

# MICROFILM DIVIDER

OMB/RECORDS MANAGEMENT DIVISION

SFN 2053 (2/85) 5M



ROLL NUMBER

DESCRIPTION

1131

2007 HOUSE NATURAL RESOURCES

HB 1131

# 2007 HOUSE STANDING COMMITTEE MINUTES

Bill/Resolution No. HB 1131

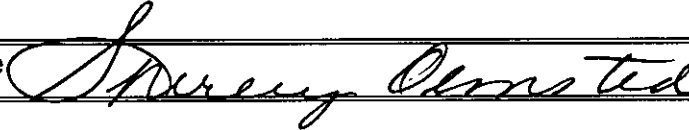
House Natural Resources Committee

Check here for Conference Committee

Hearing Date: January 11, 2007

Recorder Job Number: 932

Committee Clerk Signature



Minutes:

**Chairman Porter** called the House Natural Resources Committee to order. The Committee Clerk took roll call. All were present.

**Scott Radig**, director of the Division of Waste Management for the North Dakota Department of Health, gave testimony in favor of HB 1131. See attached testimony.

Chairman Porter asked if there were any questions of Mr. Radig. Seeing none, he asked for additional testimony in favor of HB 1131.

**Roger Schmid** presented testimony also in favor of HB 1131. See attached testimony.

**Chairman Porter** asked if there were any questions of Mr. Schmid. **Representative Meyer** asked if there were enough Dakota Certified Water Well Contractors in the state to do the required apprenticeships.

**Mr. Schmid** said he certainly would expect so. He thinks there are a number of people out there, including a number of people who have come in from out of state who have a number of years of experience.

**Representative Meyer** asked how this year of apprenticeship would work. Would they have to work for free?

**Mr. Schmidt** indicated it is the people working under the licensed contractors. He did not know how many people deal primarily in heat pumps in the state, but most of them have more than one piece of equipment, and one rig, so they have someone working for them doing that. It is the same thing in the water well business. Those that have the young people working for them it is necessary to get these young people licensed. This is important because if something happens to you and these young people are not licensed, your business is done. This is part of what happens on the heat pump now. If the fellow with the license retires, dies, or becomes incapacitated, that business stops. It is very difficult to restart on the heat pump side if that younger fellow has never drilled a water well and cannot pass the water well test. He has the experience. He has done the work. There are a number of them out there and I think it will work. It is a growing business and a lot of new homes, businesses, and schools will be drilling a lot of holes.

**Representative Hofstad** asked Mr. Schmid about the exemptions. He asked what type of supervision was taking place for the more remote areas when someone puts in these wells themselves. Is that a dangerous issue?

**Mr. Schmid** indicated that this was not a big problem.

**Representative Nottestad** asked Mr. Schmid if his interpretation of this one year internship, if that had to be a North Dakota certified installer, or in the case of the Eastern part of North Dakota, could that be under the internship of an out-of-state certified installer?

**Mr. Schmid** said he didn't know how it would work with Minnesota, but he knows that it would work with Montana. No, it doesn't necessarily mean a North Dakota certified installer.

**Representative Charging** asked if the contractors are coming into North Dakota, they have to have North Dakota certification? **Mr. Schmid** indicated yes. They have to take the test and pass the test and follow the rules set up for this state. **Representative Charging** asked if that

was geothermal, and Mr. Schmid indicated yes. What has happened is they have 15 or 20 years of experience and have not done any water wells. We are getting a problem because they cannot pass the water well testing.

**Chairman Porter** asked **Mr. Radig** to come back to the podium. He thought that several questions had been asked that he thought Mr. Radig's department should respond to. The first was in regards to reciprocity and how that would work if you had a geothermal license contractor from another state. How does the department view those?

**Mr. Radig** indicated that it was his understanding that an out of state contractor would have to become certified in North Dakota to do heat pump installation under this category.

**Chairman Porter** asked if they would have to take the test or would their license in a different state have reciprocity and they would have to just pay a fee to have the contractor's license.

**Mr. Radig** said that at this point he would believe that they would have to take the test because there is not a standardized testing method for geothermal contractors.

**Chairman Porter** asked if there was a nation wide test at this point.

**Mr. Radig** indicated that was correct.

**Chairman Porter** said the other question that Representative Hofstad had requires some explanation from the department also in regards to the exception of allowing individuals to do their own geothermal work on their own property.

**Mr. Radig** said to clarify that it would fall along the same lines as the person who is allowed to install their own water wells or their own monitoring well for their own use. As Mr. Schmid said the likelihood of that actually happening is probably very small. I doubt that there would be very many at all. However, it is our understanding that the permitting requirements that go through the Department of Mineral Resources would still have be in place. The permit would still have conditions such as what type of heating fluids would be in the system and so forth.

**Representative Nottestad** referred to section on page 4. He said it doesn't state anything about testing. It just speaks about the payment of the required fee and Section 43-35-14, after being furnished with proof that the qualifications of the applicant are equal to the qualifications of holders of such certificates in this state. There is nothing about a test in this.

