NR 812.33(1)(a)1. Pressure tanks to be buried shall be constructed of steel, fiberglass or other comparable non-metallic composite material. Steel tanks with metallic discharge piping, meeting the requirements of s. NR 812.28, shall be used in contaminated soil areas. Steel tanks to be buried shall have a minimum wall thickness of 0.25 inches. Fiberglass or other non-metallic tanks to be buried shall have the structural strength to prevent collapse of the tank. Manufacturer's instructions shall be followed. All buried tanks shall be back-filled in place with sand, compacted in place. Steel pitless receiver tanks,

when they are part of approved pitless units attached directly to the well casing pipe, shall also have a minimum wall thickness of 0.25 inches. Any air unloader pipe, tank air valve or any other pipe connection extending up to the ground surface shall be steel pipe meeting the requirements of s. NR 812.28 and shall terminate at least 12 inches above ground grade.

SECTION 165. NR 812.33(1)(a)2.d. is created to read:

NR 812.33(1)(a)2.d. Any interior protective materials including but not limited to liners, paints, coatings or sealants shall be certified for potable water use under NSF Standard 61.

SECTION 166. NR 812.32(2)(a)5. Figures 36b. and 36c. are repealed and recreated:

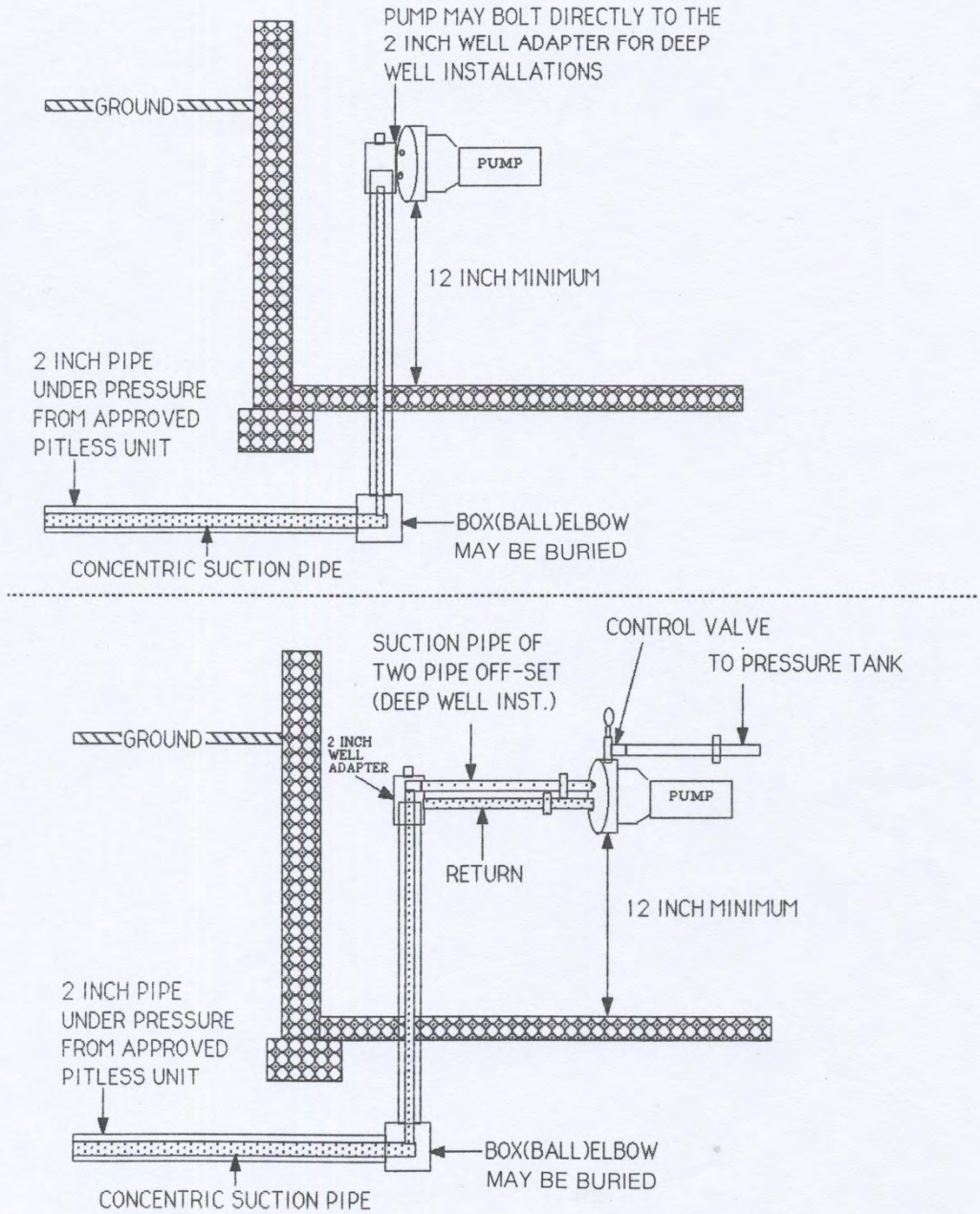
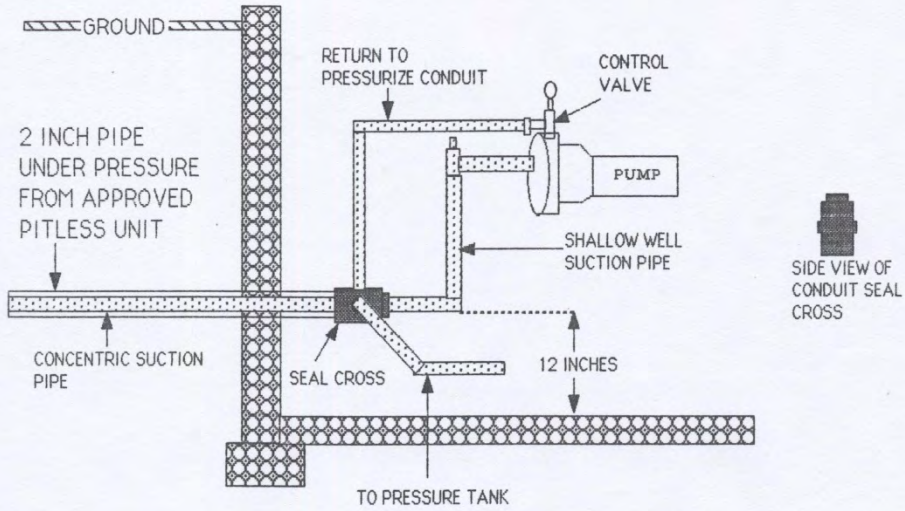


Figure 36b. Offset pump installation discharge piping using a buried box (ball) elbow. Figure prepared by T. Roos.



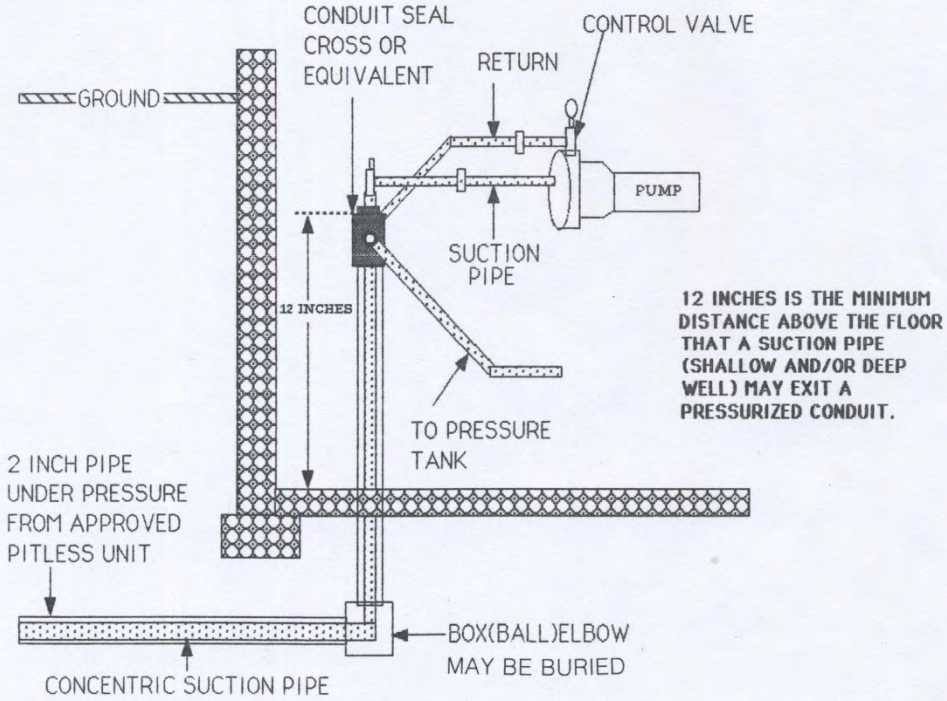


Figure 36c. Alternate offset pump installation discharge piping using a buried box (ball) elbow and seal cross fitting. Figure prepared by T. Roos.

