

# HOUSE BILL No. 4295

February 27, 2003, Introduced by Reps. Hopgood, Murphy, Gielegem, O'Neil, Law, Cheeks and Condino and referred to the Committee on Land Use and Environment.

A bill to amend 1994 PA 451, entitled "Natural resources and environmental protection act," (MCL 324.101 to 324.90106) by amending the part heading of part 141 and by adding sections 14101, 14102, 14103, 14104, 14105, 14106, 14107, and 14108.

**THE PEOPLE OF THE STATE OF MICHIGAN ENACT:**

1       PART 141 ~~POLLUTION PREVENTION POLICY~~ **GEOTECHNICAL WELLS**

2       **Sec. 14101. As used in this part:**

3       (a) "Contaminant" means any chemical, radionuclide, ion,  
4 element, compound, mixture, or microorganism that does not occur  
5 naturally in groundwater or soil or that is present in a  
6 concentration that is higher than the natural or background  
7 concentration.

8       (b) "Contamination" means the direct or indirect introduction  
9 into groundwater or soil of any contaminant in quantities that

1 are or can become injurious to human health or welfare, to animal  
2 life, to plant life, or to property, or that interfere with the  
3 beneficial uses of the groundwater or soil.

4 (c) "Department" means the department of environmental  
5 quality.

6 (d) "Fresh groundwater" means groundwater that has less than  
7 10,000 mg/l total dissolved solids.

8 (e) Subject to subdivision (f), "geotechnical well" or "well"  
9 means any of the following:

10 (i) A well or boring used to determine soil or rock  
11 characteristics for purposes of evaluating a site for  
12 construction or for investigation of soil or groundwater  
13 contamination, otherwise referred to as a soil boring.

14 (ii) A well or boring used to determine physical or chemical  
15 characteristics of fresh groundwater or potential contamination  
16 or other impacts to fresh groundwater, otherwise referred to as a  
17 groundwater monitoring well.

18 (iii) A well that is used to exchange heat with the soils or  
19 fresh groundwater for heating or air conditioning, otherwise  
20 referred to as a closed-loop heat exchange well.

21 (iv) A well or boring used for the placement of an elevator  
22 cylinder below ground level, otherwise referred to as an elevator  
23 cylinder well.

24 (v) A well or boring used to protect subsurface structures  
25 such as pipelines against corrosion, otherwise referred to as a  
26 cathodic protection well.

27 (vi) A well or boring used to remediate contaminated soil or

1 groundwater.

2 (f) "Geotechnical well" does not include any of the  
3 following:

4 (i) A water well regulated under part 127 of the public  
5 health code, 1978 PA 368, MCL 333.12701 to 333.12771.

6 (ii) A well regulated under the safe drinking water act, 1976  
7 PA 399, MCL 325.1001 to 325.1023.

8 (iii) A well regulated under part 625.

9 (g) "Owner" means the person who has the right to drill or  
10 operate a geotechnical well.

11 (h) "Saturated zone" means the subsurface zone in which all  
12 rock or soil pore space is filled with water.

13 Sec. 14102. (1) A geotechnical well shall meet all of the  
14 following requirements:

15 (a) A geotechnical well shall be drilled, cased, and sealed  
16 in a manner that prevents the movement of contaminants from the  
17 surface to a subsurface stratum or from 1 subsurface stratum to  
18 another, and prevents the flow of groundwater from 1 stratum into  
19 another or to the surface of the ground.

20 (b) Equipment and materials used in the drilling,  
21 construction, and operation of geotechnical wells shall be free  
22 of materials that may cause contamination of the soils or  
23 groundwater.

24 (c) Water used in the drilling and construction of a  
25 geotechnical well shall be potable water. Surface water shall  
26 not be used unless it is obtained from a municipal water supply  
27 system.

1 (d) Drill cuttings generated during the drilling of a  
2 geotechnical well shall be handled and disposed of in a manner  
3 that does not cause contamination of the soil, surface water, or  
4 groundwater.

