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(FORM UPDATED: 08/11/2010)

## WISCONSIN STATE LEGISLATURE ... PUBLIC HEARING - COMMITTEE RECORDS

### 2011-12

(session year)

### Assembly

(Assembly, Senate or Joint)

### Committee on Natural Resources...

#### COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**

#### INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt** (w/Record of Comm. Proceedings)
- Clearinghouse Rules ... **CRule** (w/Record of Comm. Proceedings)
- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)  
(**ab** = Assembly Bill)                      (**ar** = Assembly Resolution)                      (**ajr** = Assembly Joint Resolution)  
(**sb** = Senate Bill)                              (**sr** = Senate Resolution)                              (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

\* Contents organized for archiving by: Stefanie Rose (LRB) (August 2013)

## Assembly

### Record of Committee Proceedings

#### **Committee on Natural Resources**

##### **Assembly Bill 201**

Relating to: regulation of geothermal well drillers and granting rule-making authority.

By Representatives A. Ott, Brooks, Clark, Petryk and Spanbauer; cosponsored by Senators Kedzie, Olsen and Taylor.

July 19, 2011            Referred to Committee on Natural Resources.

January 4, 2012        **PUBLIC HEARING HELD**

Present:    (11)    Representatives Mursau, Rivard, Nerison,  
Steineke, Tiffany, Stroebel, Litjens, Molepske  
Jr, Mason, Danou and Hulsey.  
Absent:     (5)     Representatives Williams, Kleefisch, Severson,  
Clark and Milroy.  
Excused:   (0)     None.

##### Appearances For

- Al Ott, Madison — Representative, 3rd Assembly District
- Keith Meyers — Wisconsin Water Well Association
- Dick Spanbauer, Madison — Representative, 53rd Assembly District
- Bruce Walker, Grand Marsh — Wisconsin Geothermal Association
- Terry Marshall, Wisconsin Dells — Wisconsin Water Well Association
- Jeff Beiriger, East Troy — Wisconsin Water Well Association

##### Appearances Against

- Gordy Oosterhouse, Randolph — G.O. Loop
- M. Archibald, Milwaukee — Earthlinked Tech
- Tom Niesen, Kenosha — Gateway Technical College

##### Appearances for Information Only

- None.

##### Registrations For

- Jeff Beiriger, East Troy — Plumbing-Heating-Cooling Contractors Association
- Robb Kahl, Madison — Construction Business Group

- Terry McGowan, Pewaukee — Operating Engineers Local 139
- Neal Kedzie, Madison — Senator, 11th Senate District

Registrations Against

- Paul Gabriel, Madison — Wisconsin Technical College District Boards Association, Inc

Registrations for Information Only

- Steve Ales, Madison — Wisconsin Department of Natural Resources

March 7, 2012

**EXECUTIVE SESSION HELD**

Present: (16) Representatives Mursau, Rivard, Williams, Kleefisch, Nerison, Severson, Steineke, Tiffany, Stroebel, Litjens, Molepske Jr, Mason, Danou, Clark, Milroy and Hulsey.

Absent: (0) None.

Excused: (0) None.

Moved by Representative Rivard, seconded by Representative Kleefisch that **Assembly Substitute Amendment 2** be recommended for adoption.

Ayes: (16) Representatives Mursau, Rivard, Williams, Kleefisch, Nerison, Severson, Steineke, Tiffany, Stroebel, Litjens, Molepske Jr, Mason, Danou, Clark, Milroy and Hulsey.

Noes: (0) None.

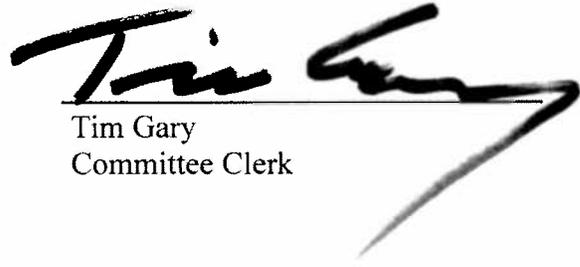
ASSEMBLY SUBSTITUTE AMENDMENT 2 ADOPTION RECOMMENDED, Ayes 16, Noes 0

Moved by Representative Kleefisch, seconded by Representative Rivard that **Assembly Bill 201** be recommended for passage.