**Chairman Porter** asked him to refer to page 3. He asked Mr. Radig to respond. Mr. Radig asked Mr. Schmidt, who is on the board, to answer that.

**Representative Keiser** said he had no idea how complicated these systems are to install. It seems to him that this is a little bit arbitrary. For example, a person can serve an apprenticeship under someone and do two systems in a year and they are certified or this person can do an apprenticeship with someone and do 40 systems a month and have to do that for 12 months to be certified. The other issue he had, and he doesn't know if this even exists, but frequently when these products are developed and are distributed, the manufacturers require their installers to come in and be trained for several weeks to become fully knowledgeable on the installation. Again, a year may be appropriate, but I am thinking that for example, a sprinkler system for a yard; we are going to put a year on that. For furnaces in a home, we are going to put a year on that. Now I am not sure if this is really the right approach on this. Do we have the right measure here? Maybe it should be an apprentice on so many installations rather than a year or something different. This doesn't seem very reasonable to me.

**Mr. Radig** indicated that a year may be somewhat arbitrated, but that is along the same lines as the requirements of water well contractors.

**Representative Keiser** said he recalled that this is very difficult and that we are trying to make this a different category of license certification and it should appropriate to what is being done and not to what others are doing.

**Mr. Radig** said that he didn't have any specific specifications other than what was recommended by the Board of Water Well Contractors.

**Representative Kelsh** said that he just wanted to find out what architects and engineers requirements are based on and the powers that they work on certain fields or certain areas of their field, and this might be another solution.

**Mr. Radig** said they would take any recommendation under advisement that have been discussed here.

**Representative Hofstad** asked Mr. Radig if there was a process in place for inspection, or is there a special process or agency that grants permits?

**Mr. Radig** said that the inspection requirements should be left up to someone from the Department of Mineral Resources answer that question. He said he knew that the Board of Water Well Contractors does have an inspector hired on staff and they do periodically inspect all the contractors that are currently under their supervision. He did not know if the Board would decide if that inspector would work with the geothermal contracting people.

**Representative Charging** said that geothermal is very innovative, but what about people who have maybe been doing this for 10 years, is there any provision for grandfathering?

Mr. Radig referred the question to Mr. Schmid. Mr. Schmid indicated there was a provision for grandfathering in the bill.

**Representative Keiser** reminded them that this is not the law yet. This would not become law if it is passed and he was not sure what the active date is. Current law applied and currently you have to have your water well license to do this and so you currently are certified and would be grandfathered in under that category. This is creating a new category that doesn't exist, that would be come effect on that date. The current folks cannot do this unless they are water well folks.

**Chairman Porter** indicated that section 7 speaks specifically to that on line 5 and 6, that the board shall issue an appropriate without certificate without examination. So any person who has been engaged in the business of geothermal system installation as an occupation for at least one year before July 1, 2007, so that is where the grandfathering comes in.

**Chairman Porter** asked for further testimony in support of HB 1131.

**Lorraine Mantz**, a geologist from the Department of Minerals and Resources came to the podium. She does inspections on behalf of the department. She looks at fluids and depths of wells to make sure that they are in compliance of the current rules. She wanted to address the questions of inspections of installations. She indicated that there was a process in place for any commercial installation. A permit must be applied for. That permit comes to her and makes sure that the well is not in any geologic sensitive area. She makes sure that everything is in compliance with the rules. Once the permit is approved, they do go out and inspect the sites while the drilling is in process. Once it is complete, the contractor is required to file a completion report with us. This verifies that the system has been completed and is running properly. They look at all kinds of systems from those that have a few holes to those who have in the hundreds of holes. The opportunity for experience is out there.

**Dan LaHayes** testified in support of HB 1131. He has been in the plumbing and heating business for the last 37 years. They have been drilling vertical bore holes and installing geothermal loops for the past 15 years. The difference between a water well contractor, in his terms, and a geothermal driller is that they drill a hole and use the water for potable means. They drill a hole and put a u-tube loop down to the bottom of the hole and grout that hole tight all the way up to the top so that no surface ground water can contaminate the ground below that. They do not want any kind of water contaminating their ground water that is down below.



If they don't grout a couple of different things can happen. You can get the contamination of ground water and if it isn't done properly, you will not get proper transfer of the heat from the ground through the hole to the pipe. The system has to be done properly for it to work right. They use math in determination of the temperature of the water coming in and the temperature of the water leaving and going back down to be reheated by the earth. I believe that we are doing the right thing when you can heat your home or business for probably less than one half of what you are paying to heat with electricity or natural gas. We are doing the right thing with geothermal. He explained the process that his company uses. They have been accredited for 15 years and are licensed and certified through the International Ground Source Heat Pump Association which is not recognized by the North Dakota Well Drillers Association or the State of North Dakota. He has very high respect for the Well Drillers Inspection and Board and he has no desire to be a well driller. Being a well driller is a different business all by itself. There were some questions asked about getting accredited or getting licensed. His recommendation would be to take certain members of the Water Well Board and also have some geothermal drillers that have experience and combine the two together to form a Board for Geothermal. They could devise a test for anybody that wants to become a certified driller or licensed geothermal driller. You could overlap what they use to be certified and that way we could come up with a test. As far as how much time for an apprenticeship he thought they should have to start out as an apprentice before you could install geothermal systems. An apprentice plumber has to have 7700 hours before they can become a journeyman. I am not saying you should have 7700 hours, but you have to have a substantial amount of time so that you understand the way it is done. You also have to be accredited with the Geothermal Heat Pump Association. Otherwise, it is a lost cause.

