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Natural Resources Committee  
March 11, 2015

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[LB512 LB581]

The Committee on Natural Resources met at 1:30 p.m. on Wednesday, March 11, 2015, in Room 1525 of the State Capitol, Lincoln, Nebraska, for the purpose of conducting a public hearing on LB512 and LB581. Senators present: Ken Schilz, Chairperson; Curt Friesen, Vice Chairperson; Dan Hughes; Jerry Johnson; Brett Lindstrom; John McCollister; and David Schnoor. Senators absent: Rick Kolowski.

SENATOR SCHILZ: Well, good afternoon, everybody, and welcome to the Natural Resources Committee hearing for today. My name is Ken Schilz. I am Chairman of the committee from Ogallala and I represent District 47. And today we would also like to welcome and thank B.J. Peters from the technology director at ESU 13 out in Scottsbluff to help us coordinate this hearing from out there as well, and I believe that this will be the first time the new distance testimony technology and process has been used in the Legislature. And so we are...so as a test we're going to see if we can't make this work just right. And so bear with us just a little bit. I think that what we'll do, B.J., I don't know if you can hear us or not, but... [LB512]

B.J. PETERS: Yes, I can. [LB512]

SENATOR SCHILZ: Very good. Do you have an idea of how many testifiers we have in Scottsbluff? [LB512]

B.J. PETERS: I have 17 green sheets in my hand, Senator. We have a little over 30 people here in attendance total and about half of them have asked to fill out the testifying sheet. [LB512]

SENATOR SCHILZ: Very good. Okay. So I think that what we'll do is we will start out there and maybe go...once we're ready for testimony, maybe we'll go with five testifiers out there and then move back to here and we'll take five testifiers here, and keep going back and forth like that until we get everybody. Because I want everybody to know that we're not trying to weight one place over the other. So when we're ready for you, we'll let you know. But thank you for being there, thank you for your help with this. We really do appreciate it. And to everybody else, we do have, what is it, two bills today, LB512, Senator Stinner, and LB581 from Senator Nordquist. But first thing, let's take care of some housekeeping here. I'd like to allow each of the senators here today at the hearing to introduce themselves and I will start to my far left with Senator McCollister.

SENATOR MCCOLLISTER: Thank you, Mr. Chairman. I'm John McCollister and I'm proud to represent District 20 in Omaha.

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SENATOR SCHNOOR: My name is Dave Schnoor and I represent District 15, which is Dodge County.

SENATOR LINDSTROM: Brett Lindstrom, District 18, northwest Omaha.

SENATOR FRIESEN: Curt Friesen, District 34, Hamilton, Merrick, Nance, part of Hall County.

SENATOR JOHNSON: Jerry Johnson, District 23, Saunders, Butler, and most of Colfax County.

SENATOR HUGHES: Dan Hughes, District 44, Chase, Dundy, Frontier, Furnas, Gosper, Harlan, Hayes, Hitchcock, Perkins, and Red Willow Counties.

SENATOR SCHILZ: Great. Thank you very much. Senator Kolowski is feeling a bit under the weather today. He would be here but he stayed home so as to not get the rest of us sick. So we appreciate that and he would be here if he could. I also want to introduce Barb Koehlmoos who is the committee clerk and Laurie Lage who is the legal counsel for the committee. And then we have two pages today, the first one is Jake Kawamoto from Omaha. He's a sophomore at UNL studying political science. And Kelli Bowlin from Cody, Nebraska. She's a junior at UNL and she's majoring in ag communications. So thank you to both of you for being here and helping out. Now to how we'll run the hearing. If you're planning on testifying, please pick up a green sign-in sheet that's on the table at the back of the room or the back of the rooms. If you do not wish to testify but would like your name entered into the official record as being present at the hearing, there's a form on the table that you can sign and this will then become part of the official record of the hearing. Please, when you get that sheet, fill it out in its entirety and make sure that when it's your turn to testify, hand the sign-in sheet to either B.J., and it sounds like he's collected most of those, or to Barb here before you testify. If you do not choose to testify, you can also submit comments in writing and we'll have them read into the official record as well. And if you have handouts, please make sure you have 12 copies for the pages to hand out and if you don't, the pages can help you get that done. When you come up to testify, please speak clearly and into the microphone, tell us your name, and remember to spell both your first and last names. At this time, please turn off or turn to silent or vibrate any cell phones, pagers, or other electronic devices that may make noise so that we can have a clean hearing and we aren't distracted by those things. And if you have to have a conversation, please keep it to a minimum or take it to the hallway if you need to. There are no displays of support or opposition to a bill, either vocal or otherwise, that's allowed at the public hearings in the Natural Resources Committee. We do that to make sure that we respect both the testifiers and the senators that are trying to hear the testimony. We do use the light system in the Natural Resources Committee. We will give everyone five minutes. We would not be opposed if you can sum up your thoughts in a shorter time frame than that. That would be just fine. And if you do hear somebody else

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comment and give the same sort of testimony that you're thinking about, it is okay to sit in the testifier's chair and say I agree with what other testifiers have said, and we can move on then. We need as little repetition as possible. But we do want to make sure that everybody's voice is heard. So we'll give five minutes. The green light will be on for four minutes. Then once that's done, the yellow light will come on for one minute, and once the red light comes on we expect you to pretty much sum up and finish your testimony. And I think that B.J. is also keeping time out in Scottsbluff. So we'll thank him again for that. One other thing, when we are done with this hearing, LB512, we will take a few minutes break to allow folks to get the TVs and the monitors out of the hearing room. So once this hearing is over we'll take a short break and then we'll start back up. Okay. And with that, I will ask Senator Stinner to go ahead and he is welcome to open on LB512. Senator Stinner, welcome to the Natural Resources Committee. [LB512]

