

**ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD  
AMENDING AND CREATING RULES**

The Wisconsin Natural Resources Board proposes an order to amend NR 140.22(1)(intro.), (2)(a) and (b)(intro.), (3)(a) and Table 4 and NR 811.02(5); and to create NR 140.05(1u), (1w), (1y) and (20s), 140.22(1m) and (2)(d) and 811.87(5) relating to groundwater quality standards and the development of an aquifer storage recovery well or the operation of an ASR system by a municipal water utility.

DG-44-02

Analysis Prepared by the Department of Natural Resources

Statutory authority: ss. 160.21, 160.257, 280.11(1), 281.11, 281.12(1) and 281.17(8), Stats.  
Statutes interpreted: s. 160.257, Stats.

The Natural Resources Board recently adopted revisions to ch. NR 811 that establish design and management criteria for aquifer storage and recovery (ASR) systems. Chapter 160, Stats., has been revised to add s. 160.257, Stats., which establishes a point of standards application around ASR wells for chloroform, bromodichloromethane, dibromochloromethane and bromoform groundwater quality standards. This point of standards application is 1,200 feet from an ASR well and at any other well located within 1,200 feet of an ASR well.

Amendments are proposed to ch. NR 140 to incorporate the chloroform, bromodichloromethane, dibromochloromethane and bromoform points of standards application for ASR wells established under s. 160.257, Stats., and to establish an ASR system design management zone at the same distance from an ASR well as the system displacement zone (aquifer storage zone) allowed under ch. NR 811. Amendments are proposed to ch. NR 811 to allow an ASR system displacement zone to extend to a maximum distance of 1,200 feet from an ASR well.

---

SECTION 1. NR 140.05(1u) is created to read:

NR 140.05(1u) "Aquifer storage recovery" or "ASR" means placement of treated drinking water underground through a well for the purpose of storing and later recovering the water through the same well for potable use.

Note: Underground placement of water for the purpose of restoring an aquifer is not included in the definition of "aquifer storage recovery" or "ASR".

SECTION 2. NR 140.05(1w) is created to read:

NR 140.05(1w) "ASR displacement zone" means the 3-dimensional subsurface region surrounding an aquifer storage recovery well into which treated drinking water is placed for storage and later recovery.

SECTION 3. NR 140.05(1y) is created to read:

NR 140.05(1y) "ASR system" means all of the ASR wells, ASR monitoring wells and related appurtenances within a municipal well system and any interconnected public water system served by the municipal water system.

SECTION 4. NR 140.05(20s) is created to read:

NR 140.05(20s) "Specified substance" means one of the following: chloroform, bromodichloromethane, dibromochloromethane or bromoform.

SECTION 5. NR 140.22(1)(intro.) is amended to read:

NR 140.22(1) DESIGN. (intro.) ~~Facilities~~ Except as specified in sub. (1m), facilities, practices or activities regulated by the department, including remedial actions, shall be designed to minimize the level of substances in groundwater and to comply with the preventive action limits to the extent technically and economically feasible at all the following locations:

SECTION 6. NR 140.22(1m) is created to read:

NR 140.22(1m) DESIGN OF ASR SYSTEMS; SPECIFIED SUBSTANCES. The point of standards application to determine if the design of an aquifer storage recovery system, regulated under ch. 280 or 281, Stats., complies with the preventive action limits for a specified substance is 1,200 feet from an aquifer storage and recovery well and at any other well that is not part of the ASR system and that is within 1,200 feet of an aquifer storage recovery well.

SECTION 7. NR 140.22(2)(a) and (b)(intro.) are amended to read:

NR 140.22(2)(a) ~~The~~ Except as specified in par. (d), the point of standards application to determine if a preventive action limit has been attained or exceeded is any point at which groundwater is monitored.

(b)(intro.) ~~The~~ Except as specified in par. (d), the point of standards application to determine whether an enforcement standard has been attained or exceeded shall be the following locations:

SECTION 8. NR 140.22(2)(d) is created to read:

NR 140.22(2)(d) The point of standards application to determine if a preventive action limit or enforcement standard for a specified substance has been attained or exceeded at an aquifer storage recovery well, regulated under ch. 280 or 281, Stats., is 1,200 feet from the aquifer storage and recovery well and at any other well that is not part of the ASR system and that is within 1,200 feet of the aquifer storage recovery well.

SECTION 9. NR 140.22(3)(a) is amended to read:

NR 140.22(3)(a) The design management zone for facilities, practices or activities subject to regulation by the department shall be an area enclosed by vertical boundaries which extend from the land surface downward through all saturated geological formations. The design management zone shall extend horizontally beyond the waste boundary or ASR displacement zone to the distance indicated in Table 4 for the specified type of facility, practice or activity. The waste boundary shall be the outermost limit at which waste from a facility, practice or activity has been stored, applied or disposed of, or permitted or approved for storage, application or disposal. For hazardous waste facilities regulated under ch. 291, Stats., the waste boundary shall include the horizontal space taken up by any liner, dike or other barrier to contain waste.

SECTION 10. NR 140.22(3) Table 4 is amended to read:

Table 4

<i>Type of Facility Practice or Activity</i>	<i>Horizontal Distances for the Design Management Zone</i>
Land disposal systems regulated under ch. 283, Stats.	250 feet
Wastewater and sludge storage or treatment lagoons regulated under ch. 281 or 283, Stats.	100 feet
Solid waste disposal facilities regulated under ch. 289, Stats., which have feasibility reports approved after October 1, 1985.	150 feet
All other solid waste disposal facilities regulated under ch. 289, Stats.	300 feet
Hazardous waste disposal facilities, waste piles, landfills and surface impoundments subject to regulation under s. NR 635.16	300 feet
Hazardous waste disposal facilities, waste piles, landfills and surface impoundments subject to regulation under ss. NR 635.05 to 635.15.	0 feet
<u>Aquifer storage recovery systems regulated under ch. 280 or 281, Stats.</u>	<u>0 feet</u>

SECTION 11. NR 811.02(5) is amended to read:

NR 811.02(5) "ASR system" means all of the ASR wells, ASR monitoring wells and related appurtenances within a municipal well system and any interconnected public water system served by the municipal water system.

SECTION 12. NR 811.87(5) is created to read:

NR 811.87(5) The displacement zone around an ASR well may extend no further than 1,200 feet from that ASR well.

SECTION 13. EFFECTIVE DATE. This rule shall take effect the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

SECTION 14. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on January 22, 2003.

Dated at Madison, Wisconsin \_\_\_\_\_.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

By \_\_\_\_\_  
Scott Hassett, Secretary

(SEAL)