**Chairman Porter** said in regards to Representative Keiser's question, you kind of answered it for us a little bit by saying an apprentice plumber has to have a certain number of hours, not a certain number of years. He thought that was a valid question. Should we be looking more at a base number of hours that an individual needs to have before they can sit for this examination?

**Mr. LaHayes** felt that they should have a certain amount of hours. He felt that it should be three to four thousand hours. The systems can vary and can be very complicated.

**Representative Keiser** said that perhaps they could ask the board to take that issue up and get back to us quickly. We should share with them the concerns expressed at this hearing that there are collective suggestion.

**Representative Meyer** asked how many certified geothermal system installers there are in North Dakota now.

**Mr. LaHayes** said that he did not know for sure. From the Canadian border to the South Dakota border he would guess that there were probably less than half a dozen.

**Representative Meyer** asked how many water well contractors there were.

**Chairman Porter** asked Mr. Shaver if he knew. Mr. Shaver indicated that he had just given a list to Representative Nottestad. He said that there were 101 certified water well contractors at this time.

**Representative Drovdal** said that somewhere in the fiscal note they came up with the number 25 geothermal contractors that would be applying. I am guessing that is an estimate.

**Chairman Porter** asked if there were any more questions for Mr. LaHayes. There were no more questions.

**Lorraine Mantz** indicated that they were currently dealing with about 12 contractors at this time working on geothermal systems. Two of those came on line this year.

**Chairman Porter** asked for her professional opinion of working with these systems, how many hours of apprentice work did she think would be necessary in order to take the examination to become certified and to go out on your own to do this type of work.

**Ms. Mantz** that it should be a minimum of one years experience.

**Chairman Porter** asked if this meant an actual 2040 hours of work experience actually working on a system. **Ms. Mantz** said that would be her guess. A recommendation is required to take the test so if their supervisor doesn't feel they are ready to take the test that recommendation is not going to come.

**Representative Charging** said that the number one concern is water safety and the reason legislation has come forward. In your estimation how do you determine that something has gone wrong presently with the system? Where is the point of concern here?

**Ms. Mantz** indicated there is a lot of overlap between the drilling of the water well and geothermal well. How it is finished is where the differences come in. A geothermal well has to be installed correctly to insure that there is no contact with the local ground water or aquifer. Every system is pressure tested when it is complete. This will indicate if there are any leaks in the systems. To date, she is not aware of any systems that are leaking. Their concern is that the systems are installed correctly. The test that they are proposing will overlap with the Well Water drillers, but there are specialized techniques that unique to geothermal systems that water well drillers would know nothing about.

**Chairman Porter** indicated that currently if an individual puts a system in commercial you are inspecting those. Residential systems are not inspected, correct?

**Ms. Mantz** indicated that at the current time, residential systems do not require them. They do require a completion report once the system in installed.

**Representative Meyer** asked if water well contractors now do continuing education and if so, how many hours per year?

**Ms. Mantz** referred the question to **Mr. Schmid** and he indicated that it was 6 hours of continuing education every 2 years. He said that is 6 years over a two year period. It was 12 hours but they cut it back to 6 a couple of years ago.

**Chairman Porter** asked for any opposition on HB 1131.

**Doreen Redman**, who was representing the North Dakota Builders, said that many of the 1700 members that she was representing were plumbing and heating contractors and people who do geothermal systems. She asked if the grandfather clause would just relate to those who are in the water well industry or if a heating and plumbing contractor who currently installs geothermal systems would be included in that grandfathering situation? She said she would like to see the Mechanical Contractor's group involved in this discussion as well. She thought it was closely related to them as well especially before they start setting hours as well.

**Chairman Porter** asked if they could be here at 2:00 today.

**Ms. Redman** said that she would get in touch with someone to have someone here at 2:00. She was missing page 2 of the bill so she was wondering if there was a requirement of having a regular contractor's license in order have this. She also asked about the \$2000.00 bond that was required. This was just a couple of things that she wanted to bring to their attention.

**Chairman Porter** asked how they could be in the business today as a plumbing and heating contractor without a well drillers permit.

**Ms. Redman** indicated they do all the installation and the well drillers comes and puts the hole in the ground. The plumbing and heating contractors run all the tubes into the ground and run the connection to the home.

**Chairman Porter** indicated that they would hold this open in the event someone wanted to come in and testify at 2:00 today on HB 1131.

**Mr. Redig** wanted to clarify that the rules were intended and certification for geothermal installers with the Board of Water Well Contractors is only intended to address the environmental concerns of drilling holes in the ground which may affect the ground water. It does not address the qualifications of being a plumber and installing and hooking up the system to the heat pump system in the home or business. This is just a point of clarification on this.