SENATOR STINNER: Thank you, Senator Schilz. Members of the Natural Resources Committee, I do want to thank you for allowing apparently the first ever--and thank you, Chuck--video conference. I think Ken and I and Senator Hughes know what a barrier distance can be. And I can tell you from Sioux County to Lincoln is about a seven-hour drive for a three-minute testimony, both when we talked about it this looked like the best solution. So...and I do want to thank Senator Schilz for cosponsoring this bill. I'm going to try to be really brief and give you a little bit of background and then get out of the way because I know we've got a lot of testimony and a lot of people to weigh in. And really what this bill is about is kind of a placeholder. And I received two telephone calls after the session had begun, and I think it was either three, four, or five days into the session from two women out in Mitchell and Sioux County and they were concerned about the wastewater, the proposal for 80 trucks per day. And so we started an investigation, and really I gave the investigation to Roger Keetle who's my legislative aide. He talked to the Oil and Gas Commission. They confirmed that there was going to be an...there is an application on file, 10,000 barrels of wastewater from Colorado were going to be deposited to this new well in Sioux County. So based on what we learned from the Oil and Gas Commission is this water was to be compliant with EPA and the Clean Water Act. So that set aside, they indicated they really didn't have money to monitor this well. And the reason is, is because the Oil and Gas Commission gets their money from a severance tax on our oil and gas producers. This is being transported from outside of our area into our state, and so therefore we didn't get any...the Oil and Gas Commission didn't get any revenue from that. So along with that, we talked about safety and we talked about making sure the roads were repaired because this was going to...you know, our roads out there aren't designed for this type of traffic. So, anyhow, we did a little bit of a search. I was familiar with the North Dakota wastewater. I've been to the Bakken. But, anyhow, we picked Ohio as a template for us. And Ohio has a situation where Pennsylvania comes over and dumps their wastewater into high wells and they impose a 20-cent tax. And that tax is bifurcated between monitoring wells and road construction and repair. So that's really the genesis of this bill. It deals with road repair. It deals with monitoring the wells. But I think we need to open this discussion up and I'm talking about a placeholder because a lot of other things

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have come to light since that time since we introduced this thing, and I think for the committee's concern is the number one priority is water quality. We got to maintain water quality. So what level of standards do we need to set as we take a look at the fracking business, the wastewater business, and an environmentally-sensitive area because this is the Sandhills, this is the aquifer, this is the number one resource for the state of Nebraska. Where do you want to be and who's going to monitor this well? You know, we have NRDs set up all over the state of Nebraska really to look at levels of water and water quality. I know right now the Oil and Gas Commission, they monitor wells. But that's another open for discussion item. What level of due diligence do we need to have to ensure that we have the appropriate amount of review and due diligence to ensure this water quality is maintained. The second thing has to do with roads and I understand that in interstate travel, these trucks will be paying in to the state fund for the state roads. But they also are going across city and county roads as well. So we're trying to create in this bill a fund and there should be a fund that's really segregated from the Department of Transportation's funds. This is our belief. Because then the cities and the counties can make a grant proposal for not only that, but then the safety aspects. And safety is an absolute key to this thing too. You're going to have a lot of trucks going by schools in Mitchell, for an example, that need to have new signage. Maybe there's a red light involved. So there's some safety aspects, road aspects that need to be addressed, and certainly from the water quality side. And that's really kind of the bottom line to this discussion. So in summary, this is a placeholder, this is open for discussion, and we're going to have a lot of discussion today from a lot of different people and I'll now conclude my comments, so. Thank you. [LB512]

SENATOR SCHILZ: Thank you, Senator Stinner. Are there any questions? Seeing none, thank you. You'll stick around for your closing? [LB512]

SENATOR STINNER: Yes, I will. [LB512]

SENATOR SCHILZ: Okay. Thank you, Senator Stinner. Okay. At this time we will start out in Scottsbluff, and, B.J., if you'd have your first testifier come up, we would very much appreciate that. [LB512]

B.J. PETERS: You signed in first. If the next...and it's kind of a...one... [LB512]

SENATOR SCHILZ: Oh, we need to...excuse me, B.J. [LB512]

B.J. PETERS: Yes, go ahead. [LB512]

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SENATOR SCHILZ: Yeah. We will start with folks, if there's anybody...how we do this, if there's anybody in support for the bill, we'll start there first. So is there anybody in... [LB512]

B.J. PETERS: Senator, we had quite the discussion of whether they were supporting or opposing. They opposed the process but support the legislation. So it was a little hard for them to fill the form out. Well, it may be a free-for-all, but we'll see (laughter) if we can maintain decorum. [LB512]

SENATOR SCHILZ: We will do our best, but if they are in support of the bill we can have them come up at this point. [LB512]

B.J. PETERS: That is correct. Okay. [LB512]

SENATOR SCHILZ: And we'll start with the first five from out there in Scottsbluff. [LB512]

B.J. PETERS: Okay. If you want to come up. [LB512]

DAVE HAACK: I'm not in support of it. I'm opposed of it. [LB512]

B.J. PETERS: Okay. Who wants to testify first from Scottsbluff? Come right ahead. If the next three or four want to line up over here on the right-hand side, that way we'll at least know who's the next up in line. Thank you. [LB512]

BECKY McMILLEN: Am I supposed to spell my name did they say? [LB512]

B.J. PETERS: Yes, say your name and then spell it. [LB512]