Ayes: (16) Representatives Mursau, Rivard, Williams, Kleefisch, Nerison, Severson, Steineke, Tiffany, Stroebel, Litjens, Molepske Jr, Mason, Danou, Clark, Milroy and Hulsey.

Noes: (0) None.

PASSAGE RECOMMENDED, Ayes 16, Noes 0

A handwritten signature in black ink, appearing to read "Tim Gary", with a long, sweeping underline that extends to the right.

Tim Gary  
Committee Clerk

## Vote Record Committee on Natural Resources

Date: March 7, 2012

Moved by: Rivard                      Seconded by: Kleefisch

AB 201                      SB \_\_\_\_\_                      Clearinghouse Rule \_\_\_\_\_  
 AJR \_\_\_\_\_                      SJR \_\_\_\_\_                      Appointment \_\_\_\_\_  
 AR \_\_\_\_\_                      SR \_\_\_\_\_                      Other \_\_\_\_\_

A/S Amdt \_\_\_\_\_  
 A/S Amdt \_\_\_\_\_ to A/S Amdt \_\_\_\_\_  
 A/S Sub Amdt 1 \_\_\_\_\_  
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Be recommended for:  
 Passage                       Adoption                       Confirmation                       Concurrence                       Indefinite Postponement  
 Introduction                       Rejection                       Tabling                       Nonconcurrence

Committee Member	Aye	No	Absent	Not Voting
<b>Representative Jeffrey Mursau, Chair</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Roger Rivard</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Mary Williams</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Joel Kleefisch</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Lee Nerison</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Erik Severson</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Jim Steineke</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Thomas Tiffany</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Duey Stroebel</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Michelle Litjens</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Louis Molepske Jr</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Cory Mason</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Chris Danou</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Fred Clark</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Nick Milroy</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Brett Hulsey</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Totals:    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_

Motion Carried                       Motion Failed

# Vote Record Committee on Natural Resources

Date: March 7, 2012

Moved by: Kleefisch      Seconded by: \_\_\_\_\_

AB 201      SB \_\_\_\_\_      Clearinghouse Rule \_\_\_\_\_  
 AJR \_\_\_\_\_      SJR \_\_\_\_\_      Appointment \_\_\_\_\_  
 AR \_\_\_\_\_      SR \_\_\_\_\_      Other \_\_\_\_\_

A/S Amdt \_\_\_\_\_  
 A/S Amdt \_\_\_\_\_ to A/S Amdt \_\_\_\_\_  
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- Be recommended for:
- Passage       Adoption       Confirmation       Concurrence       Indefinite Postponement
  - Introduction       Rejection       Tabling       Nonconcurrence

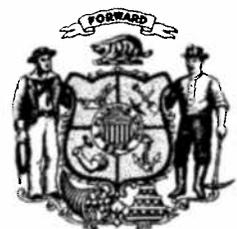
Committee Member	Aye	No	Absent	Not Voting
<b>Representative Jeffrey Mursau, Chair</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Roger Rivard</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Mary Williams</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Joel Kleefisch</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Lee Nerison</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Erik Severson</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Jim Steineke</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Thomas Tiffany</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Duey Stroebel</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Michelle Litjens</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Louis Molepske Jr</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Cory Mason</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Chris Danou</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Fred Clark</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Nick Milroy</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Representative Brett Hulse</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Totals:      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

Motion Carried       Motion Failed



# WISCONSIN STATE LEGISLATURE





2791B Edwards Street  
East Troy, WI 53120  
(414) 331-2059  
jeff@assocmgmtservices.com

**Assembly Committee on Natural Resources**  
**Assembly Bill 201**  
**January 4, 2012**

My name is Jeff Beiriger and I am testifying today on behalf of the Wisconsin Water Well Association.

Two sessions ago, I worked on a piece of legislation dealing with the plumbing industry. In that instance, we were talking about "gray water" systems - a system where water is treated on-site and reused before it is sent to a sewage system for treatment.

In that instance, we had to change the plumbing licensing law because it defined plumbing as "potable" water - or water that is used for human consumption. Clearly, the original licensing legislation did not anticipate a day when we would reuse water.