5 (e) A geotechnical well that is not plugged immediately after  
6 completion of drilling shall be properly cased and sealed as  
7 follows:

8 (i) A geotechnical well that does not penetrate bedrock shall  
9 be cased throughout the entire depth of the well.

10 (ii) The section of a geotechnical well that penetrates  
11 bedrock may be left uncased from a depth of 20 feet below the top  
12 of the bedrock to the bottom of the well if the bedrock is  
13 competent and capable of maintaining an open hole throughout the  
14 life of the well and if the requirements of subdivision (a) are  
15 met.

16 (iii) Casing and joints shall be watertight and shall be  
17 designed to withstand the internal and external pressures and the  
18 tension and compression forces anticipated during the drilling,  
19 construction, and operation of the well.

20 (iv) Materials used for casing, joints, screens, and other  
21 permanent well equipment shall be chemically compatible with  
22 soils and groundwater anticipated during the drilling,  
23 construction, and operation of the well.

24 (v) A geotechnical well in which the borehole diameter  
25 exceeds the outside casing diameter shall be grouted by filling  
26 the annular space between the casing and the borehole wall from  
27 the bottom of the annular space to the surface as follows:

1 (A) Any section of a geotechnical well that penetrates  
2 bedrock shall be grouted with cement grout.

3 (B) Any section of a geotechnical well that penetrates  
4 glacial drift or other unconsolidated materials shall be grouted  
5 with cement grout or bentonite grout.

6 (C) Grout shall be placed by circulating through the casing  
7 or by placement through a tremie pipe.

8 (vi) A geotechnical well in which the casing is driven or is  
9 oversize with respect to the borehole diameter shall be grouted  
10 by introducing bentonite granules continually along the outside  
11 of the casing as the casing is advanced.

12 (f) The top of the casing in a geotechnical well shall be  
13 sealed in such manner that it excludes precipitation, surface  
14 water, dirt, or other foreign materials from entering the well.

15 (g) The top of the casing in a geotechnical well shall be  
16 protected from damage by appropriate measures.

17 (h) The casing in a geotechnical well shall be secured in a  
18 manner that prevents unauthorized entry into the well.

19 (2) The department may grant an exception to a provision of  
20 subsection (1) if the owner of the geotechnical well demonstrates  
21 to the satisfaction of the department that an alternative method  
22 or material satisfies the intent of subsection (1). If the  
23 department does not respond to a request for an exception within  
24 10 business days of receipt of the request, the request shall be  
25 considered granted.

26 Sec. 14103. (1) The owner of a geotechnical well shall plug  
27 the well within 1 year after the well ceases to be used for its

1 intended purpose. A geotechnical well shall be plugged in  
2 compliance with all of the following:

3 (a) A geotechnical well shall be plugged in a manner that  
4 prevents the movement of contaminants from the surface to a  
5 subsurface stratum or from 1 subsurface stratum to another, and  
6 prevents the flow of groundwater from 1 stratum into another or  
7 to the surface of the ground.

8 (b) Any section of a geotechnical well from the surface to a  
9 depth of 10 feet may be plugged by filling with native materials,  
10 provided that section of the well does not penetrate bedrock or  
11 does not penetrate the water table.

12 (c) The section of a geotechnical well below a depth of 10  
13 feet that does not penetrate bedrock shall be plugged by filling  
14 the well with cement grout, concrete grout, bentonite grout, or  
15 bentonite pellets or chips. However, if the well does not reach  
16 the water table and does not encounter silt or clay, or any  
17 combination of silt or clay with other materials, the section of  
18 the well below a depth of 10 feet may be plugged by filling with  
19 native materials mixed with 50% bentonite granules, pellets, or  
20 chips.

21 (d) The section of a geotechnical well that penetrates  
22 bedrock shall be plugged by filling with cement grout or concrete  
23 grout from the bottom of the well to not less than 20 feet above  
24 the top of the bedrock or to the ground surface. The section of  
25 the well from 20 feet above the bedrock to the ground surface  
26 shall be plugged pursuant to subdivisions (b) and (c).