BECKY McMILLEN: My name is Becky McMillen, B-e-c-k-y M-c-M-i-l-l-e-n. I live in rural Scotts Bluff County on a small, historic farmstead. Two ditches run through my pasture. One belongs to Enterprise Irrigation District and the other feeds my neighbor, feeds water to my neighbor. It's one of the smaller irrigation districts in the region but it is important to us. If you fly over western Nebraska, you'll see an amazing interconnecting series of ditches, both large and small, that deliver water to the farms and ranches that grow food for the world. Our surface irrigation water comes from the North Platte River. Here in western Nebraska, we share water with our neighbors and when we're finished with it, we send it downstream to other Nebraska farmers. That's just on the surface. Underneath us is the largest underground freshwater reservoir in the country. For many western Nebraskans, that is the only water available to them. I don't

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have to tell you how many other counties and states could be affected by contamination of the Ogallala Aquifer. We're an ag-based community. We know what it's like to experience drought like California is now suffering. We know the value of water. Information from other states, including California, has made it clear that unregulated fracking and pressurized injection of waste into the earth can result in contamination of freshwater aquifers. Surface spills of saltwater waste have impacted rivers and habitats in other states. We don't want any of that. I urge you to put a moratorium in place for development of fracking and injection wells, including the proposed Sioux County injection well. We need to have time to study this issue and we need to have time to put well-thought-out regulations and protections in place for us, for our kids, their kids, and their kids, and also for the people that depend on us to grow their food. This is our land and it's our water and we have all been charged with protecting it, some of us, in fact some of us here, have been protecting it for generations, and now it's time for you to step up and do the same. Thank you very much. [LB512]

SENATOR SCHILZ: Thank you very much, Ms. McMillen. Wait one second. Is there anybody that has any questions for Ms. McMillen? Seeing none, now you can go. Thank you very much for your testimony. [LB512]

BECKY McMILLEN: Thank you. [LB512]

SENATOR SCHILZ: You're welcome. Okay. Next testifier, please, in support from Scottsbluff. Good afternoon. [LB512]

JOHN BERGE: (Exhibit 1) Good afternoon, Senator Schilz, members of the committee. My name is John Berge, J-o-h-n B-e-r-g-e. I'm the general manager of the North Platte Natural Resources District. I submitted a letter of testimony in support of this bill on February 23rd. I wanted to sort of underline that today since we had this opportunity and this format, and thank you very much for providing this for the people of western Nebraska. North Platte NRD does not currently regulate the disposal of wastewater via injection into deep aquifers, and we do not have the statutory authority to regulate this type of disposal well. The North Platte NRD, however, does have the statutory responsibility over groundwater quality. To this end, the NRD conducts districtwide monitoring of aquifer water quality so that potential human health concerns can be addressed. We will pursue the construction of such monitoring wells in the event that this wastewater disposal project or others are approved by other agencies for location in our district. The regulatory entities like the North Platte NRD should be able to defray those costs of installing and gathering data for monitoring wells constructed to monitor these types of projects, and this piece of legislation would help us do that. We've advised the Nebraska Oil and Gas Conservation Commission of our intention to install a monitoring well in close proximity to this proposed site if the project is approved. This would provide real-time monitoring for a quick

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response in the event that there was some sort of spill. In addition, we are building these types of projects into the districtwide hazard mitigation plan with our planning consultants. This monitoring well that we're talking about here would provide real-time data and would cost somewhere in the neighborhood of \$40,000 or \$50,000. This would be added to probably the most extensive monitoring well network that we have in this state. We have 800 monitoring wells in our NRD and we add a few of those each year. We're very, very good at monitoring wells, but we believe that with something like this where we need quick response, telemetry or some other sort of real-time data collection would be in order. And having this type of revenue stream to aid in that would be helpful. There was one question that came up during our discussion internally with our board of directors, and that was how would this money be administered. It would be my humble suggestion that perhaps these revenues from this piece of legislation could be put into something like the water quality fund where an NRD like ourselves could apply for those dollars through a grant process in order to reimburse for these types of projects. Thank you very much. [LB512]

SENATOR SCHILZ: Thank you, Mr. Berge, and thank you for your testimony. Any questions? Senator Schnoor. [LB512]

SENATOR SCHNOOR: John, this is Senator Dave Schnoor. As the manager of the NRD, I'm probably assuming that you know a lot more about this whole fracking business and this water than anybody. So I guess for my education, could you explain to me this fracking water and what it's like and what this can do to the ground? And then another question is why, I guess why is it if it's in Colorado how come it's being brought to Nebraska? [LB512]

JOHN BERGE: Well, at the risk of disagreeing with a sitting senator, I think you're making an unsafe assumption. What I can tell you tell you is the following. What we know about this project is that...is just what you know, what was in the application. We know that there's going to be a large volume of this waste that's going to come into our state, into our district in southern Sioux County and be injected into an old oil well. We know that the Oil and Gas Commission and the company in question have done some research into the voracity of that well and to the voracity of the area that they wanted to inject this water into. We are concerned, obviously, because this is a foreign material that's going to be injected through a man-made casing through an aquifer into this void under the earth. And we know that things that are man-made sometimes fail. In an effort to respond to the interest that was raised by our constituents, we thought it was an appropriate way for us to address those concerns by offering the ability to do not only monitoring in the way we currently do it, but to do real-time monitoring so that we can build that into our hazard mitigation plan so that if there is an issue, the appropriate officials can address that. There's a lot of questions about what this material is and why this material is coming in from another state. I will leave that to others to answer because I'm just...I don't know that I could speak for the intent of the company or the intent of the project. [LB512]