SECTION 167. NR 812.33(1)(b) and (2) (intro.) are amended to read:

NR 812.33(1)(b) *Pressure tanks larger than 1,000 gallons gross volume.* An approval shall be obtained for pressure tanks having a gross volume greater than 1,000 gallons. The department recommends that pressure tanks having a volume greater than 1,000 gallons be installed above ground. When approved, the tank shall be installed according to the requirements of par. (a). When tanks of this size are approved for burial, the head end of the tank shall be cradled in a basement wall or in the wall of an approved pit to provide access and shall be constructed to the specifications for pits described in s. NR 812.36(2) to provide access to the head of the tank. The pit shall have other additional support cradles. This is depicted in figure 44. Pitless receiver tanks having a volume greater than 1,000 gallons may be installed without an access pit.

NR 812.33(2) (intro.) NONPRESSURE STORAGE VESSELS. Nonpressure storage vessels, ~~other than surge tanks~~ designed as part of a potable water supply system, may not be used without approval. Approval is required regardless of whether or not there is a free-air gap in the water inlet line upstream of the vessel. Vessel approval is based on methods of construction and sanitary provisions. The installation of a surge tank is exempt from this approval requirement.

SECTION 168. NR 812.33(2)(b)5. is created to read:

NR 812.33(2)(b)5. A reservoir shall be located according to the requirements of s. NR 812.08, including the minimum separation distance requirements of s. NR 812.08(4) established for existing or proposed potential sources of contamination.

SECTION 169. NR 812.33(3) is amended to read:

NR 812.33(3) PAINTING AND CATHODIC PROTECTION. Metal surfaces of reservoirs or elevated storage tanks, to be in contact with potable water, shall be protected by paints, ~~or~~ other protective coatings, or by cathodic ~~protective devices~~ protection except when documentation is provided to the department that the source water will not be aggressive or corrosive to the metal surfaces. Paint or coating systems shall ~~be consistent~~ conform with AWWA standard D102 and shall be NSF approved for use with potable water. ~~Cathodic~~ When cathodic protection is to be provided, it shall be designed and installed by competent technical personnel. A copy of the AWWA standards are available for inspection at the office of the department of natural resources, the secretary of state's office and the office of the revisor of statutes, and may be obtained for personal use from AWWA, Inc., 6666 W. Quincy Avenue, Denver, Colorado 80235.

SECTION 170. NR 812.34 (title) and (intro) are amended to read:

NR 812.34 ~~Sampling~~ Sample faucets. In all pressure water systems, whether installed before or after 1991, provision shall be made for collection of water samples directly from the well by installation of a sampling faucet at or ~~before~~ upstream of the pressure tank and upstream of any water treatment equipment. The ~~sampling~~ sample faucet shall be installed at least 12 inches above the floor, have a downturned spout and be in an accessible location. All sample faucets shall be metal and shall have ~~a~~ an inside diameter of at least one-quarter inch. The sample faucet shall have a smooth end~~, or if threaded faucets are used, the threads shall be filed off~~. Threaded faucets and threaded drain valves may not be installed in place of a smooth end sample faucet even if the threads have been filed off. Petcocks may not be used as sample faucets ~~except when the spout is at least 1/4 inch in diameter and has a smooth end~~. ~~When a petcock is installed for a sample tap, an auxiliary, smooth-end faucet shall also be installed to provide a tap for recirculation during batch chlorinations.~~ Any faucet used for recirculation shall be installed with a hose connection vacuum breaker. Sample faucets shall be installed in the pump discharge piping ~~ahead~~ upstream of the pressure tank entry except:

SECTION 171. NR 812.35 is amended to read:

NR 812.35 Yard hydrants. Yard hydrants may be installed in a water system provided they are not installed in or on a well~~, are at least 8 feet from the well~~ and ~~comply with the requirements of sub. (1) or (2)~~ and have been approved by the department of safety and professional services for this purpose. All backflow prevention devices shall comply with ch. SPS 384 and shall be installed and maintained in accordance with ch. SPS 382.
~~**(1)** For yard hydrants with underground bleeds, a reduced pressure principle backflow preventer or a backflow preventer with intermediate atmospheric vent shall be installed in the water supply pipe which services only the yard hydrant or hydrants. Yard hydrants which have underground bleeds and hose threaded outlets shall also have a hose connection vacuum breaker installed on the hose threads.~~
~~**(2)**~~ **(1)** Yard hydrants ~~without underground bleeds and with~~ having hose threaded outlets shall ~~comply with par. (a (b).~~ either:
(a) ~~A~~ Have a hose connection vacuum breaker ~~shall be~~ installed on the hose threads, or
(b) ~~A~~ Have a reduced pressure principle backflow preventer or a backflow preventer with intermediate atmospheric vent ~~shall be~~ installed in the water supply pipe which serves only the yard hydrant or hydrants.
~~**(3)**~~ **(2)** Yard hydrants without ~~underground bleeds and without~~ hose threaded outlets may be installed without additional backflow protection if the outlet of the yard hydrants complies with the air gap requirements in s. SPS 382.41.

SECTION 172. NR 812.36(3) is created to read:

NR 812.36(3) Driveway Ramps: If a well must be located in a driveway, parking area, walkway or other high traffic area due to small lot size, accessibility constraints or inability to otherwise meet the minimum separation distance requirements of s. NR 812.08, the well may be contained within a driveway ramp structure without department approval provided the driveway ramp meets the specifications of this subsection.

(a) Driveway ramps may not be constructed in a floodway or floodplain.

(b) Driveway ramps shall conform to figure 45 and the following minimum specifications:

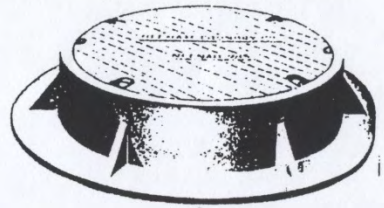
1. Nonpressure conduit. If the well has a nonpressure conduit, the pump installer shall evaluate the integrity of the nonpressure conduit and its connection to the well casing pipe by performing a pressure test. If the nonpressure conduit fails the pressure test, the nonpressure conduit shall be eliminated and the installation shall be changed to a pitless connection in accordance with s. NR 812.42(11)(e).
2. Construction. The top of the well shall be contained within a manhole and frame that is set on a concrete ring. The manhole shall be water-tight with a gasketed seal and shall be bolted securely to the frame. The manhole must be surrounded by concrete or asphalt that is sloped so that surface water does not flow toward or pond on the manhole cover.
3. Height of well. The top of the well casing pipe shall terminate a minimum of four inches above the original grade of the driveway, parking lot or sidewalk.
4. Well seal. The top of the well shall be sealed watertight with an approved sanitary well seal.
5. Conduit for electrical cable. Pump electrical cable shall be protected in a metal or plastic conduit. The conduit shall be threaded tightly into the well cap or seal or shall be sealed in an equivalent manner. If the electrical wires are buried beside the well, the bottom of the conduit shall extend below the floor of the driveway ramp and shall be sealed watertight. If the conduit extends from the well seal to a basement, the end of the conduit shall be sealed in a watertight, vermin−proof manner.