**Chairman Porter** said that there would be back at 2:00 today.

## 2007 HOUSE STANDING COMMITTEE MINUTES

Bill/Resolution No. HB 1131

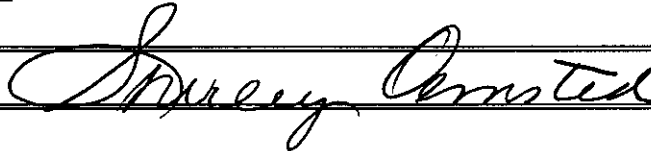
House Natural Resources Committee

Check here for Conference Committee

Hearing Date: January 11, 2007

Recorder Job Number: 952

Committee Clerk Signature



Minutes:

**House Bill 1131 – continued at 2:00 PM on January 11, 2007.**

**Chairman Porter** called the House Natural Resources Committee back to order. We will continue back on HB 1131.

**Lorraine Manz** from DMR indicated that she had made contact with one of the contractors who works on geothermal systems on a regular basis. He is a heating and cooling contractor. His statement regarding the education requirements was that more is definitely better. He can see where three or four years of experience is not a bad thing, putting it in terms of hours. He said it is an expensive system to put in and it would be very expensive to make repairs to the system once it is in. He did express that it is important to do it right. More experience is better. He thought that in terms of hours, this is a good thing.

**Scott Radig** wanted to make one clarification that this bill is only to “certify the people that do the drilling” and not those plumbing and heating people who work with the drillers. This has nothing to do with any others working on the system. He suggested that maybe they could change the title to certify geothermal drilling contractors and not system installers. That may

be too broad. They did not intend to include others, like the plumbing installers, unless they intended to get the certification to do the drilling portion of this.

**Chairman Porter** indicated that the hearing would be closed. HB Bill 1131 is before us.

He opened the floor for discussion.

**Representative Nottestad** suggested that this bill should be amended from the title on down to say "drilling contractors" rather than "system installers".

**Chairman Porter** also said if the committee was going to make that change, they should address the issue of hours as well and do it all at once.

**Representative Meyer** indicated she had a problem with the apprenticeship because there are so few in the state. She felt it would be a problem getting an apprenticeship with only 12 in the state.

**Chairman Porter** indicated there were 2 different ways to take the examinations. One is to take a technical education course through a Technical College or they can do an on-the-job training. There are options out there where they can gain the experience in order to take the examination.

**Representative Keiser** said it is hard to know what would be the correct number of hours, but he felt the committee has an obligation to put a number in to make sure that you are getting reasonably qualified people. I think the suggestion was for one year's hours, I believe that was

2040 hours. The committee may have to address this again in two years but I think that should be part of the motion.

**Representative Drovdal** indicated that on page 3 there are several places where it indicated one year experience as well as using the verbiage system installers.

**Representative Hofstad** indicated that it would take a huge capital investment to start a business like this so he felt we would be talking about a relatively small group of people who would be involved here.

**Representative Drovdal** made a motion that an amendment should be prepared to HB 1131 that will address the issue of geothermal systems installer being changed to geothermal systems driller and that the requirement of the apprenticeship be 2040 hours.

It was second by **Representative Hofstad**.

**Chairman Porter** indicated there a motion and a second. Is there any discussion? None being heard, House Bill 1131 is before us in an amended version. Those in favor indicate an aye. There was no one opposed. The motion carries.

**Chairman Porter** indicated that there is an amended version of HB 1131 in front of us.

**Representative Drovdal** made a motion for a do pass on HB 1131 as amended.

**Representative Keiser** made a second to the motion.





The Committee Clerk took the roll.

Let the record show this was a do pass as amended with 14 yeas and 0 nos.

**House Bill 1131 – continued at 2:00 PM on January 11, 2007.**

**Chairman Porter** called the House Natural Resources Committee back to order. We will continue back on HB 1131.

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**Chairman Porter** indicated that there is an amended version of HB 1131 in front of us.

**Representative Drovdal** made a motion for a do pass on HB 1131 as amended.

**Representative Keiser** made a second to the motion.

The Committee Clerk took the roll.

**Chairman Porter** indicated that the motion carries on the "do pass". Who wants to carry this to the floor?

**Representative Drovdal** indicated that he would carry this to the floor.

**FISCAL NOTE**  
 Requested by Legislative Council  
 01/16/2007

Amendment to: HB 1131

1A. **State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2005-2007 Biennium		2007-2009 Biennium		2009-2011 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
<b>Revenues</b>	\$0	\$0	\$0	\$1,500	\$0	\$1,500
<b>Expenditures</b>	\$0	\$0	\$0	\$1,500	\$0	\$1,500
<b>Appropriations</b>	\$0	\$0	\$0	\$0	\$0	\$0

1B. **County, city, and school district fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

2005-2007 Biennium			2007-2009 Biennium			2009-2011 Biennium		
Counties	Cities	School Districts	Counties	Cities	School Districts	Counties	Cities	School Districts
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

2A. **Bill and fiscal impact summary:** *Provide a brief summary of the measure, including description of the provisions having fiscal impact (limited to 300 characters).*

No Change in fiscal note due to amendment

HB1131 establishes a certification procedure for geothermal system contractors. Fiscal impacts amount to a \$50.00 certification filing fee and a \$10.00 test fee paid to the North Dakota Board of Water Well Contractors.