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SENATOR SCHNOOR: Okay. Thank you, sir. [LB512]

SENATOR SCHILZ: Thank you, Senator Schnoor. Any other questions? Senator Hughes. [LB512]

SENATOR HUGHES: Thank you, John. Senator Dan Hughes, you made reference to, you have 800 wells that you are testing currently in your district, is that correct? [LB512]

JOHN BERGE: That's correct. We have, since the early nineties, been installing a wide variety of monitoring wells. We monitor those both for static water levels and for contaminates, predominately nitrates given our heavy ag use out here. We need to keep apprised of nitrates, but we also test for a variety of other things depending on the location of those wells. All of that information, by the way, we just recently made available on-line. If anybody has any interest in water levels or contaminate information about our district, all of those graphs are on-line and available for use. [LB512]

SENATOR HUGHES: Okay. Have you or your board given any thought as to what type of monitoring that you would do around this site? Or have you even got that far yet? [LB512]

JOHN BERGE: We're really in an exploratory process. You know, we've had a very good series of conversations with the Oil and Gas Commission. They are aware of our interest in doing this and we've had infrequent but have had some conversations with the company. We would hope to be working in partnership with both. We know that the Oil and Gas Conservation Commission will be doing monitoring as well of this site and we would probably mimic much of their monitoring, although we would be much more frequent, for example, real-time data collectors where I think they're going to do it much more infrequently. So in terms of the contaminates that we would be testing for, that's still a work in progress. We've also had some questions about the location of this well. We have not chosen the location as of yet. Obviously, we work in partnership with landowners. Given the number of people in this hearing and the number of people we've heard from, I don't think it's going to be hard to find a partner to host such a monitoring well. But we have not determined a location yet because we're waiting for a final disposition of the application. [LB512]

SENATOR HUGHES: That was...one more question. So you do not have any monitoring wells in the vicinity at this time? [LB512]

JOHN BERGE: There are some monitoring wells up there, Senator Hughes. They would not necessarily lend themselves to this type of monitoring. What we're talking about here would



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require some real-time recorders to be placed in the monitoring well which might require a larger bore. It would also require some telemetry either via Internet, satellite, or cellular technology to be able to communicate that information back to the office real time. So I think that what we're talking about here is going to require likely a new well or a complete reconfiguration of an existing well. [LB512]

SENATOR HUGHES: Thank you. [LB512]

SENATOR SCHILZ: Thank you, Senator Hughes. Any other questions? Senator McCollister. [LB512]

SENATOR MCCOLLISTER: Thank you, Mr. Chairman. John, what can you tell us about the geology of that area and whether that to the extent the well would interface with the aquifer? [LB512]

JOHN BERGE: Well, we know the depth of the well. Well, first of all, we know that DEQ has said that...and forgive me if I misquote this. I'm certainly not trying to mislead. But I believe that something that I read said that this material would be injected to a level of about 6,000 feet. We know that this aquifer up in that neighborhood, it's commonly suggested that this is on the deep Ogallala Aquifer. There's some question as to whether that's the case or not. There's a lot of fractured, more shallow aquifer up there as well. That's not trying to take away any of the arguments from those that have talked about the Ogallala Aquifer. All of our aquifer systems at some level have some interconnectivity. So...but just to give you an answer to your question, Senator McCollister, we know that this pipe, this casing that is heading down to that 6,000-foot depth goes through the aquifer. We know that that casing has been tested for a particular pressure. I can't recall what the pressure is. It's in the application. But it's been tested for that pressure in order to test the voracity of that casing for this type of material. We know those things. We know that it's tested well, at least that's what we've been told. We know that that will probably be much of the discussion that's held at the commission hearing in a week or two. What we also know, however, is that there are times that things can go wrong and one of our jobs as an NRD is to the extent possible to protect groundwater quality from potential issues. We work all the time with municipalities on wellhead protection programs. For example, we work with municipalities to put risers around wells or with landowners to put risers around wells to keep chemicals out of the aquifer. This would be very similar to that. My board has not taken a position on the overriding project. They don't see that as their position to take given our statutory authorities. But given the statutory confines in which we are existing, if this project does get approved, that's what we're trying to protect. The geology up there as much of you might imagine, it's not only are we talking about perhaps a fractured aquifer or the deep Ogallala, we're also talking about a sandy sort of full of gradient type of soil system. So there is a potential for

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stuff, for lack of a better word, to travel and to travel deeply in the event that there was a spill. There's also the potential in the event that the casing was to fail or there was a crack or some other sort of breach, there is a potential for it to enter where we don't want it to enter. [LB512]

SENATOR McCOLLISTER: Thank you, John. [LB512]

SENATOR SCHILZ: Thank you, Senator McCollister. Senator Schnoor. [LB512]

SENATOR SCHNOOR: John, this is Senator Schnoor again. Do you know, has this process been used anywhere else throughout the nation? [LB512]

JOHN BERGE: I was told by the Nebraska...this would be a much better question asked of Bill or Stan from the Oil and Gas Commission. I've been told that there's a number of these sites in Nebraska. And I can't verify that for you, but I've been told that. I believe that this is the first. It's certainly the first one of its kind that's been proposed since I've been at the NRD, and granted I've not been there but two years. So this is something that happens. Senator Stinner mentioned the example of Ohio where they are injecting this kind of...the same kind of material in Ohio from development that's going on in Pennsylvania. We think, at least I would assume, this is my supposition, nobody else's, but I would assume that this is a relatively common practice. You know, as this has become a bigger issue out here, there's been reports in the media of these types of wastewater disposal sites with varying degrees of success in other states. So I couldn't speak specifically to it, but I would imagine the Oil and Gas Commission could. [LB512]