Absent the change in the definition of plumbing, this emerging technology would have created a potential breach in safety standards that had existed in our state for many years. Without the change, the potential was there for an agency to be regulating an industry with questionable authority. And so the industry approached the legislature to seek a change in the law - not, as some might have argued, to "fence" anyone out, but to make certain that existing safety standards were extended to cover the new realities of a changing industry.

These emerging technologies are causing us to revisit licensing legislation, not to decide whether there should be a license, but to determine whether these new technologies are being accommodated by the existing law.

And so it is with AB 201.

When water well licensing was passed seventy-five years ago, it was passed with the purpose of protecting citizens from unsafe drinking water and poor quality installations and to protect the groundwater. Geothermal heat exchange wasn't on the radar back then, and so we are left to reexamine the existing law.

Because AB 201 is meant to address a groundwater protection gap in our law, it doesn't over-reach. It doesn't address all drill holes, only those used for vertical heat exchange systems. And it doesn't affect any other part of the geothermal system, only the drill hole itself.

AB 201 takes advantage of existing regulatory structures. The DNR tells us that the vast majority - over 95 percent - of the companies constructing geothermal drill holes are companies who are already licensed as water well contractors. That's the case because water well contractors have the equipment and the knowledge necessary to perform this work.

Of those who are not licensed as water well contractors, several are non-resident companies that are licensed to drill water wells or geothermal drill holes in other states. There exists, through reciprocity and through licensure, a way to become qualified to drill water wells and geothermal drill holes in this state.

In this instance, we believe that the future is in our past. Legislation to regulate the water well industry and to protect the consumer and the groundwater has been on the books for 75 years. AB 201 honors that history and is responsive to an industry and to the environment. More than that, it does it in a way that is cost-effective for the state.

Consider again that there may be three or four drill holes for a residential geothermal system, all adjacent to another property in a residential area. What happens on one property affects the adjacent wells, for they almost certainly share a common aquifer. That's part of the reason why AB 201 is necessary. There needs to be a higher standard of qualifications if not for the property owner who selects the contractor they will work with, but for the adjacent property owners who don't get to decide whether their neighbor will hire a qualified contractor or not.

AB 201 makes sense - for the existing water well industry and for the emerging geothermal industry, most of which partners with the water well industry for their drilling needs. 40 percent of the energy used in buildings is for heat load and that there are significant cost savings to be had through geothermal systems. These systems are taking hold and will take off when the construction market rebounds. When it does, AB 201 allows one industry to be able to continue to provide clean water and it protects the other from a set-back resulting from substandard construction and a resulting groundwater contamination.

Much like the plumbing legislation I discussed earlier - which passed by voice votes in both chambers - this change is prompted by a world that is changing around us. We need to thoughtfully consider the effects of these new technologies and adapt our laws to allow their use while continuing to serve the larger purpose. AB 201 is supportive of the existing industry, the emerging industry, and the policy of groundwater protection.

We ask you to support Assembly Bill 201.



# WISCONSIN STATE LEGISLATURE



January 4, 2012

To: Members of the Assembly Natural Resources Committee

Re: Assembly Bill 201 (Substitute Amendment)

Good morning. My name is Keith Meyers and I have been drilling wells in Wisconsin and around the country for most of my life. I currently work for Layne Northwest, a national drilling company, and prior to that, I was an owner of a drilling business in the northeast part of the state.

Geothermal heating-cooling is a rapidly growing renewable energy technology. It uses the ground and groundwater to provide heat exchange and it generally comes in one of two varieties - horizontal and vertical. AB 201 addresses only vertical systems.

In a vertical geothermal heat exchange system, a drill hole is made into the ground, often extending 300 or more feet below the surface. In residential systems, three or more drill holes may be necessary, while in commercial systems, there could be several hundred drill holes necessary to create enough heat exchange to heat or cool a building.

From the surface, a drill hole may look the same in Madison as it does in Eau Claire or Green Bay. They are not. The ground below us dictates how we can drill and how we will seal these drill holes once they are complete. It takes skill and experience to know which technique will work best in which situation and, if the circumstances change in the field, what to do next.