B. **Fiscal impact sections:** *Identify and provide a brief description of the sections of the measure which have fiscal impact. Include any assumptions and comments relevant to the analysis.*

3. **State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

A. **Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

Based on an annual filing of 25 geothermal contractors at \$60.00 each (\$50.00 certification application fee and \$10.00 test fee) total revenues to the North Dakota Board of Water Well Contractors amounts to \$1500.00.

B. **Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

Annual expenditures of the Board of Water Well Contractors is estimated to equal the additional annual revenue of \$1500.00 as described in 3A.

C. **Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, for each agency and fund affected. Explain the relationship between the amounts shown for expenditures and appropriations. Indicate whether the appropriation is also included in the executive budget or relates to a continuing appropriation.*

none

<b>Name:</b>	Robert Shaver	<b>Agency:</b>	N.D. State Water Commission
<b>Phone Number:</b>	8-2754	<b>Date Prepared:</b>	01/17/2007

**FISCAL NOTE**  
 Requested by Legislative Council  
 01/02/2007

Bill/Resolution No.: HB 1131

**1A. State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2005-2007 Biennium		2007-2009 Biennium		2009-2011 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
<b>Revenues</b>	\$0	\$0	\$0	\$1,500	\$0	\$1,500
<b>Expenditures</b>	\$0	\$0	\$0	\$1,500	\$0	\$1,500
<b>Appropriations</b>	\$0	\$0	\$0	\$0	\$0	\$0

**1B. County, city, and school district fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

2005-2007 Biennium			2007-2009 Biennium			2009-2011 Biennium		
Counties	Cities	School Districts	Counties	Cities	School Districts	Counties	Cities	School Districts
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

**2A. Bill and fiscal impact summary:** *Provide a brief summary of the measure, including description of the provisions having fiscal impact (limited to 300 characters).*

HB1131 establishes a certification procedure for geothermal system contractors. Fiscal impacts amount to a \$50.00 certification filing fee and a \$10.00 test fee paid to the North Dakota Board of Water Well Contractors.

**B. Fiscal impact sections:** *Identify and provide a brief description of the sections of the measure which have fiscal impact. Include any assumptions and comments relevant to the analysis.*

No additional fiscal impacts over and above the certification and test fees described in 2A.

**3. State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

**A. Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

Based on an annual filing of 25 geothermal contractors at \$60.00 each (\$50.00 certification application fee and \$10.00 test fee) total revenues to the North Dakota Board of Water Well Contractors amounts to \$1500.00.

**B. Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

Annual expenditures of the Board of Water Well Contractors is estimated to equal the additional annual revenue of \$1500.00 as described in 3A.

**C. Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, for each agency and fund affected. Explain the relationship between the amounts shown for expenditures and appropriations. Indicate whether the appropriation is also included in the executive budget or relates to a continuing appropriation.*

none

<b>Name:</b>	Robert Shaver	<b>Agency:</b>	N.D. State Water Commission
<b>Phone Number:</b>	8-2754	<b>Date Prepared:</b>	01/02/2007

January 11, 2007

**House Amendments to HB 1131 (78117.0101) - Natural Resources Committee  
01/12/2007**

Page 1, line 3, replace "installer" with "driller"

Page 1, line 6, replace "installers" with "drillers" and replace "installation" with "drilling"

Page 1, line 13, replace "installer" with "driller"

**House Amendments to HB 1131 (78117.0101) - Natural Resources Committee  
01/12/2007**

Page 2, line 3, replace "installation" with "drilling"

Page 2, line 10, replace "installers" with "drillers"

Page 2, line 14, replace "installers" with "drillers"

**House Amendments to HB 1131 (78117.0101) - Natural Resources Committee  
01/12/2007**

Page 3, line 7, replace "installer" with "driller"

Page 3, line 8, replace "installer" with "driller"

Page 3, line 9, replace "one year" with "two thousand forty installation hours" and replace "installation" with "drilling"

Page 3, line 10, replace "installer" with "driller"

Page 3, line 12, replace "installation" with "drilling"

Page 3, line 17, replace "installer" with "driller"



**House Amendments to HB 1131 (78117.0101) - Natural Resources Committee  
01/12/2007**

Page 4, line 3, replace "Installation" with "drilling"

Page 4, line 7, replace "installation" with "drilling"

Page 4, line 11, replace "Installer" with "driller"

Page 4, line 12, replace "Installer" with "driller" and replace "installing" with "drilling"

Page 4, line 13, replace "installer" with "driller"

Page 4, line 14, replace the first "installation" with "drilling" and replace the second "installation" with "drilling"

Page 4, line 15, replace "installing" with "drilling"