SENATOR SCHNOOR: Okay. I'll save the rest of my questions for them then. Thank you, John. [LB512]

SENATOR SCHILZ: Thank you, Senator Schnoor. Any other questions for Mr. Berge? Seeing none, Mr. Berge, thank you very much for your testimony. [LB512]

JOHN BERGE: Thank you very much. [LB512]

SENATOR SCHILZ: Next support testimony from Scottsbluff. Good afternoon, sir. [LB512]

BOB COX: (Exhibit 2) My name is Bob Cox, C-o-x. I'm a rancher. I live 12 miles southwest of Gering, Nebraska. I'm very familiar with oil and gas production and I support Senator Stinner's efforts to somehow regulate this well if it indeed is going to become a reality. The proposed bill that Senator Stinner has advanced would regulate this by taxing the disposal at the rate of 20 cents a barrel. Most semitrucks that run up and down the highways of the state of Nebraska are

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limited to 50,000 pounds of cargo. Water is normally presumed to represent approximately 8.5 pounds per gallon, thus, a 50,000 gallon tanker would contain about 5,882 gallons. Twenty cents a gallon is woefully inadequate. That's only \$28 per semi. Twenty-eight dollars per semi in today's world is a drop in the bucket. The water that is going to be dumped there is not going to be generated in Nebraska. It will come from Colorado primarily and also from eastern Wyoming. The question becomes whether we should accept wastewater from another state when we are not currently generating any significant amount of this on our own. I'm not opposed to oil and gas production. Over the years from the early 1950s to the 1970s, we've had 15 oil wells drilled on our ranch. What I am very familiar with is the treatment that oil producers and drillers provide to the land. They're in to do one job, to do it well, and they're also in there to do it quick, cheap, and dirty. They don't care what they leave behind. The wells that are generating this water in Colorado and Wyoming produce a severance tax to the states that they're produced in. Nebraska also has a severance tax. Part of that severance tax goes to support the Oil and Gas Commission, but the majority of that money just goes into the state General Fund. I don't think that's right. I think that if a severance tax is to be distributed in this state, it should be distributed primarily to the counties where oil and gas is produced. We have three primary highways that are going to be affected by this--Highway 71, Highway 26, and Highway 29. Highway 29 would have the brunt of the traffic. A hundred sixty trips by a semi per day on that road is going to create significant damage, and a \$28 per truck fee per day is not going to be able to cover the damage that's created. I don't know if it's legally possible for Nebraska to prohibit this disposal well. In addition to being a rancher, I also served ten years as a member of the environmental control board which regulates the Nebraska Department of Environmental Quality, so I'm very concerned. I consider myself to be a good steward of the land. This is something that needs to have a real close look taken at it. Thank you. [LB512]

SENATOR SCHILZ: Thank you, Mr. Cox, for your testimony. Are there any questions? Seeing none, thank you very much for your testimony, sir. We appreciate it. Next supporter from Scottsbluff, please. Good afternoon. [LB512]

SANTANA TAMARAK: Good afternoon. My name is Santana Tamarak, S-a-n-t-a-n-a, Tamarak is T-a-m-a-r-a-k. I've been a retailer in this valley since 1977. Okay. My concerns have to do with the state's responsibility to wastewater management, having to do with how are our state officials and inspectors going to be trained. This is relatively new processes that we're beginning to examine. For example, testing of the pipes and the wells, what the quality of the...and ingredients of the pipes might be and what sort of testing facilities we need to put in place in order to check for any incursions there. Also, the fact that the materials themselves are designed to penetrate geological formations. And as such when we're looking at one year, two years, five years, ten years down the road as was mentioned earlier that, you know, those incursions are going to be likely. And how do we test for that? What equipment do we need to make those tests possible? How often do we do that examination? That migration can be quite difficult and complicated to

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manage and to examine. So between training of our state officials and instrumentations and like that, also what is the funding that we have in place or need to have in place in order to provide us with the safety that we all expect, you know, for the quality of our state and our water. I would hate to see us get to the point where we just throw up our hands and say, well, let's do it and see what happens. Okay. That would be an inappropriate response to our communities and to the work that we're trying to do. Okay. Thank you. [LB512]

SENATOR SCHILZ: Thank you, Mr. Tamarak. Any questions? Senator Johnson. [LB512]

SENATOR JOHNSON: Thank you. A question. You've talked quite a bit about testing, you know, testing the pipes and the whatnot and we've talked about monitoring wells. Are you aware of what...if there's any monitoring of the water that comes in so we know exactly what's being deposited and how much...if we have any opportunity to stop any of it if there's some product in there that we know would be overly hazardous, the water, or wouldn't separate? [LB512]

SANTANA TAMARAK: Complex question, and in view of what other states--Oklahoma, Ohio, California--are currently examining this exact kind of issue. And it's very difficult to...when you have your first incursion into pipes and you have your first six months to a year, it's fairly easy to monitor where that affluent is. Once it begins to degrade and migrate out of that particular area, then it becomes far more difficult to determine, you know, where it's going, you know, the various fracturing components of the aquifer, make that even more problematic. When we add that to the amount of pressure that's being done, you know, the pressure that's used to push the affluent down in there, that pressure can also vary. And I think we have to be careful as to what amounts of pressure we allow in this process and where we set limits on that to minimize any problems. Hope that answered your question. [LB512]

SENATOR JOHNSON: Okay. Part of my question, it was complex but part of my question, when we talk about the wastewater, do we know what's in that wastewater coming in? [LB512]