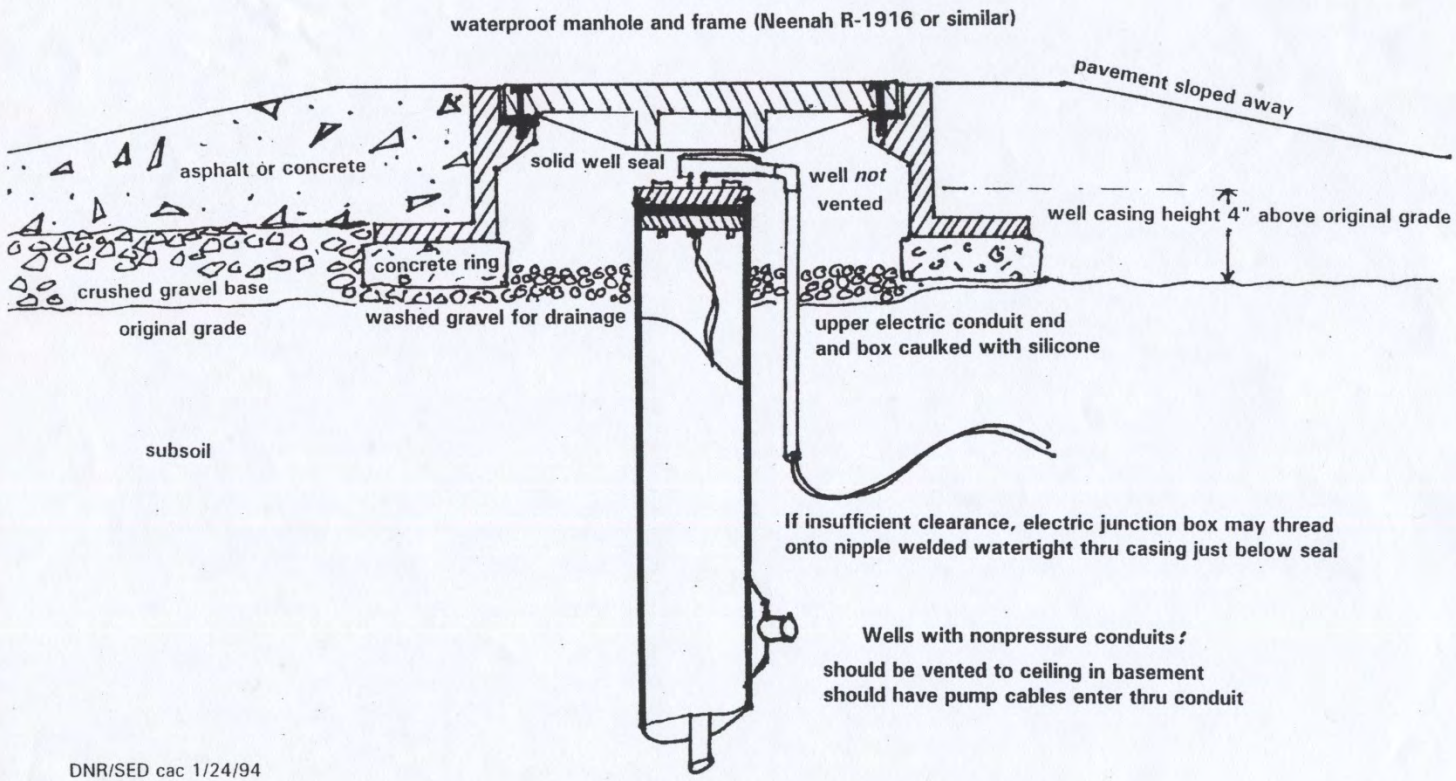
6. Wells with nonpressure conduits must be vented to the ceiling in the basement and shall have the pump cables enter through a conduit.

SECTION 173. Figures 45A and 45B are created:

Well Driveway Ramp

General design for installations which have obtained variance only.
Variance may allow or require specification changes.





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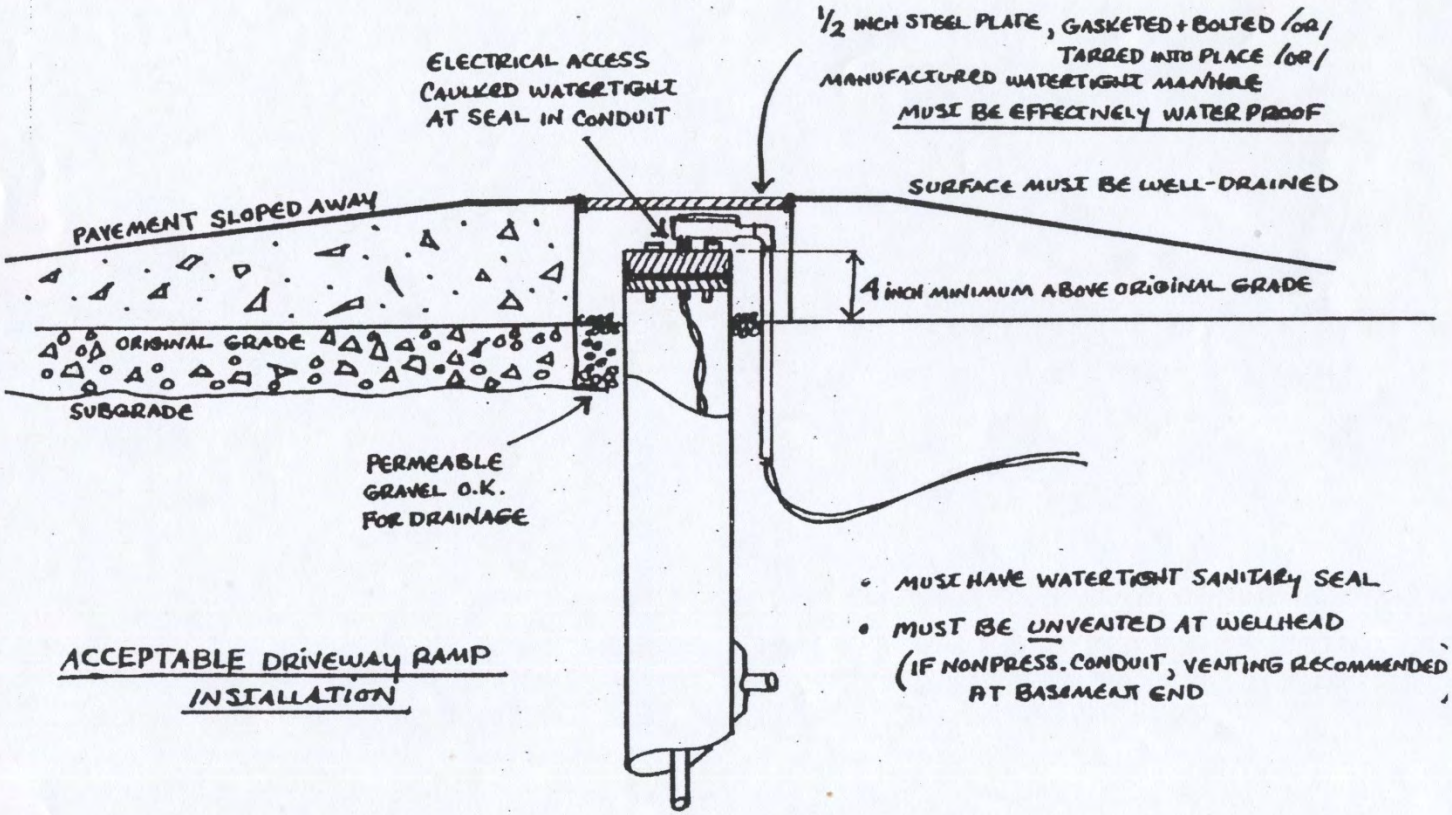
1/2 INCH STEEL PLATE, GASKETED + BOLTED /OR/
TARRED INTO PLACE /OR/
MANUFACTURED WATERTIGHT MANHOLE
MUST BE EFFECTIVELY WATER PROOF
ELECTRICAL ACCESS
CAULKED WATERTIGHT
AT SEAL IN CONDUIT
SURFACE MUST BE WELL-DRAINED
PAVEMENT SLOPED AWAY
4 INCH MINIMUM ABOVE ORIGINAL GRADE
ORIGINAL GRADE
SUBGRADE
PERMEABLE
GRAVEL O.K.
FOR DRAINAGE
• MUST HAVE WATERTIGHT SANITARY SEAL
• MUST BE UNVENTED AT WELLHEAD
(IF NONPRESS. CONDUIT, VENTING RECOMMENDED
AT BASEMENT END
ACCEPTABLE DRIVEWAY RAMP
INSTALLATION

SECTION 174. NR 812.37(4)(a) is amended to read:

NR 812.37(4)(a) In addition to the information required in s. NR 812.09 (2), the department may require the applicant to describe the proposed water treatment device; provide a sketch of the proposed installation; include information on results of an analysis of coliform bacteria of a water sample taken from the water supply within 6 weeks of application and analysis of contaminants intended to be controlled by the water treatment device; and describe the proposed water quality monitoring, operating, and maintenance programs. Additional sampling and information may be requested depending on the nature of the contamination and other site specific conditions. Analysis of water samples for bacteria shall be performed by a ~~Wisconsin certified~~ laboratory certified by DATCP under ATCP 77 or the Wisconsin state laboratory of hygiene.