As Representative Ott noted, the goal of a properly constructed drill hole is not just to extract something from the ground - whether water or heating/cooling - but also to protect the groundwater. An improperly constructed well is a direct conduit for contamination to enter the groundwater. To minimize the risk of groundwater contamination, both water wells and geothermal wells should be built in accordance with codes and standards and by individuals skilled to perform this work.

Imagine a residential property. Now imagine sticking a 300 foot straw in the ground. That, basically, is a drill hole. If that drill hole is used to extract water from below and the water is used for people to drink, our straw would be labeled a water well. Unless the property owner performed the work themselves (and even then they must comply with the relevant codes), the water well would have been constructed by someone licensed in this state to do that work. Both initial training and continuing education are required of those who are licensed.

Now imagine that our residential property owner decides to invest in a geothermal heating-cooling system. Depending upon the size of the property, an additional three, four, or five "straws" or drill holes are placed in the ground, often times within a few feet of the "straw" that is our water well. Under current law, the person making the three, four, or five drill holes need not have any type of education or training with regard to geology, drilling of wells, or the sealing of wells.

Representative Ott is correct to say that the groundwater doesn't distinguish between one drill hole or "straw" and the next. It's a conduit to the groundwater. It's intended use doesn't matter.

What matters is the construction of the drill hole. Contamination - everything from road salt to animal waste to lawn fertilizer - is usually filtered through hundreds of feet of dirt, sand, and rock before returning to the groundwater below. The ground serves as a highly-effective filter for the water.

A drill hole, by comparison, allows any contamination a means to drop the 300 or 400 feet into the groundwater, unfiltered, in a matter of seconds rather than years. If the drill hole is not properly constructed and properly sealed, water will carry the contaminate through the path of least resistance - any breach in the drill hole - and deliver the contaminate to the water below.

Around the Institute for Discovery here in Madison, there are dozens and dozens of geothermal drill holes. At Epic Systems in Verona, there are hundreds. To see these locations now, you'd never know it. Geothermal heating-cooling systems are, for the most part, buried below the ground or located inside of the building. Out-of-sight should not mean out-of-mind. We need to have greater confidence in the construction of these drill holes before and during construction and that comes not just with a plan approval, but with the knowledge that the work is being done by qualified individuals.

I am currently the president of the Wisconsin Water Well Association and I have been actively involved in groundwater discussions in the state for many years, most recently as part of a committee charged by the legislature to look at the issue of high capacity wells and other groundwater protection measures. During those discussion and now, the Wisconsin Water Well Association has pointed out that it has two parts to its mission. We *provide* the state's groundwater, but we also *protect* it.

If the groundwater isn't protected, we have no industry. We protect it by performing our work properly and we have been supporters of licensing and continuing education for the 75 years that the industry has been regulated in the state. AB 201 helps us protect the groundwater and our industry.

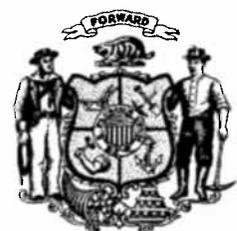
Licensure is not a perfect solution. It is no more a guarantee that the groundwater will not be contaminated as a drivers license guarantees that there won't be an accident. This proposal ensures that well-qualified and skilled professionals are properly constructing the drill holes utilized in vertical geothermal heat exchange systems.

Drilling around the country, I can tell you that Wisconsin is not alone in addressing this issue. Although the processes may differ slightly, our neighbors in Iowa, Minnesota, and Illinois all regulate the construction of geothermal drill holes through a licensing or credentialing process of some kind. We think it's time that Wisconsin do the same....





# WISCONSIN STATE LEGISLATURE





# Al Ott

State Representative • 3rd Assembly District

**Assembly Bill 201**  
**Geothermal Well Drilling**  
**Assembly Committee on Natural Resources**  
**January 4, 2012**

Thank you for the opportunity to testify on Assembly Bill 201 (AB 201), relating to the construction of geothermal heat exchange drill holes.

Under current law (Chapter 280), the Department of Natural Resources (DNR) regulates the drilling of water wells for the purpose of obtaining ground water for human consumption. While the Department also has the authority to regulate the drilling of other types of holes in the ground, regardless of whether they are used as water wells, they do not have specific authority to regulate drill holes used for geothermal heat exchange.