SANTANA TAMARAK: No, we do not. No, we do not. And once again, that makes it very difficult. Some of it's considered proprietary information. So it does make it difficult for us to do proper monitoring. If we're looking for just nitrates, for example, or possibly one or two other chemical components, that's all we will find or not find. When we have a better understanding of what is in the wastewater, then we can design tests to monitor for five, eight, ten, 15 different compounds. [LB512]

SENATOR JOHNSON: Thank you. [LB512]

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SENATOR SCHILZ: Thank you, Senator Johnson. Any other questions? Mr. Tamarak, thank you very much for your testimony. We appreciate it. [LB512]

SANTANA TAMARAK: Thank you. [LB512]

SENATOR SCHILZ: Next testifier from Scottsbluff. And then after that we will take five testifiers from here in Lincoln. Good afternoon, sir. [LB512]

DAVID BAUER: My name is David Bauer. I was born and raised in southern Sioux County. Recently moved back here three-and-a-half years ago to take care of my... [LB512]

SENATOR SCHILZ: Mr. Bauer? Mr. Bauer, could you please spell your name for us? Thank you. [LB512]

DAVID BAUER: Oh, sorry. [LB512]

SENATOR SCHILZ: That's okay. [LB512]

DAVID BAUER: David, D-a-v-i-d, Bauer, B-a-u-e-r. [LB512]

SENATOR SCHILZ: Thank you. [LB512]

DAVID BAUER: I recently moved back here three-and-a-half years ago to take care of my 94-year-old uncle on his ranch. We live about, as the crow flies, 15 miles east of where this proposed well is. I have a property in Texas where there was extensive fracking and disposal well down there, and there was three aquifers, and I paid to have a water well for my personal use drilled down to the sweeter Trinity aquifer. When they started fracking and the disposal around there, the water that I had in...my dishwasher started to calcifying up the dishes. So...and I had the water tested and so someplace one of those wells or maybe the vibration from the fracking process because one fracking well was just about 300 to 400 yards from my place. Anyways, I had the water tested. Instead of the Trinity Water aquifer, it tested like the bitter Paluxy water up above. So...and once that happens, you can't get the oil companies to admit to any wrongdoing or to fix the problem. And it's been a nightmare in the Dallas-Fort Worth Texas area since they started it. My dad drilled water wells for himself on the ranch with one of those old hammer drill-type things, and our structure here is just basically layers of soft sandstone and then thin layers of hard sandstone, which their proposal is to have a pit to skim oil off of and then if they put a pit in there like that, that could easily sink down through that sandstone layers in a short period of time because if they don't line it properly or if they puncture the liner or something like

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that, we'll have problems from above as well as this seal. This well here was drilled with the intention of pumping oil out for exploratory purposes, and from what I've seen, the casings on it aren't near designed what I've seen other fracking wells for the extensive layers of seals and stuff like that. So I think we're looking at a nightmare if we allow this to go forward. [LB512]

SENATOR SCHILZ: Thank you, sir, Mr. Bauer. Any questions? Senator McCollister. [LB512]

SENATOR McCOLLISTER: Thank you, Mr. Chairman. What compounds, sir, did you see coming from the well that you drilled in Texas when you saw the contaminations? [LB512]

DAVID BAUER: I just had a guy come out and test it and he said this doesn't test like the Trinity water, it tests more like the Paluxy water. So I didn't see compounds. He did say there was arsenic in there and that is one of the compounds that I understand is in there. There's a lot of other compounds that, you know, the oil and gas industry use. Plus we have uranium mine up at Crawford, which I've been told that's underneath of all of our down deep, and so if you start pushing pressure down there you're going to start pushing uranium up too. [LB512]

SENATOR McCOLLISTER: Thank you very much, sir. [LB512]

SENATOR SCHILZ: Thank you, Senator McCollister. Any other questions? Seeing none, Mr. Bauer, thank you very much for your testimony. We appreciate it. Okay. We will now move here to Lincoln for the next five testifiers, and so some...if the first person in support of the bill will come up, we'll take that. Thank you very much. And we'll get back to you in Scottsbluff in just a little bit. [LB512]

KEN WINSTON: (Exhibit 3) Good afternoon, Chairman Schilz and members of the Natural Resources Committee. For the record, my name is Ken Winston, K-e-n W-i-n-s-t-o-n, and I'm appearing on behalf of the Nebraska Sierra Club in support of LB512. And we wanted to start off by greatly...by stating our appreciation to Senator Stinner for introducing this legislation and for his forthright comments about the process and the fact that this was something that he did some investigation on and his efforts to respond to the interests of the people in the community. The primary thing that we're asking for is for the Legislature to establish a moratorium on the importation of fracking wastewater into Nebraska and any new permits to dispose of such wastewater until adequate safeguards can be put in place to protect the interests of the residents of the area, the financial interests of the people of this state, and our land and water, particularly our precious Ogallala Aquifer and our drinking water. And then I guess there's just...I'm not going to read my whole statement because I know I don't have time, so I want to just try and hit on some various points. First of all, Nebraska is the breadbasket of the nation. I've heard that said many times. I remember Senator Carlson in particular, former-Senator Carlson used to wax