SECTION 175. NR 812.41(3) is repealed and recreated to read:

NR 812.41(3) SAMPLING FOR COLIFORM BACTERIA, NITRATE AND ARSENIC. (a) For potable wells, the pump installer or his or her agent or the owner shall collect a water sample to be analyzed for coliform bacteria no later than 30 days following completion of the original pump installation and before the system is placed into service. Water samples shall also be collected and analyzed for coliform bacteria, nitrate and arsenic no later than 30 days after the well is entered for the purpose of measuring or diagnosing any feature or problem within the well or after the well is entered for rehabilitation, redevelopment, reconditioning or cleaning or if the well is entered for the purpose of installing, replacing or repairing equipment located within the well or when the casing height is raised. If the pump installer uses the well owner as the agent to collect the water samples, the pump installer shall provide the owner with laboratory designated sample bottles and department specified forms. Regardless of whom the pump installer designates to collect and submit the samples for analysis, the responsibility to ensure these tasks are completed belongs to the pump installer. Water samples shall be collected no later than 30 days after completion of the work. If the installation is completed at a time when the sample will be received at a certified laboratory later than 48 hours after the sample was collected, the sample may instead be collected no later than 30 days after the well is placed in service. If the laboratory test report indicates that any test result is invalid for any reason, including improper sample bottle, improper collection technique or longer than 48 hours between sample collection and arrival at the laboratory, the pump installer is required to collect replacement samples no later than 30 days of receiving the invalid test report(s).
(b) Water samples for coliform bacteria analysis shall be analyzed by a laboratory certified by DATCP under ch. ATCP 77 to perform coliform bacteriological examination of drinking water provided the laboratory has an agreement with the department for electronic submission of laboratory test reports to the department no later than 30 days after completion of each analysis or be analyzed by the Wisconsin state laboratory of hygiene.
(c) Water samples for nitrate analysis shall be analyzed by a laboratory certified by the department under ch. NR 149, to perform nitrate analysis of drinking water provided the laboratory has an agreement with the department for electronic submission of laboratory test reports to the department no later than 30 days after completion of each analysis, or be analyzed by the Wisconsin state laboratory of hygiene.
(d) Water samples for arsenic analysis shall be analyzed by a laboratory certified by the department under ch. NR149, to perform arsenic analysis of drinking water provided the laboratory has an agreement with the department for electronic submission of laboratory test reports to the department no later than 30 days after completion of each analysis, or be analyzed by the Wisconsin state laboratory of hygiene.

Note: In some instances arsenic test results may be temporarily high due to turbidity increases caused by changing a pump or by chlorination following work involving entry into the well. Before pursuing remedial reaction, the well owner is advised to collect a second water sample at least 30 days after the first sample.

(e) The certified laboratory and pump installer shall use forms specified by the department. The pump installer shall provide the well owner with a copy of the laboratory test reports no later than 10 days after

the pump installer's receipt of the reports.

SECTION 176. NR 812.41(4) is created to read:

NR 812.41(4) WELL CASING PIPE DEPTH VERIFICATION. When required to measure well casing pipe depth, due to lack of a confirmable well construction report, the pump installer shall enter the well details, including location, well casing pipe depth, total well depth, distances to possible contaminant sources and well owner information on a form specified by the department and shall submit the report to the department no later than 30 days after performing the verification. A copy of the report shall also be provided to the well owner no later than 30 days after performing of the verification.

SECTION 177. NR 812.42(1) (title), (intro.), (a) and (b) are amended to read:

NR 812.42(1) LOCATION, WELL CONSTRUCTION, PUMP INSTALLATION, ~~AND~~ WATER QUALITY AND SANITARY CONDITION. Each existing water ~~supply installation~~ system shall be viewed as an individual unit and its acceptability for use as a source of water shall be determined on the basis of its location, construction, pump installation, pump discharge piping arrangement, water quality and sanitary condition. Existing installations shall be evaluated according to and shall comply with the requirements in effect at the time they were constructed or installed, or if constructed or installed prior to ~~April 24, 1936,~~ April 10, 1953, with the standards adopted on that date, except that installations shall meet the further well location, well construction, pump and pump discharge, water quality, pit, reservoir~~,~~ and dug well~~, pump and pump discharge and well location~~ requirements of this section. The owner shall ~~verify~~ provide written documentation verifying the date of construction or installation or both. Water systems constructed or installed on or after February 1, 1991 shall meet the requirements of Subchapters I through III. Water systems constructed or installed prior to February 1, 1991 shall meet the requirements of this subchapter. ~~Existing installations~~ Water systems having features not meeting the requirements of this section or the code in effect at the time of construction or installation if installed after April 10, 1953, shall be upgraded as specified in s. NR 812.04 (2) and sub. (11) according to requirements for new construction or installation, or shall be ~~abandoned~~ filled and sealed according to the criteria and requirements of s. NR 812.26. The department may deny approval for operation of an existing well requiring approval under s. NR 812.09(4), if the well does not meet the ~~specifications~~ construction requirements of this chapter for new wells:

(a) *Location*. The well location shall conform to the requirements in effect at the time the well was constructed, or to the location requirements of s. NR 812.08. However, if a contamination source was installed after the well was constructed, the well location shall conform to the requirements in effect at the time of installation of the contamination source. ~~If the well was constructed prior to April 24, 1936, the well shall be in a location that provides reasonable sanitary protection.~~ If the well was constructed prior to April 10, 1953, it shall meet the separation distance requirements established on April 10, 1953, except those separation distance requirements that are no longer in effect. If a separation distance requirement is less in the current code than it was in the April 10, 1953 code, the lesser separation distance requirement applies. A well which meets the location requirements in effect at the time of construction, but does not meet the current location requirements of s. NR 812.08 may only be reconstructed with prior department approval.

(b) *Well construction*. 1. The well construction shall be in compliance with the construction requirements in effect at the time the well was constructed or shall be in compliance with the standards of ss. NR 812.09 to 812.15, except if the well was constructed prior to April 10, 1953, in which case the well construction shall be in compliance with the standards adopted on ~~that date~~ April 10, 1953. A well constructed in violation of the requirements in effect at the time of construction, or a well constructed to meet the requirements in effect at the time of construction ~~,~~ but not ~~meeting~~ according to the construction requirements of ss. ~~NR 812.11~~ NR 812.09 to 812.15, may only be reconstructed with prior department

approval. ~~Special well construction methods required by the department shall be followed when constructing or reconstructing wells located on properties listed on the department's geographic information system registry of closed remediation sites.~~

~~Note: The Department of Natural Resources GIS Registry of Closed Remediation Sites can be found at http://www.dnr.state.wi.us/org/aw/rr on the DNR's internet site. Information that appears on the GIS Registry of "Closed Remediation Sites can also be accessed by calling the nearest regional DNR office.~~

SECTION 178. NR 812.42(1)(b)2., 3., 4., and 5. are created to read:

NR 812.42(1)(b)2. The well casing pipe shall meet the minimum wall thickness requirements of s. NR 812.17 Table V for its diameter and may not be in a deteriorated condition.

3. If the minimum well construction requirements of this paragraph are not met, the well shall be filled and sealed in accordance with s. NR 812.26. For wells in basements or walkout basements, the well casing pipe depth shall be measured from the floor of the basement.

4. Except for where additional well casing pipe depth has been required for a variance or a special well casing depth area, unconsolidated formation wells, including both drilled and driven-point wells, shall have minimum well casing pipe depth settings of at least 25 feet below the ground surface, not including the screen; or, if the static water level is deeper than 15 feet, shall have minimum well casing pipe depth setting at least 10 feet below the static water level.

5. Except for where additional well casing pipe depth has been required for a variance or a special well casing depth area, bedrock wells shall have minimum well casing pipe depth settings below the ground surface as follows:

a. Twenty-five feet for wells terminating in sandstone, constructed before February 1, 1991; and 30 feet for wells terminating in sandstone, constructed on or after February 1, 1991.

b. Forty feet for wells terminating in limestone or dolomite.

c. Forty feet for wells terminating in bedrock other than sandstone, limestone or dolomite.

d. Sixty feet for wells terminating in limestone or dolomite, when the depth to bedrock is less than ten feet below the ground surface and the well was constructed on or after February 1, 1991.