As amended, AB 201 extends the Chapter 280 licensing and continuing education requirements to the construction of vertical drill holes used as part of a geothermal heat exchange system. AB 201 relates *only* to the drill hole construction component of these systems, not the systems in their entirety.

While I will leave it to others to describe how a geothermal heating-cooling system works and how these drill holes are constructed, the proper construction of *any* drill hole involves the protection of the groundwater. An improperly constructed well – of any type – is a direct conduit for contamination to enter the groundwater. To minimize the risk of groundwater contamination, both water wells and geothermal wells must be constructed in accordance to code and by individuals skilled to perform this work.

To protect our groundwater and the individuals who rely on it for their water supply, the licensure and continuing education requirements to construct water well drill holes should be extended to drill holes used for geothermal heat exchange.

AB 201 is a common-sense approach to minimize risk to our groundwater by ensuring that well-qualified and skilled professionals are properly constructing the drill holes utilized in vertical geothermal heat exchange systems.

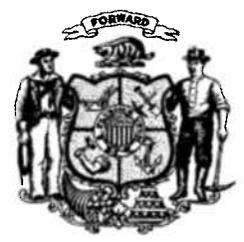
This bill has been crafted to provide the maximum amount of groundwater protection with a minimal impact on the industry and on the costs of setting up and administering the program. Interestingly, DNR data indicates that in nearly 96 percent of Wisconsin geothermal projects, licensed water well drillers were utilized to construct the necessary drill holes.

In the end, the groundwater doesn't care whether a drill hole is being used as a water well, as part of a geothermal heating-cooling system, or for any number of other uses. AB 201 speaks to the broader concern of groundwater protection by requiring a standard of knowledge and training among those seeking to construct drill holes as part of a vertical geothermal heating-cooling system.

Thank you for your time, and for your consideration of AB 201.



# WISCONSIN STATE LEGISLATURE





# RICHARD J. "DICK" SPANBAUER

STATE REPRESENTATIVE • 53<sup>rd</sup> ASSEMBLY DISTRICT

P.O. Box 8953  
Madison, WI 53708

(608) 267-7990  
Toll-Free: (888) 534-0053  
Fax: (608) 282-3653  
Rep.Spanbauer@legis.wi.gov

January 4, 2011

## Assembly Committee on Natural Resources

### Assembly Bill 201

Thank you, Chairman Mursau and members, for the opportunity to speak today in favor of Assembly Bill 201.

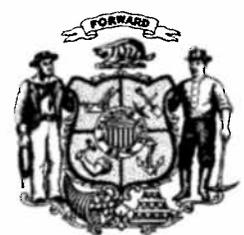
When I was chairman of the Town of Algoma, the town had to deal problems created by poorly excavated and installed geothermal heat exchange systems. Several town residents had had these systems installed at their homes, but the drillers apparently gave little thought to where the water would go once it had been used. Instead of being returned underground, the water was released on the surface, filling ditches and other low-lying areas. When angry residents complained to the town, we contacted the Department of Natural Resources and were told that the department does not have jurisdiction over geothermal thermal systems and that it was up to local governments to enact ordinances.

Geothermal energy can be an efficient way to heat homes and businesses, and development in this area should be encouraged. Faulty installations give this technology a black eye, and I think it is important that businesses that excavate and install geothermal systems be subject to the same standards as well drillers. Assembly Bill 201 is a commonsense approach to this issue, and that is why I signed on as a coauthor.

Thank you for the opportunity to share my comments about AB 201.



WISCONSIN STATE LEGISLATURE



January 4, 2012



To: Assembly Natural Resources Committee  
From: Bruce Walker, Wisconsin Geothermal Association  
Re: Assembly Bill 201

On behalf of the Wisconsin Geothermal Association, I am writing in support of Assembly Bill 201 (as amended) regarding geothermal drill holes.

The mission of the Wisconsin Geothermal Association is to responsibly advance the geothermal heating and cooling industry in Wisconsin. It is a professional consortium (non-profit) of contractors, manufacturers, design engineers, utilities, educators and others dedicated to the promotion and growth of Wisconsin's geothermal heating and cooling industry.