Page 4, line 19, replace "installatlon" with "drilling" and replace "installation" with "drilling"

Page 4, line 25, replace "installers" with "drillers"

Page 4, line 27, replace "installers" with "drillers"

**House Amendments to HB 1131 (78117.0101) - Natural Resources Committee  
01/12/2007**

Page 5, line 4, replace "install" with "drill"

Renumber accordingly

Date: 1-11-07  
 Roll Call Vote #: 1

2007 HOUSE STANDING COMMITTEE ROLL CALL VOTES  
 BILL/RESOLUTION NO. HB 1131

House Natural Resources Committee

Check here for Conference Committee

Legislative Council Amendment Number \_\_\_\_\_

Action Taken Amend HB 1131 - See below

Motion Made By Rep. Drovudal Seconded By Rep. Hofstad

Representatives	Yes	No	Representatives	Yes	No
Chairman - Rep. Porter			Rep. Hanson		
Vice-Chairman - Rep. Damschen			Rep. Hunskor		
Rep. Charging			Rep. Kelsh		
Rep. Clark			Rep. Meyer		
Rep. DeKrey			Rep. Solberg		
Rep. Drovudal					
Rep. Hofstad					
Rep. Keiser					
Rep. Nottestad					

Total Yes 14 No 0

Absent 0

Floor Assignment -

If the vote is on an amendment, briefly indicate intent:

*To take the word "system installer" and replace with "system driller" throughout HB 1131, and to delete reference to the "one year apprenticeship" and replace that with "2040 hours".*

Date: 1-11-07  
Roll Call Vote #: 2

2007 HOUSE STANDING COMMITTEE ROLL CALL VOTES  
BILL/RESOLUTION NO. HB 1131

House Natural Resources Committee

Check here for Conference Committee

Legislative Council Amendment Number \_\_\_\_\_

Action Taken Do Pass as amended

Motion Made By Rep Droadal Seconded By Rep Keiser

Representatives	Yes	No	Representatives	Yes	No
Chairman - Rep. Porter	✓		Rep. Hanson	✓	
Vice-Chairman - Rep Damschen	✓		Rep. Hunsakor	✓	
Rep. Charging	✓		Rep. Kelsh	✓	
Rep. Clark	✓		Rep. Meyer	✓	
Rep. DeKrey	✓		Rep. Solberg	✓	
Rep. Droadal	✓				
Rep. Hofstad	✓				
Rep. Keiser	✓				
Rep. Nottestad					

Total Yes 14 No 0

Absent 0

Floor Assignment Rep Droadal

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

HB 1131: Natural Resources Committee (Rep. Porter, Chairman) recommends AMENDMENTS AS FOLLOWS and when so amended, recommends **DO PASS** (14 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). HB 1131 was placed on the Sixth order on the calendar.

Page 1, line 3, replace "installer" with "driller"

Page 1, line 6, replace "installers" with "drillers" and replace "installation" with "drilling"

Page 1, line 13, replace "installer" with "driller"

Page 2, line 3, replace "installation" with "drilling"

Page 2, line 10, replace "installers" with "drillers"

Page 2, line 14, replace "installers" with "drillers"

Page 3, line 7, replace "installer" with "driller"

Page 3, line 8, replace "installer" with "driller"

Page 3, line 9, replace "one year" with "two thousand forty installation hours" and replace "installation" with "drilling"

Page 3, line 10, replace "installer" with "driller"

Page 3, line 12, replace "installation" with "drilling"

Page 3, line 17, replace "installer" with "driller"

Page 4, line 3, replace "installation" with "drilling"

Page 4, line 7, replace "installation" with "drilling"

Page 4, line 11, replace "installation" with "drilling"

Page 4, line 12, replace "installer" with "driller" and replace "installing" with "drilling"

Page 4, line 13, replace "installer" with "driller"

Page 4, line 14, replace the first "installation" with "drilling" and replace the second "installation" with "drilling"

Page 4, line 15, replace "installing" with "drilling"

Page 4, line 19, replace "installation" with "drilling" and replace "installation" with "drilling"

Page 4, line 25, replace "installers" with "drillers"

Page 4, line 27, replace "installers" with "drillers"

Page 5, line 4, replace "install" with "drill"

Renumber accordingly

2007 SENATE NATURAL RESOURCES

HB 1131

## 2007 SENATE STANDING COMMITTEE MINUTES

Bill/Resolution No. HB 1131

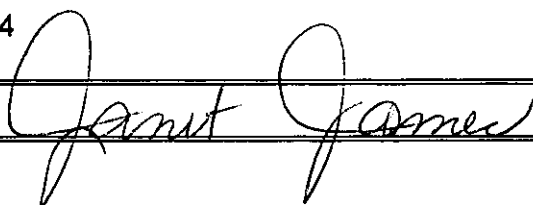
Senate Natural Resources Committee

Check here for Conference Committee

Hearing Date: February 22, 2007

Recorder Job Number: # 3684

Committee Clerk Signature



Minutes:

**Senator Ben Tollefson**, Vice Chairman of the Senate Natural Resources Committee opened the hearing on HB 1131 relating to the state board of water well contractors and geothermal driller certification and standards. Chairman, **Senator Stanley Lyson** stepped out of committee to testify at another hearing.