SECTION 179. NR 812.42(1)(c) is amended to read:

NR 812.42(1)(c) *Water quality.* A well should produce bacteriologically safe water and produce water free from contaminant levels in exceedence of the drinking water standards of s. NR 812.06. If a well does not produce bacteriologically safe water or produces water containing contaminant levels in exceedence of the drinking water standards of s. NR 812.06 the department may require the water system to be upgraded to meet the requirements of this chapter or ~~abandoned~~ <u>may require the well to be filled and sealed</u> according to the criteria and requirements of s. NR 812.26.

SECTION 180. NR 812.42(2)(intro), (a), (c) and (d) are amended to read:

NR 812.42(2) PITS <u>AND SUBSURFACE PUMPROOMS (ALCOVES)</u>. Existing pits used only for the housing of valves are exempt from the requirements of this section except that a pit used for this purpose shall be watertight, may not be connected to a sewer, shall be drained to permeable soil or to the ground surface,

and may not be subject to flooding. Existing well or pressure tank pits, alcoves and subsurface pumprooms constructed after April 10, 1953 shall ~~be approved and shall either~~ comply with ~~the conditions of an approval to construct the pit or~~ the minimum requirements of s. NR 812.36(2). When a well in a free-standing pit is filled and sealed, the pit shall be filled in accordance with s. NR 812.26(7)(a)5.unless the pit is a complying valve pit. When a well in a free-standing pit is extended above grade, the pit shall be filled in accordance with s. NR 812.26(7)(a)5.unless the pit is a complying valve pit. Pits and alcoves constructed ~~prior to~~ on or before April 10, 1953 shall meet the following minimum requirements:

(a) *Construction.* The entire pit or subsurface pumproom structure, including the roof, shall be constructed of reinforced watertight poured concrete. If the pit or a subsurface pumproom pit connected to a basement (alcove) has a history of being continuously dry, walls of concrete block, brick or stone with mortared joints may be accepted. The walls, floor and roof shall be crack-free and watertight. The junction of walls and floors and all openings in the structure shall be sealed watertight. The roof or deck shall be at or above the ground surface. Requirements for existing pits are depicted in figures 47 and 48.

(c) *Drainage*. The department recommends that a pit be drained by a separate, metal, gravity drain discharging to the ground surface or to a subsurface pocket of permeable sand or gravel. The drain pipe shall be watertight. If there is a backflow or seepage from the drain into the pit at any time, the drain shall be sealed. When a drain is not installed, the department recommends that the pit have a watertight sump. A subsurface pumproom ~~pit~~ (alcove) adjoining a basement may be drained to the basement if the basement is adequately drained. If the basement is not adequately drained, ~~a partition wall in the entrance at least one foot higher than the pit floor shall be provided,~~ concrete shall be poured in the alcove so that the alcove floor is increased in height to one foot above the basement floor and if the well casing height no longer complies with par. (d), it shall be extended in accordance with par. (d)1.d. Well subsurface pumproom ~~pits~~ (alcoves) adjoining basements where the basement is subject to flooding shall be discontinued for use as a well pit and the well shall be ~~abandoned~~ filled and sealed according to s. NR 812.26. The ~~pit~~ subsurface pumproom (alcove) need not be ~~abandoned~~ filled and sealed. Pit or alcove drains or sump pump discharge pipes may not be directly connected to a sewer or other plumbing system. If discharging to the ground surface, the end of the surface discharge pipe shall be screened.

(d) *Well height.* The well casing pipe shall terminate at least 6 inches above the floor of a pit or a subsurface pumproom pit (alcove) connected to a basement and shall be provided with an approved sanitary well seal.

1. If the well casing pipe does not extend at least 6 inches above the floor, the pit or alcove may remain in service only if all of the following apply: ~~the well casing pipe is extended to at least 12 inches above the pit floor and~~

a. The well location meets the minimum standards of sub. (1)(a),

b.The well construction meets the minimum standards of sub. (1)(b), verified by measuring the well casing pipe depth in accordance with sub. (7)(a)5, if no confirmable well construction report can be found for the well. Well details, including location, well casing pipe depth, total well depth, distances to possible contaminant sources and well owner information shall be entered on a form and submitted to the department in accordance with s. NR 812.22(10) or 812.41(4).

c. The pit or alcove structure meets the requirements of this section.

d. The well casing pipe is extended up and out of the pit or alcove to 12 inches above the outside grade in accordance with sub. (12). For situations where the well would create an obstruction, including in a stoop, sidewalk, breezeway, driveway, garage or patio, making it impractical to raise the well casing pipe up and out of the alcove, the well casing pipe may be raised to a height just below the ceiling of the alcove structure in accordance with sub. (12).

2. If the pit is a subsurface pumproom (alcove) connected to a basement and the ~~pit~~ alcove floor is lower than the basement floor, the floor shall be raised to a height at least even with the basement floor by pouring concrete.

3. ~~The well casing pipe shall be extended at least 12 inches above the newly poured pit floor.~~ If the newly-poured alcove floor results in the well casing pipe terminating less than 6 inches above the floor, then the well casing pipe shall be extended as specified in sub. (2)(d)1.d and in accordance with sub. (12). If the well casing pipe is extended or the floor is raised, a four-inch high, two-inch thick concrete collar shall be placed around the well casing pipe just above where it extends out of the floor.

SECTION 181. NR 812.42(3) is amended to read:

NR 812.42(3)(a) NONCOMPLYING PITS When the free-standing pit structure does not meet the minimum construction requirements of sub. (2) or when water gains access to a pit through the floor or walls, the floor and at least one wall of the pit shall be ~~abandoned~~ perforated and the pit shall be filled after properly extending the well casing pipe above grade in accordance with sub. (12) or after properly ~~abandoning~~ filling and sealing the existing well according to s. NR 812.26. Before the pit is filled, all water system features, including but not limited to, the pressure tank, pump, discharge piping, electrical wiring and conduit, and any treatment equipment shall be removed from the pit. ~~At least one wall of the pit shall be removed or the wall perforated, and the floor shall be perforated to facilitate good drainage.~~

(b) NONCOMPLYING SUBSURFACE PUMPROOMS (Alcoves) If the pit is a subsurface pumproom (alcove) connected to a basement, the pit need not be filled, except when the alcove floor is lower than the basement floor, in which case the floor shall be raised to a height at least even with the basement floor by pouring concrete. To allow for easy removal of the pump for servicing or replacement, this casing extension may be made with the use of a threaded and coupled joint. If the well casing pipe is extended or the floor of the alcove is raised, a four-inch high, two-inch thick concrete collar shall be placed around the well casing pipe just above where it extends out of the floor.

(c) Any other modifications to the pit or alcove allowed by the department shall be made in a manner to meet the requirements for ~~new~~ pits in s. NR 812.36.

SECTION 182. NR 812.42(4)(f) is amended to read:

NR 812.42(4)(f) When a below ground-grade reservoir or a buried pressure tank pit is to be abandoned, it shall be permanently filled and sealed when the well or drillhole is filled and sealed. The reservoir shall be filled according to ~~dug well~~ the ~~abandonment~~ filling and sealing requirements of ~~s. NR 812.26 (7) (a) 4.~~ s. NR 812.26(7)(a)5. for ~~dug wells~~ well pits.

SECTION 183. NR 812.42(4)(g) and (h) are created to read:

NR 812.42(4)(g) The owner shall permanently eliminate, by filling and sealing, a reservoir if any of the following apply:

1. The location or construction of the reservoir does not meet the requirements of this chapter.

2. It poses a hazard to health or safety.

3. It has been taken out of service or has not been used for 2 or more years.

(h) A reservoir shall be maintained in a clean and sanitary condition and provide water free of bacterial and chemical contamination.

SECTION 184. NR 812.42(6) (intro.) is amended to read:

NR 812.42(6) PUMP AND PUMP DISCHARGE INSTALLATIONS. ~~Existing pump installations constructed prior to April 10, 1953 shall reasonably comply to the requirements that went into effect on April 10, 1953. Existing pump~~ Pump installations ~~constructed after April 10, 1953~~ installed prior to February 1, 1991 shall conform to the following requirements:

SECTION 185. NR 812.42(6)(a)2. is amended to read:

NR 812.42(6)(a)2. For off-set pump installations,

a. Any buried suction pipe shall be contained in a sealed pressurized conduit or, a nonpressurized conduit, if the nonpressure conduit was installed before February 1, 1991. ~~meeting~~ The nonpressure conduit shall meet the pipe requirements of Table V~~,~~ between the connection to the well casing pipe and a basement, or shall be properly connected to the well with an approved pitless adapter or pitless unit designed for and used with a concentric piping arrangement. Unprotected buried suction lines not enclosed in conduit may not be used.