The use of geothermal systems in Wisconsin is on the rise. Geothermal systems take advantage of the earth's constant year-round ground temperature to provide heating, cooling and hot water in a variety of applications and have proven to deliver excellent occupant comfort in Wisconsin, while saving energy and reducing emissions.

Our support of AB 201 is driven by our mission to "responsibly" advance the geothermal heating and cooling industry in Wisconsin. Any time you drill a hole in the ground - whether for a geothermal system or for any other reason - there is a risk to the groundwater below. When constructing a vertical geothermal heat exchange system, we might drill to a depth of 300 feet or more and we will almost certainly come in contact with groundwater.

A drill hole is nothing more than a direct link between the ground above and the groundwater below. Anything that enters the drill hole is transferred to the groundwater without having been filtered by the soil above.

My company drills both water wells and drill holes used in geothermal systems and we have experience with properly drilled geothermal systems affecting adjacent groundwater supplies and wells. These are temporary effects, but ones that require the experience of a water well driller to remediate. We have experience with the unique geology of Wisconsin that affects drilling techniques and with the techniques necessary to seal both water wells and geothermal drill holes so that they do not become open conduits for contamination.

Improperly drilled, the effect on the groundwater could be significant and could be permanent. A single groundwater contamination from an improperly constructed system would be a set-back to this emerging technology and one of the few bright spots in the construction industry.

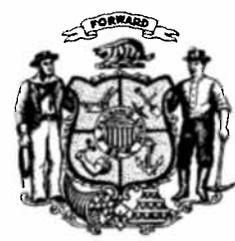
We appreciate that our organization has been part of the process in developing this legislation and that the Substitute Amendment contains several recommended changes. AB 201 is an important step in the right direction. It protects the groundwater and, most importantly, it does it in a way that will not restrain the growth of the geothermal industry. It is measured and reasonable, dealing not with the systems as a whole, but only that portion where the state's groundwater resources could be harmed by improper installation.

We appreciate your consideration and support of AB 201.

Wisconsin Geothermal Association  
W175 N11117 Stonewood Drive, Suite 201  
Germantown, WI 53022  
(262) 532-2440  
[www.wisgeo.org](http://www.wisgeo.org)



WISCONSIN STATE LEGISLATURE



Hello. My name is Gordy Oosterhouse. I own a small Wisconsin business that contracts for and installs ground source heat exchange systems. My company provides contracting and construction services to private homeowners, small and large businesses and to government entities. I am opposed to 2011 Assembly Bill 201 and to the Assembly Substitute Amendment 1, to 2011 Assembly Bill 201 as related to licensure requirements for persons engaged in the construction of heat exchange drill holes.

We subcontract drillers to construct the vertical heat exchange holes that we use on our geothermal systems. I have had difficulty finding Wisconsin licensed Water Well drillers who are willing and experienced enough to install heat exchange drill holes that meet my standards of (competence) excellence. I have worked with and employed vertical heat exchange drillers who are not licensed to construct water supply wells in Wisconsin. These unlicensed drillers are engaged almost exclusively in drilling and installing heat exchange drill holes around the country (USA) and the world, and, in my opinion they do the best job of installing and sealing the drill holes correctly to prevent potential groundwater contamination.

While some Wisconsin licensed Water Well drillers are capable and good at correctly installing heat exchange holes, many Wisconsin licensed Water Well drillers do not possess the appropriate grouting equipment nor the experience required to efficiently drill heat exchange holes and then grout them closed with State of Wisconsin approved drill hole sealing materials. The inclusion of vertical heat exchange drillers in the existing licensing regulations that apply to Wisconsin Water Well Drillers will not serve to

increase protection of Wisconsin's groundwater resources from potential contamination or overuse, and, the proposed statute would make it [much] more difficult for me to conduct business in my home state of Wisconsin.

It is important to understand that water supply well construction is different from heat exchange drill hole construction. It requires different knowledge, equipment and techniques. The proposed bill and the substitute amendment are nothing more than an attempt by the Water Well industry in Wisconsin to limit the availability of heat exchange drillers, and to prevent Wisconsin contractors/small businesses like myself from having access to highly qualified and trained heat exchange drillers from inside or outside the state of Wisconsin. There is nothing in the Wisconsin Water Well Drilling licensure regulations that ensures that any licensed driller is more than minimally competent to drill anything except water supply wells.