All other members of the committee were present.

**Scott Radig**, Director of the Division of Waste Management for the North Dakota Department of Health testified in support of HB 1131 (see attachment #1). He also presented to the committee the written testimony of **Dan LaHaise**, owner of the Geo LaHaise and sons Plumbing and Heating (see attachment #2).

**Senator Layton Freborg** asked if a landowner could still drill a well on his private property and questioned a statement in his testimony regarding the drilling effecting the consumer and environment.

**Scott Radig** confirmed it is the same as drilling water well on private property for private use and does not expect individuals without experience and proper equipment to be drilling these wells and installing the geothermal system as it is very specialized. Language has been carried over regarding drilling private water wells and the possible contamination and risk involvement.

**Senator Herbert Urlacher** inquired if special equipment is needed to install the loop system

**Scott Radig** confirmed this to be true.

**Senator Constance Triplett** commented that it is possible to obtain water from a very shallow well and if there is a significant difference between the two systems with danger to the environment maybe this law language should be consistent.

**Senator Urlacher** asked if there is some type of testing for leakage before the project advances to far.

**Scott Radig** referred the question to the North Dakota Geological Survey.

**Lorraine Manz**, geologist with the North Dakota Geological Survey and the Department of Mineral Resources answered that a permit through their department is required whenever a commercial geothermal system is installed in North Dakota. Currently a bill is in the legislature to require a permit for residential installation of thermal wells; therefore the same leakage testing would be required. After the installation is complete the entire system is pressure tested for leaks and if none are found then a completion report is filed with the department. If a leak occurs in the future, it must be reported for inspection resulting in a decision for further action. The fluids used in geothermal systems are non toxic food grade additives.

**Senator Joel Heitkamp** asked how this bill affects the small drilling companies and if they are okay with the bill.

**Lorraine Manz** confirmed that they are okay as it will help to maintain the standards of the industry.

**Senator Urlacher** asked if it very practical for an individual to put in a private system because it requires special equipment.

**Lorraine Manz** answered that the wells drilled for geothermal systems are very similar to drilling a water well. A 2000 square foot home would require 4-5 wells that are tied into looped system.

**Senator Tollefson** asked for opposing testimony and hearing none asked for testimony in a neutral position

**Senator Tollefson** closed the hearing on HB 1131.

**Senator Heitkamp** made a motion for Do Pass of HB 1131.

**Senator Jim Pomeroy** second the motion.

**Senator Heitkamp** added most thermal water well driller are water well drillers.

A roll call vote for a Do Pass of HB 1131 was taken indicating 7 Yeas, 0 Nays and 0 absent or not voting.

**Senator Heitkamp** will carry HB 1131.

**Senator Heitkamp** further stated geothermal is very expensive up front but in the long run it pays off because in a lot areas there is very shallow wells and looping them saves money.



Date: 2-22

Roll Call Vote #: 1

2007 SENATE STANDING COMMITTEE ROLL CALL VOTES

BILL/RESOLUTION NO. 1131

Senate Natural Resources Committee

Check here for Conference Committee

Legislative Council Amendment Number \_\_\_\_\_

Action Taken DO Pass

Motion Made By Heitkamp Seconded By Pomeroy

Senators	Yes	No	Senators	Yes	No
Sen. Stanley Lyson, Chairman	✓		Sen. Joel Heitkamp	✓	
Sen. Ben Tollefson, ViceChairman	✓		Sen. Jim Pomeroy	✓	
Sen. Layton Freborg	✓		Sen. Constance Triplett	✓	
Sen. Herbert Urlacher	✓				

Total (Yes) 7 No 0

Absent 0

Floor Assignment Heitkamp

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE (410)  
February 22, 2007 1:56 p.m.

Module No: SR-34-3695  
Carrier: Heitkamp  
Insert LC: . Title: .

**REPORT OF STANDING COMMITTEE**

HB 1131, as engrossed: Natural Resources Committee (Sen. Lyson, Chairman)  
recommends **DO PASS** (7 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING).  
Engrossed HB 1131 was placed on the Fourteenth order on the calendar.

2007 TESTIMONY

HB 1131

**Testimony**

**House Bill 1131**

**Natural Resources Committee**

**Thursday, January 11, 2007; 10 a.m.**

**North Dakota Department of Health**

Good morning, Chairman Porter and members of the Natural Resources Committee. My name is Scott Radig, and I am director of the Division of Waste Management for the North Dakota Department of Health. I am here today to testify in support of House Bill 1131 regarding the certification of well drillers for the purpose of installing geothermal heating and cooling systems.