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episodic about that and I know that at least four members of this committee are engaged in agriculture. And so I know that's something that all of you take very seriously. And agriculture has been very good to this state. We have one of the lowest unemployment rates in the country and we weathered the recent recession much better than much of the country and agriculture was a big part of that. And water is vital to agriculture. And even if this particular well wouldn't contaminate an aquifer, one of the concerns that we have is whether this would set a precedent. If we don't figure out how to do this right at this time, are we going to have lots more of these happen in the state? So we're very concerned about the potential of this being a precedent. Then, secondly, we have a lot of financial concerns. You've heard some already today from the NRDs and from the folks in the community about their financial concerns, and Senator Stinner also mentioned some of the financial concerns. One of the things that hasn't been mentioned, would the company have the ability to cover a spill or if they had an accident on the road. Are these trucks going to be bonded? Is there going to be financial assurances? Are they going to be required to...and what would be the appropriate level of those kinds of things? So we think you need...all those things need to be put in place before something like this happens. And then, of course, there's the cost of damage to things like roads. Then the next thing is regulatory concerns. Is the Oil and Gas Commission the right entity to oversee this kind of process? The mission of the Oil and Gas Commission is promotion of the production and development of oil and gas. Well, this really isn't about production or development of oil and gas; this is about disposal of a hazardous material. So we're thinking that perhaps DEQ would be a better agency to have charge of this. And then there's a number of documented dangers and there's been recent reports. There's just been a ton of stuff in the news recently about fracking and disposal of fracking materials. They've been implicated in contamination of aquifers in California, Pennsylvania, and Texas. And then there's the question about earthquakes. I mean, it seems absurd in Nebraska to be talking about earthquakes, but when I read in the World-Herald, which I hope is a reliable source of information, that there were 574 earthquakes with a magnitude of 3 or greater last year in Oklahoma, and in 2008 they only had two. And Nebraska has only had, I believe, five in the last ten years of that level. Well, it's cause for concern. We need to make sure that we know what we're dealing with. Then we don't know the contents, as one of the previous testifiers indicated, we don't know what's in it. So I think we ought to be able to know those kinds of things. And then local concerns. There's already been some discussion about that. The fact that it would go by schools, the impact on roads, the potential to impact the NRDs' territories, their right to protect groundwater. So all those things need to be taken into consideration. And then there's the question about whether the Oil and Gas Commission needs to consider any of the local concerns. And my reading of the regs is they don't necessarily have to. And we think they ought to have to be aware of...be required to consider those concerns. And the local folks ought to be able to put their provisions in place. So if I could just complete my testimony, I've got like one more sentence. So since there's many questions that need to be answered and many of the things that need answers have negative answers, we think that the

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Legislature should put a moratorium on this until those issues are addressed. Thank you, Senators. [LB512]

SENATOR SCHILZ: Thank you very much, Mr. Winston. Any questions? Senator Friesen. [LB512]

SENATOR FRIESEN: Thank you, Senator Schilz. Do you support this bill then with changes? [LB512]

KEN WINSTON: We would support the bill if it were modified in the...I guess...here's what we would like to do. We'd like to spend some time working with the committee and your able committee counsel and with Senator Stinner, he's indicated that he thinks there's probably some more things that need to be done. And the testimony so far from the folks in Scottsbluff, I'm finding some very interesting things that they're saying. I think some of those things ought to be incorporated. So, yes, we'd like to see legislation pass this session. [LB512]

SENATOR FRIESEN: Okay. Thank you. [LB512]

SENATOR SCHILZ: Thank you, Senator Friesen. Any other questions? Seeing none, thank you very much for your testimony. [LB512]

KEN WINSTON: Thank you. [LB512]

SENATOR SCHILZ: Next testifier in support here in Lincoln. Good afternoon. Welcome. [LB512]

MARY PIPHER: (Exhibits 4 and 5) Hello. Thank you. I'm Mary Pipher, P-i-p-h-e-r. I live in Lincoln. Thank you for hearing my testimony today. I'd like to begin by referencing what is now happening in California. For years, their regulators, government officials, and gas and oil people reassured citizens that the fracking in the state and the wastewater disposal of fracking materials was well-regulated and safe. However, in February of this year in a time of extreme drought, Californians discovered that their very limited freshwater aquifers contained poisonous materials including arsenic and thallium, which is used in rat poison. Benzene, toluene, and other harmful chemicals in fracking fluids are also present in what the environmental quality for the state of California's commission is calling its toxic stew of drinking water. The Center for Biological Diversity in San Francisco reports that these aquifers may now be irreparably contaminated. Ladies and gentlemen of this committee, what are we doing allowing unregulated disposal of fracking wastewater through the Ogallala aquifer? What could possibly be in it for the citizens of



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this state that equals the risk we will be taking? No doubt the regulators in California also reassured citizens that everything was going to be fine. No doubt the oil and gas companies reassured citizens about the safety of their procedures. And yet what has happened in California happens again and again in this country. Water supplies are destroyed and land is laid waste so that somebody can make a profit. Bill Sydow of the Nebraska Oil and Gas Commission prefers to call this water "produced water" and says it is no more hazardous than the products under our sinks. Well, I looked under my sink and half the products there were marked hazardous or poisonous. Of course, we do not know exactly what is in this "produced water" because the gas companies will not tell us, claiming trade secrets or proprietary information. Who should be more entitled to this information than the landowners and the first responders in the areas where fracking is occurring? Do we really want to trust international oil and gas corporations to protect our state's water supply for generations to come? Don't pipes degrade, especially old pipes in wells? Don't accidents happen over time? Are we not in an area scheduled to have long-term mega-droughts in the near future? Agriculture gives us our history, our way of life, and our thriving economy. Why on earth would we put our water supply and agricultural economy at risk to make a few quick bucks? This is not a complicated issue, but rather an extraordinarily simple one. Will the legislators of this state stand up to big oil and gas and take care of our citizens and our water? I support LB512 as a place owner. I support Ken Winston's recommendation that we have a moratorium on this kind of procedure until we have a great deal more information and regulation. Thank you very much. [LB512]