Note: Unprotected buried suction lines have never been allowed by the Wisconsin Well and Pump Code. Nonpressurized conduits were only allowed prior to February 1, 1991.

b. Nonpressure conduit shall ~~be~~ have been welded watertight or threaded watertight to the well casing pipe and shall be at least 4 inches in diameter and shall enter the basement such that the bottom of the conduit is at least 6 inches above the basement floor.

Note: Nonpressure conduits to protect buried suction lines were only allowed before February 1, 1991 and then only for installations serving three or fewer homes.

c. A nonpressure conduit may extend at an angle up through a basement floor, or up through a concrete slab floor of a building having no basement, provided the lowest end of the conduit extends to a height at least 6 inches above the floor.

SECTION 186. NR 812.42(6)(b)4. is amended to read:

NR 812.42(6)(b)4. When an existing offset pump installation using a ~~non-pressure~~ nonpressure conduit has been or will be converted to a submersible pump installation, ~~the basement end of the non-pressure conduit shall be permanently sealed watertight, except when the conduit does not extend at least 6 inches above the basement floor, in which case~~ the ~~non-pressure~~ nonpressure conduit shall be completely eliminated by cutting off the well casing pipe below the nonpressure conduit, extending the well casing pipe to at least 12 inches above grade in accordance with sub. (12) ~~and replaced with~~ and installing pressurized discharge piping according to the requirements of ss. NR 812.28, NR 812.31 and 812.32(4).

SECTION 187. NR 812.42(7) is amended to read:

NR 812.42(7) HEIGHTS OF EXISTING WELLS. (a) When a well is not terminated in a basement, in a walkout basement, in a pit, in an alcove or in a subsurface pumproom, the well casing pipe shall extend above grade as follows:

~~(a) Wells constructed prior to April 10, 1953 shall terminate at least 6 inches above the established ground grade,~~

~~(b)~~ 1. Low capacity wells, constructed before February 1, 1991, except school and wastewater treatment plant wells, ~~constructed between 1953 and February 1, 1991~~ shall terminate at least 8 inches above established ground grade,

~~(c)~~ 2. High capacity, school and wastewater treatment plant wells shall terminate at least 12 inches above established ground grade, and

~~(d)~~ 3. All wells constructed on or after February 1, 1991 shall terminate at least 12 inches above established ground grade.

~~(e)~~ 4. All wells ~~constructed on or after October 1, 1975~~ located in a floodplain shall extend at least 2 feet above the regional flood elevation for the well site.

(b) When the height of a well casing pipe does not meet the requirements of this section, it shall be extended in accordance with sub. (12) to a height at least 12 inches above ground grade or above the floor of a pumphouse; or, if applicable, 2 feet above the regional flood elevation. The well casing pipe may only be extended if the well meets the well casing pipe depth requirements of sub. (1)(b). If it does not meet these requirements, the well shall be filled and sealed according to the requirements of s. NR 812.26. If there is no confirmable well construction report available for the well the well casing pipe depth shall be measured. Well details, including location, well casing pipe depth, total well depth, distances to possible contaminant sources and well owner information shall be entered on a form and submitted to the department in accordance with NR 812.22(10) or NR 812.41(4).

(c) 1. When a well is terminated in a basement a below-grade crawl space, in a walkout basement, in a pit, in an alcove or in a subsurface pumproom, the well casing pipe shall extend 6 inches above the floor of the structure.

2. When the height of a well casing pipe does not meet the requirements of this section, it shall be extended in accordance with sub. (12) to a height at least 12 inches above the floor of the structure, except that for wells located in pits and alcoves the well casing pipeshall be extended at least 12 inches above the outside ground grade. For situations where the well would create an obstruction, including in a stoop, sidewalk, breezeway, driveway, garage or patio, making it impractical to raise the well casing pipe up and out of the alcove, the well casing pipe may be raised to a height just below the ceiling of the alcove structure.

3. The well casing pipe may only be extended if the well meets the well casing pipe depth requirements of sub. (1)(b). If it does not meet the requirements of sub.(1)(b), the well shall be filled and sealed according to the requirements of s. NR 812.26. The well casing pipe depth shall be measured before extending the well casing pipe, if there is no confirmable well construction report for the well. Well details, including location, well casing pipe depth, total well depth, distances to possible contaminant sources and well owner information shall be entered on a form and submitted to the department in accordance with s. NR 812.22(10) or 812.41(4).

SECTION 188. NR 812.42(8) is amended to read:

NR 812.42(8) EXISTING WELL SEALS AND CAPS.

(a) An overlapping non vermin-proof cap or well seal shall be replaced in any of these situations:

1. The existing cap or seal, or the electrical conduit is broken or damaged,

2. The well is entered for the purpose of installing, replacing or repairing the pump or any other equipment located within the well.

3. The well is entered for the purpose of reconstructing or rehabilitating the well~~.~~,

(b) Wells constructed prior to February 1, 1991 may ~~be~~ have been covered with overlapping caps rather than vermin-proof caps or seals~~.~~ , but may only continue to be covered with an overlapping cap until such time that there is entry into the well to perform water well drilling or pump installation work.

(c) Sanitary seals having ~~one or 2-piece plate~~ solid or split-plate seals may be used, but ~~2-piece plate~~ split-plate seals may only be used if the well is enclosed in a pumphouse~~,~~ or a building ~~or pit~~.

(d) When a well cap or seal is replaced, it shall be replaced with an approved vermin-proof cap or an approved sanitary well seal. ~~The department recommends that a vermin-proof cap or seal be provided for an existing installation whenever any maintenance work is done to the well or pump installation.~~ No open holes, other than the well vent, may exist in the cap or seal.

(e) Approved vermin-proof caps or approved sanitary well seals may be installed by licensed water well drillers or registered water well drilling businesses, or licensed pump installers or registered pump installing businesses.

SECTION 189. NR 812.42(9) (a) and (b) are amended to read:

NR 812.42(9) WELLS IN BASEMENTS AND WALKOUT BASEMENTS. (a) *Wells in basements and below-grade crawl spaces, not including wells in subsurface pumprooms (alcoves).* 1. Wells constructed after April 10, 1953 terminating in basements or wells constructed after July of 1951 terminating under a building addition shall be permanently ~~abandoned~~ filled and sealed according to the requirements of s. NR 812.26.~~ unless otherwise accepted by the department~~.

2. Wells ~~constructed prior to April 10, 1953~~ terminating in basements or below-grade crawl spaces shall be evaluated ~~by the department on a case-by-case basis. The criteria for evaluation shall be~~ based on the sanitary safety of the well location and construction, pump installation and condition of the basement or below-grade crawl space in terms of the potential for the well to continuously produce water free from contaminants.

3. Screens may not be replaced on driven-point wells terminating in or extending through basements or below-grade crawl spaces. When a driven-point well screen needs replacement, the driven-point well shall be permanently ~~abandoned~~ filled and sealed according to the requirements of s. NR 812.26 ~~unless~~

~~otherwise accepted by the department~~. Any replacement well shall meet the requirements for new wells in this chapter.

4. Wells terminating in basements or below grade crawl spaces may remain in service if all of the following conditions are met:
a. The well was installed before April 10, 1953, the date after which wells in basements and below grade crawl spaces were no longer allowed.
b. If the well is a driven point, the point was never replaced after April 10, 1953, the date after which wells in basements and below grade crawl spaces could no longer be reconstructed.
c. The well produces water continuously free from contaminants in excess of the drinking water standards of s. NR 812.06.
d. The well casing pipe depth meets the requirements of sub. (1)(b).
e. The well and pump installation are in compliance with all other requirements of this chapter.

(b) *Wells in walkout basements.* ~~Existing installations~~ Wells terminating in walkout basements may remain in service if all of the following conditions are met;

1. It is possible to walk directly outside from the walkout basement without walking upstairs or upslope.
2. The surface of the ground around the outside exit door of the walkout basement slopes down away from the door.
3. The well and pump installation are accessible for repair and removal.
4. The well produces water continuously free from contaminants in excess of the drinking water standards of s. NR 812.06.
5. The well casing pipe depth meets the requirements of sub. (1)(b).
6. The well and pump installation are in compliance with all other requirements of this chapter.
7. The walkout basement is not subject to flooding
8. The walkout basement is not in a floodway or floodplain.