In the last few years, the State of Wisconsin has worked in partnership with Gateway Technical College in the Racine/Kenosha area to provide a program designed to offer a certification in heat exchange drill hole construction. The purpose of this program is to ensure that those individuals involved in heat exchange drill hole construction understand and can apply the many technical skills and knowledge required for the successful construction of heat exchange drill hole systems. There are national standards that apply to heat exchange drill hole system construction that were devised, researched and supported by the International Ground Source Heat Pump Association (IGSHPA) headquartered in Oklahoma. The State of Wisconsin currently requires that heat exchange

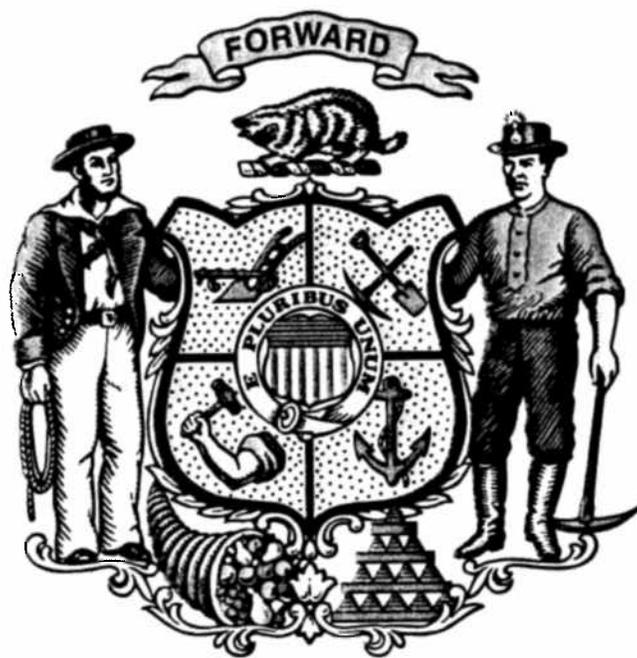
drill holes systems in Wisconsin be constructed to meet the IGSHPA standards. By incorporating the IGSHPA standards and/or the Gateway Technical College certification into Wisconsin's Administrative rules, I believe that Wisconsin's groundwater would be far better protected than it would be through the arbitrary licensure requirements of this proposed Assembly Bill and/or its proposed substitute amendment. In addition, I would note that IGSHPA requires continuing education in order to maintain current IGSHPA certification.

I have obtained information from State of Wisconsin regulators indicating that in the last 2 years, of about 49 different, active heat exchange drill hole contractors in Wisconsin, only 8 of those were not licensed by the state of Wisconsin for the construction of Water Wells in Wisconsin. Of those 8, 4 were Wisconsin based companies and 4 were from out of state. Of the 4 companies from out of state, 2 were licensed in their respective states to drill wells. 96% of the geothermal drill hole jobs were done by Wisconsin licensed well drillers.

None of the unlicensed "out of state" drill hole contractors have been referred to the Department of Justice for violations of Wisconsin regulations. Several of the Wisconsin Water Well licensed well drillers have been referred to the Wisconsin Department of Justice for violations of Wisconsin well drilling regulations. In my opinion, the proposed Assembly Bill and the Substitute Amendment are a solution looking for a problem that does not exist.

I would not oppose and in fact would encourage a separate heat exchange drill hole construction standard that would be incorporated into the current Wisconsin Administrative Codes. Such standards would require conformance with the technical specifications of IGSHPA and might require verification of heat exchange drill hole construction competence. Folks who hold a certification or degree from an accredited program like the program at Gateway Technical College would be deemed competent to drill/construct heat exchange drill holes. Any Wisconsin licensed Water Well driller or other person that wanted to drill heat exchange drill holes would be certified to do so by getting a certificate or degree from a program like the Gateway Technical College or by the International Ground Source Heat Pump Association or by demonstrating the appropriate experience, to be determined by Wisconsin Administrative Rule.

I would be happy to entertain questions regarding my testimony. Thank you.



If you had  
a guarantee that  
waterwell drillers won't be able  
to engage in geothermal  
work w/o proper  
training in advance,  
would you support  
this bill?