The North Dakota water well code protects the public and the environment through certification and testing requirements for well drilling contractors, as well as installation/construction requirements that will prevent contamination of groundwater and wells. Geothermal heating and cooling systems, sometimes called ground-source heating and cooling systems, are regulated and permitted by the North Dakota Department of Mineral Resources due to the extraction of energy. The Department of Mineral Resources' current geothermal system regulations do not address installation or construction requirements for wells, except to require that "All wells must be made by a certified water or monitoring well contractor." North Dakota law pertaining to certification and licensing of water well contractors is administered under Chapter 43-35.

Installation of closed-loop geothermal systems is a specialty type of drilling that is significantly different from drilling potable, water supply or monitoring wells. When completed, no water is pumped out of a closed-loop geothermal system, and the intention is that the whole system is sealed from contact with the aquifer and the environment. There are a growing number of drillers who have experience only with geothermal installations and who have neither the proper experience nor the full knowledge to pass the water well driller's exam should they ever decide to start their own geothermal well drilling business. However, a significant level of experience and expertise is still required to properly construct the system in a manner that will protect both the consumer and the environment.

At the request of the North Dakota Board of Water Well Contractors, the North Dakota Department of Health is proposing to change the laws regarding well driller certification to create a separate category for installation of geothermal heating and

cooling systems and to add representation of this industry on the Board of Water Well Contractors. This change would not restrict drillers currently installing geothermal systems. It would, however, allow a driller who is not interested in drilling potable, water supply or monitoring wells to specialize in geothermal systems.

I encourage your passage of House Bill 1131 and would be happy to answer any questions you may have.

# Testimony in favor of House Bill No. 1131

by Roger Schmid, Water Supply, Inc.

11 January 2007

I am Roger Schmid, I live in Bismarck and have been a North Dakota Certified Water Well Contractor for 32 years and a member of the Board of Water Well Contractors since 1999. I am geologist and ground water consultant with forty-six years of drilling and water well experience.

I am here to express my support of House Bill 1131. The passage of this bill will create a geothermal installer certification under the Board of Water Well Contractors. The need for the geothermal installer certification has been brought about by the significant increase in the number of earth-coupled heating/cooling systems being installed.

At the present time a person needs a water well contractor certification to drill the holes to install geothermal closed-loop systems. The problem is that there are now persons with considerable experience in geothermal installation who have never drilled a water well. These people are highly qualified geothermal installers who are at present required to pass a test for water well contractors in order to become licensed in North Dakota. By creating a geothermal installer certification these people that only do geothermal installations will take a test specifically designed for geothermal installers and obtain continuing education credits in their field.

I believe that the passage of House Bill 1131 will result in more qualified geothermal installers to meet the increasing demand for economical, efficient heating and cooling for the people of North Dakota.

## Geo LaHaise and Sons Plumbing Heating GeoThermal



335 Highway 81 ♦ Grafton North Dakota 58237 ♦ USA  
Phone 701-352-0572 ♦ Fax 701 352 2748

February 21, 2007

*Mr. Scott Radig Fax 701 338 5200*

Honorable Senators;

Good Morning; My name is Dan LaHaise and I apologize for not being present at this meeting, as I have a previous meeting scheduled to attend at this time.

I am a partner -owner of Geo. LaHaise & Sons Plumbing and Heating in Grafton. I've been in business with my partner-brother Tom for 37 years, taking over the business our father started in 1959.

We've also been in the geo-thermal heating and cooling contracting since 1993, and have installed hundreds of bore hole loops since. We have the utmost respect for water well drillers and have no desire 'what so ever', to engage in any type of water well drilling.

A water well is drilled to 'use water from', or 'take water for one or more purposes'. A geo-thermal bore hole is drilled to a set depth and 'smaller diameter' for insertion of a "closed loop u-coil" to the bottom. The hole is then grouted from the bottom of the hole to the top of the ground with an attached 'tremie hose' when the u-tube is inserted. The grout is pumped down to the bottom under high pressure with a positive displacement pump to completely fill the hole and cavity.

An approved grout for enhanced thermal conductivity or 'heat transfer' is used. It is an E.P.A. approved and listed grout material as to not allow any contamination of any ground water below the surface. If not properly grouted, many problems come into play; (incomplete heat transfer, contamination of ground water, equipment failure, to name a few).

The International Ground Source Heat Pump Association standards are recommended and followed by all equipment manufacturers and installers, designers. Accredited geo-thermal drillers and installers, designers attend continuous education classes each year for minimal hours credited for certification.

Because there isn't any state certification or licensing in our trade, this fledgling industry is unable to continue forward. Many contractors would be willing to secure equipment and licensing for this type of trade if it were available. If we could form a committee with a member from the water well drilling board, a geothermal driller, a state health officer, a geological survey officer, and maybe an appointed member at large, to establish a geo-thermal drillers board. Regulations could parallel or meet the International Ground Source Heat Pump Association standards.

Maybe certain number of hours per year could establish an apprenticeship program for testing to become licensed and certified in our state. Geo-thermal and water well drilling are separate business trades.

thank you for the opportunity to address this issue, and we are,  
Sincerely,

**Testimony**

**House Bill 1131**

**Senate Natural Resources Committee**

**Thursday, February 22, 2007; 10:15 a.m.**

**North Dakota Department of Health**

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