SECTION 190. NR 812.42(10), (11), (12), (13) are created to read:

NR 812.42(10) DRIVEWAY RAMPS. A well may terminate within a driveway ramp, with or without a variance, before the effective date of this subsection [legislative reference bureau inserts date], if the installation complies with the requirements for driveway ramps in Subchapter III.

NR 812.42(11) WORK ON EXISTING INSTALLATIONS.
(a) *Pits or Well Deepening.* Before extending any well casing pipe out of a pit, or deepening a well constructed by another individual, the water well driller or the pump installer shall measure the well casing pipe depth to verify that the casing depth complies with the rules in effect at the time the well casing was installed including any special well casing depth area requirements or variances, if no confirmable well construction report can be found for the well. Well details, including location, well casing pipe depth, total well depth, distances to possible contaminant sources and well owner information shall be entered on a form and submitted to the department in accordance with s. NR 812.22(10) or 812.41(4).

(b) *Sample Faucet.* When doing any pump work involving replacement of the pressure tank, or work involving the water supply piping inside the basement or building, upstream of the pressure tank, the pump installer shall install a complying sample faucet if one is missing. The pump installer shall also replace any sample faucet that does not comply with the requirements of s. NR 812.34, including any faucet that was installed before February 1, 1991 and including replacement of any threaded sample faucet with a sample faucet without threads. The pump installer or well owner may not file the threads off a noncomplying sample faucet.

Note: This requirement applies to sample faucets installed before and after February 1, 1991.

(c) *Casing Height.* When doing any water well work or pump installing work that involves entry into a well located outside a building, the water well driller or pump installer shall extend the well casing pipe to at least:

1. 12 inches above grade for any well that is less than 8 inches above grade and was installed before February 1, 1991.

2. 12 inches above grade for any well that is less than 12 inches above grade and was installed on or after February 1, 1991.

(d) When the well casing height above grade does not comply with par.(c), the water well driller or the pump installer shall measure the well casing pipe depth to verify that the well casing pipe depth complies with the rules in effect at the time that the well was constructed, if there is no confirmable well construction report available for the well. Well details, including location, well casing pipe depth, total well depth, distances to possible contaminant sources and well owner information shall be entered on a form and submitted to the department in accordance with s. NR 812.22(10) or 812.41(4)

(e) The extension of the well casing pipe shall be in accordance with sub. (12).

(f) *Vermin-Proof Well Cap or Seal*. When doing any water well work or pump installing work that involves entry into a well, the water well driller or pump installer shall replace any non-vermin proof well cap with an approved vermin-proof cap or sanitary well seal.

(g) *Nonpressure Conduit.* When any water well drilling work or pump installing work is performed involving entry into a well that has a nonpressure conduit, the water well driller or pump installer shall evaluate the integrity of the nonpressure conduit and its connection to the well casing pipe by performing a pressure test. If the nonpressure conduit fails the pressure test, the installation shall be changed to a pitless connection. The nonpressure conduit shall be completely eliminated by cutting off the well casing pipe below the nonpressure conduit and extending the well casing pipe to at least 12 inches above grade and installing pressurized discharge piping according to the requirements of ss. NR 812.28, 812.31 and 812.32 (4). The extension of the well casing pipe shall be in accordance with sub. (12).

(h) *Corrections.* The features in pars. (a) to (g) must be corrected and may not be noted on a noncomplying features form instead of correcting the noncomplying feature or testing the nonpressure conduit.

(12) WELL CASING HEIGHT EXTENSIONS FOR STEEL WELL CASING PIPE (a) The well casing pipe in the ground may only be extended up if it has the minimum wall thickness for its diameter according to the requirements of s. NR 812.17 Table V and is not in a deteriorated condition. If it does not meet these requirements, the well shall be filled and sealed according to the requirements of s. NR 812.26. The well casing pipe extension (riser pipe) shall meet the requirements of s. NR 812.17(2) and shall be attached to the top of the existing casing by one of the following methods:

1. Cutting off the well casing pipe in the ground squarely, providing a bevel for the top of the well casing pipe and making a watertight weld between the beveled end of the well casing pipe and the beveled end of the riser pipe.

2. Cutting threads on the top of the well casing pipe and the bottom of the riser pipe with a pipe die and using a full-standard recessed threaded coupling to provide a watertight connection between the two pipes.

3. Welding a properly-sized, snug-fitting, pipe nipple, beveled on the lower end and having threads on the upper end, and meeting the requirements of s. NR 812.17 (2), to the beveled end of the well casing pipe. The top of the well casing pipe and the bottom of the pipe nipple to be welded shall both have beveled ends. The pipe nipple shall be welded on the inside and the outside contact surfaces of the pipe nipple. The riser pipe shall be threaded to the top of the pipe nipple.

4. Reaming out the threads of a full standard recessed coupling, at least 1/3 the length of the coupling, and welding the coupling to the top of the cut-off well casing pipe with a fillet weld on the inside and outside contact surfaces of the coupling. The riser pipe shall be threaded into the top of the coupling.

5. The threaded lower end of a riser pipe may not be welded to the cut-off end of a well casing pipe.

6. Riser pipe may not be connected to the well casing pipe by means of a compressible joint.

NR 812.42(13) DISINFECTION, FLUSHING AND SAMPLING.
When working on existing water wells or pump installations, the well and water system shall be disinfected, flushed and sampled in accordance with s. NR 812.22 and 812.41.

SECTION 191. NR 812.43 (1) is amended to read:

NR 812.43 (1) When strict compliance with the requirements of this chapter is not feasible, a variance may be requested. All variance requests shall be in writing, except for situations that may require an immediate response, in which case a variance may be requested verbally from the owner, or the owner's agent, and a verbal variance may be granted by the department to be followed up with a written confirmation. If the verbal request is made by the owner's agent, the agent shall provide confirmation of the owner's concurrence with the request. A variance request shall include the names of the owner or owners and, if known, the well driller, well constructor or pump installer. The reason or reasons compliance with the requirements for this chapter is not feasible shall also be provided. The department may require the owner or the owner's agent to submit additional information necessary for the department to determine if a variance is justified. The owner or owners or the owner's agent shall sign the variance request. The department may condition the issuance of a variance by requiring additional construction or installation features to safeguard the groundwater and water supplied by the installation from contamination. Failure to comply with the conditions of a variance or the applicable requirements of this chapter voids the variance approval.

SECTION 192. NR 812.43 (1)(d) is repealed.

SECTION 193. NR 812 **Subchapter VI** is created to read:

Subchapter VI **Property Transfer Well Inspections**:

NR 812.44 Property transfer well inspections This subchapter applies to all water supply wells as defined in s. 280.30, Stats., used for any potable or nonpotable purpose. A well and pressure system inspection is not required at the time of property transfer, though if one is conducted, the inspection shall be in accordance with this chapter and chapter NR 146.

Note: "Water supply well" is defined in s. 280.30, Stats., to mean "an excavation or opening into the ground made by digging, boring, drilling, or other method that supplies water for any purpose."

(1) LICENSING. (a) An individual may not for compensation, in contemplation of a transfer of real property, conduct an inspection of the real property for the purpose of locating or evaluating water supply wells or

pressure systems or wells that must be filled and sealed on the real property, unless the individual is a licensed water well driller or a licensed pump installer.

(b) Only licensed individual water well drillers or licensed individual pump installers may conduct an inspection, or make any statement or offer any opinions regarding the existence or nonexistence of wells that need to be filled and sealed; or the location, compliance, condition, capacity or performance of a well and pressure system for compensation, at the time of property transfer.

(c) If the only work to be done is collecting water samples for analysis at time of property transfer and the laboratory test results are reported by the certified laboratory on a laboratory form and no other statements are made or opinions offered by the individual who collected the sample or by the laboratory or by anyone else, regarding the location, compliance, condition, capacity or performance of the well or pressure system or the location or existence or nonexistence of wells that need to be filled and sealed then the samples may be collected by someone other than a licensed water well driller or licensed pump installer.

(d) County employees are not required to obtain a well driller or pump installer license to conduct property transfer well inspections if the county has adopted a Level 3 county delegation program under ch. NR 845 and the inspections are conducted as part of their duties as county employees. Property transfer well inspections performed by Level 3 delegated county employees shall be conducted in accordance with the evaluation criteria in this subchapter and using the department form specified for property transfer well inspections.