27 (e) Notwithstanding any provision of this subsection, gravel,

1 sand, stone aggregate, or fluid loss agents may be used for  
2 plugging that section of a geotechnical well that penetrates lost  
3 circulation zones.

4 (f) Only cement or concrete grout shall be used to plug  
5 geotechnical wells that discharge gases from the subsurface or  
6 that encounter groundwater under artesian pressure. Precautions  
7 shall be taken to prevent gas or groundwater under artesian  
8 pressure from cutting the cement and reaching another stratum or  
9 the surface.

10 (g) Plugging materials for geotechnical wells shall be placed  
11 as follows:

12 (i) Cement, concrete, or bentonite grout shall be placed by  
13 circulating through a tremie pipe from the bottom of the well to  
14 the depth prescribed in this section.

15 (ii) Bentonite granules, pellets, or chips shall be poured  
16 slowly into the top of the well to prevent bridging in the casing  
17 or borehole, until the well is filled to the depth prescribed in  
18 this section. Potable water shall then be placed into the well  
19 to promote expansion of the bentonite.

20 (iii) Gravel, sand, stone aggregate, or native materials  
21 shall be placed slowly into the top of the well to prevent  
22 bridging in the casing or borehole, until the well is filled to  
23 the depth prescribed in this section.

24 (h) Upon completion of plugging, there shall be no open,  
25 unplugged annular space between casings or between a casing and  
26 the borehole, and there shall be no open, unplugged space inside  
27 a casing or in the borehole.

1 (i) Casing may be removed from a geotechnical well provided  
2 all requirements of this section are met.

3 (2) The department may grant an exception to a provision of  
4 subsection (1) if the owner of a geotechnical well demonstrates  
5 to the satisfaction of the department that an alternative method  
6 or material satisfies the intent of subsection (1). If the  
7 department does not respond to a request for an exception within  
8 10 business days of receipt of the request, the request shall be  
9 considered granted.

10 Sec. 14104. If the department determines that an owner of a  
11 geotechnical well has failed or neglected to case, seal, operate,  
12 repair, or plug the geotechnical well pursuant to this part or  
13 the rules promulgated under this part, the department shall give  
14 notice of the determination to the owner. If the owner fails to  
15 correct the specified conditions within 60 days after service of  
16 notice, the department may enter into or upon any private or  
17 public property on which the well is located, and across any  
18 private or public property to reach the well, and repair or  
19 correct the specified condition, and the owner is liable for all  
20 expenses incurred. The department shall certify to the owner the  
21 claim of the state, listing in the claim the items of expense in  
22 making the repair or correction. The claims shall be paid by the  
23 owner, within 30 days, and if not paid within that time, the  
24 department may bring suit in the circuit court of Ingham county  
25 against the owner for the collection.

26 Sec. 14105. (1) The geotechnical well oversight fund is  
27 created within the state treasury.



1           (2) The state treasurer may receive money or other assets  
2 from any source for deposit into the fund. The state treasurer  
3 shall direct the investment of the fund. The state treasurer  
4 shall credit to the fund interest and earnings from fund  
5 investments.

6           (3) Money in the fund at the close of the fiscal year shall  
7 remain in the fund and shall not lapse to the general fund.

8           (4) The department shall expend money from the fund, upon  
9 appropriation, only to implement this part.

10          Sec. 14106. The department may promulgate rules to  
11 implement this part.

12          Sec. 14107. (1) A person who violates this part is  
13 responsible for a civil fine of not more than \$1,000.00 for each  
14 well at which a violation occurs.

15          (2) A default in the payment of a civil fine or costs ordered  
16 under this section or an installment of the fine or costs may be  
17 remedied by any means authorized under the revised judicature act  
18 of 1961, 1961 PA 236, MCL 600.101 to 600.9948.

19          (3) Civil fines collected under this section shall be  
20 forwarded to the state treasurer for deposit into the  
21 geotechnical well oversight fund created in section 14105.

22          Sec. 14108. A person who violates this part is guilty of a  
23 misdemeanor punishable by imprisonment for not more than 90 days  
24 or a fine of not more than \$2,500.00, or both.