(2) EQUIPMENT. Licensed individuals conducting property transfer well inspections shall be adequately equipped to conduct inspections.

Note: Recommended equipment includes, where applicable, a well casing depth measuring device, GPS unit, computer, internet service, digital camera and magnetic locator.

(3) FORMS AND INSTRUCTIONS. Licensed water well drillers or licensed pump installers, when conducting property transfer well inspections, shall use the department form specified for that purpose. The form shall be completed in full according to department instructions and shall be true and accurate. Inspectors shall provide the person who requested the inspection with the completed property transfer well inspection form. The inspector may attach their own forms or letters, provided those forms are not represented to be part of the department form. Use of the department form does not imply department approval of the well and pressure system. The property transfer well and pressure system inspection form shall not be submitted to the department except in the case of a variance request. After the department has developed an online entry system for submitting variance requests, the inspector shall submit the variance request, with the inspection form, laboratory test reports and photos electronically.

(4) SAMPLES. Any property transfer well inspection shall include the collection of water samples to be tested for coliform bacteria, nitrate and arsenic for each potable well on the property. Any property transfer well inspection shall include the collection of a water sample to be tested for coliform bacteria for each nonpotable well on the property. The coliform test shall be analyzed by a laboratory certified for bacteriological testing of drinking water. The nitrate test shall be analyzed by a laboratory certified for nitrate analysis of water. The arsenic test shall be analyzed by a laboratory certified for arsenic analysis of water. Laboratory test reports shall not be submitted to the department except in the case of a variance request. Laboratory test reports for coliform bacteria, nitrate and arsenic shall be provided to the person that requested the inspection.

(5) EVALUATION CRITERIA. (a) A well and pressure system shall be evaluated for compliance with the requirements of this chapter in effect at the time of construction or installation, except that well and pressure systems installed before February 1, 1991 shall comply with the standards of subchapter IV. If a well and pressure system was ever used as a potable water supply, it shall be evaluated for compliance with the ch. NR 812 standards for potable water supplies. The inspection shall include all wells on the property.

(b) The following features of all wells and pressure systems on the property shall be evaluated during a property transfer well inspection and any action needed, noncompliance and information shall be noted on the inspection form as follows:

1. The need for a more comprehensive search on the property, a diligent search for wells that need to be filled and sealed, or need for additional research when there are indications that potential violations may exist which are not fully identifiable as part of the basic inspection outlined in this paragraph. to 36. Potential violations include a possible unused well, a well possibly located in a floodway or floodplain, or a well possibly located too close to a potential contamination source, including a landfill. The department shall develop guidance for conducting comprehensive searches that fall outside a basic property transfer well and pressure system inspection.

2. The existence of any unused or noncomplying well that is required to be filled and sealed or the existence of any well that was filled and sealed by an unlicensed individual or unregistered person after June 1, 2008.

3. The existence of any well having either stovepipe or thin-walled well casing pipe.

4. The existence of any unsanitary or noncomplying dug well.

5. The existence of any noncomplying or unprotected buried pump suction line.

6. The existence of any noncomplying well pit or subsurface pumproom (alcove).

7. The existence of any noncomplying non-walkout basement or below-grade crawl space well.

8. Well casing pipe in poor condition including significant corrosion, cracks or other damage.

9. The existence of any potential source of contamination located less than the required minimum separation distance from the well, as provided in ss. NR 812.08 and 812.42(1)(a).

10. The existence of a well in a floodway or flood fringe.

11. The existence of a low area or drainage swale near or around the well site that places the well at risk from localized flooding.

12. The existence of any visible cross-connection either between the private water piping system and a sewerage piping system or between the well and a community water system.

13. The existence of a driven-point (sand-point) well installed on or after February 1, 1991 for which a well construction report is not available or a driven-point well of any construction date that has less than 25 feet of well casing pipe, not including the screen.

14. The existence of noncomplying nonpressure conduit, either horizontal or vertical.

15. The existence of a noncomplying hand pump.

16. The existence of an offset pump or offset pump piping that is not located at least 12 inches above a basement floor.

17. The existence of a noncomplying yard hydrant installed upstream of the pressure tank after [effective date of rule] [legislative reference bureau inserts date]or the existence of any yard hydrant installed in or on a well.

18. The existence of any visible noncomplying pump suction pipe, discharge pipe or noncomplying water

supply piping.

19. The existence of noncomplying flowing well installation.

20. The existence of a check valve in a noncomplying location.

21. The lack of a complying well seal or well cap.

22. Noncomplying casing height above grade or above a floor.

23. The pump electrical wires at the wellhead are not properly enclosed in conduit.

24. The well and pressure system lacks a sample faucet either on the tee of the pressure tank or upstream of the pressure tank.

25. The sample faucet is noncomplying.

26. The existence of an extreme health or safety hazard not noted elsewhere on the inspection form.

27. The well casing pipe at the ground surface is less than six inches in diameter for wells terminating in limestone, dolomite, shale, quartz or granite.

(c)The following comments or items of concern shall be noted on the inspection form:

1. The existence of a driven-point well installed before February 1, 1991, with a strong likelihood it contains less than 25 feet of casing pipe below the ground surface, not including screen.

2. The inability of the contractor to find a well construction report for the well in department records either because one was never filed, the report had an incorrect geographic location, or the report was misfiled in department records.

3. The existence of a well located in a Special Well Casing Depth Area.

4. The existence of a two-wire submersible pump, manufactured prior to 1979, in a well.

5. Evidence of some corrosion, but not serious corrosion, on the visible portion of the well casing pipe.

6. The existence of a well having an inaccessible or difficult location with respect to any future well construction or rehabilitation work.

7. The existence of a well having an inaccessible or difficult location with respect to any future pump installation work.

8. The existence of a non-vermin proof well cap or well seal. The cap or seal is required to be replaced with an approved vermin-proof cap or seal whenever any well drilling or pump installing work is done on the well and pressure system which involves removal of the well cap or well seal.

9. The inspector may note any concerns regarding the condition, capacity or performance of the well and pressure system in the inspection, including well or pump yield, though it is not required for a property transfer well inspection.

(d) The inspector shall indicate whether the well and pressure system comply with this chapter; comply with this chapter with the exception of needing a more comprehensive search or additional research; or does not comply with this chapter.

SECTION 194. Subchapter VII is created to read:

NR 812.44. **Citations.**

(intro.) The department may take enforcement action against any person who violates any of the provisions listed in sub. (1). The department shall consider the severity, duration, frequency, and environmental or health risks of the violation. The department will evaluate and address violations in accordance with the Department stepped enforcement process. The department shall provide written notice of a violation and provide an opportunity to meet pursuant to s. 290.98(4), Stats., before issuance of a citation.

(1) Citations may be issued for violations relating to any of the following:
(a) Licensing and registration as provided in this chapter, ch. 280, Stats. or s. NR 812.26(9).
(b) Disinfection requirements, as provided under ss. NR 812.22(4), 812.27(5), 812.41(1) or 812.42(13).
(c) Sampling and reporting requirements, as provided under ss. NR 812.04(2), 812.09(4)(a)3., 812.10 (11) or (12), 812.22(6), (7), (8), (9) or (10), 812.26 (3) or (8), 812.27(6), 812.41(3) or (4), 812.42(13), or 812.44(3) or (4).
(d) Water systems that were installed before February 1, 1991, as provided under s. NR 812.42.
(e) Well or drillhole filling and sealing, as provided under ss. NR 812.09(4)(a)5. or 812.26.
(2) Prior to issuing a citation under par. (b), the Department shall do all of the following:
(a) Issue a written warning outlining the violation.
(b) Schedule an enforcement conference with the alleged violator. The alleged violator is allowed to bring a representative to the enforcement conference.
(3) If the alleged violator does not attend the enforcement conference or make alternative arrangements to the department's satisfaction, the department shall consider the requirement of s. 280.98, Stats., to be met, and shall base its enforcement decision on all available information.

SECTION 195. EFFECTIVE DATE: This rule shall take effect on the first day of the month following publication in the Wisconsin Administrative Register as provided in s. 227.22 (2) (intro.) Stats.

SECTION 196. BOARD ADOPTION: This rule was approved and adopted by the State of Wisconsin Natural Resources Board on _____.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____

Cathy Stepp, Secretary

(SEAL)