SENATOR SCHILZ: Thank you, Ms. Pipher. Any questions? Seeing none, thank you very much for your testimony. Next proponent, supporter from here in Lincoln. Good afternoon and welcome. [LB512]

CYNTHIA TIEDEMAN: (Exhibit 6) Thank you. My name is Cynthia Tiedeman, T-i-e-d-e-m-a-n. I'm from Omaha representing the League of Women Voters of Nebraska. And water has always been one of our number one issues with the League. We've done water studies and we really value water. I'm going to take the opportunity, as Senator Schilz said, that I can just say I agree with what the last two folks have said about let's make sure that we're safe before we do anything. [LB512]

SENATOR SCHILZ: Very good. Thank you very much for your testimony. Hold on one second. Any questions for the testifier? Guess not. You got off easy. Thank you very much for your testimony. We appreciate it. Next proponent, supporter here in Lincoln if we have any. [LB512]

\_\_\_\_\_: I just have a question. [LB512]

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SENATOR SCHILZ: Sorry ma'am. We don't take questions from the audience, but if you have testimony to give we'd be happy to hear it. So thank you though. Welcome. Good afternoon.  
[LB512]

NANCY PACKARD: I am Nancy Packard, N-a-n-c-y P-a-c-k-a-r-d, of Lincoln, nearly lifetime member of this state, retired teacher, widow, grandma. I've been interested in water I guess since I lived on a York County farm and had to help irrigate and have paid attention to it. I had a strongly Republican and very conserving father. I'm going to remind you of a Sunday school story. I'm speaking peripherally to this issue, to the bigger issue of water in Nebraska. The story is of Joseph in Egypt, and you remember that Pharaoh had dreams and Joseph interpreted them. And so he said that the interpretation of Pharaoh's dream was that there were going to be seven good years and then seven bad years. So Pharaoh put Joseph in charge and in all of Egypt he collected the grain for seven years. And sure enough, after seven years, there were seven bad years. And the people could survive plus they could make money selling grain to the nearby nations. I think of that story when I, as I often do, Google Ogallala aquifer, because if you've ever done it right on your screen will pop up numerous maps. And it shows, you know, a broad swath of the United States, and right there in Nebraska in many of the maps is a brilliant blue spot because we have the deepest and the most water. And I feel like it is such a gift, it is such a gift, some would say such a blessing, and we have to take care of it. Now in Joseph's time, you learned your information from a dream from Pharaoh, but in our time we learn it from the news or from Googling it. And the news is full of stories of, I'll say, travesty on our water systems. People have mentioned fracking water in drinking water. We know that there are oil transportation problems, pipelines burst, rivers have oil in them. There's no shortage of bad news about what we're doing to our water. And also someone, one of the recent testimonies mentioned that Nebraska is headed for a drought. If you are like me, 2012 was very scary. I'm a gardener and it was scary. I knew something was different because of the endless dry days and because of the lack of rain. And predictions are that we'll have that again. So there are all kinds of stresses on our water and it is absolutely imperative that we do everything to prevent anything from...in our power from contaminating it. I think...I was trying to think of a way to convey to you and to me of how important water is to us, and we're simply living in luxury and we never have the experience of not having it so we don't know how it would be to not have good water. The only time I can think of is camping when you have just such a little bit of water and you're taking such good care of it. I think the luxury of all of our water makes us not realize the importance of it. I want to say that in every way you can you must preserve our water. It's what brought people here to Nebraska along with the soil. It's what my family came for. I have kids living here, for goodness sakes, and they wouldn't be here if we were as devastated as other states are without resources. I read the news about the Legislature in the Lincoln Journal-Star. I like to read it. And you deal with so many important and complicated issues. But as I think about this one issue of water, it spans all generations from now into the future. It is a huge one. Many of the others will work with a select group of people at this time and possibly later, another select group of people,

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but this is one issue that is an all-time huge issue. So I'm asking you to be so careful of this resource that keeps us all here and that keeps our state functioning so well. Thank you. [LB512]

SENATOR SCHILZ: Great. Thank you, Ms. Packard. Any questions? Seeing none, you did a great job. Thank you very much. Further testimony in support here. Come on up. And then after this testifier we will move back to Scottsbluff. Good afternoon. [LB512]

EMILY LEVINE: Good afternoon. I'm Emily Levine, E-m-i-l-y L-e-v-i-n-e. First, I'd like to thank all of your for taking this so seriously as it should be. And I'm real nervous because I don't do this, but it's important so I'm here. I also support a moratorium on wastewater injection wells from the fracking process. My basic question is, is there any reason why the state should accept wastewater from other states? And I can't think of a single one. There are, as we've heard, numerous reasons why we should not. There's only risks for us. First point, no company should be able to inject dangerous chemicals into our precious soil and water without Nebraska being able to know what those chemicals are. I find the argument of proprietary interests on the company's part absolutely unacceptable. If they won't tell us what it is, we should not take it. Contamination of our aquifer cannot be cleaned up. Once these dangerous chemicals are in there, they can never be cleaned up. In terms of financial arguments, I don't think one penny of our state tax dollars should go to monitor these injection wells, to repair the roads that will be destroyed, to attempt to clean up what will happen. The taxpayer should not have to give up 1 cent for any of that. If a company wants to make a profit, they should pay for the risks involved as well. If you want to know what can happen to rural roads from truck traffic like this, take a look at western North Dakota, and it is a disaster up there. Senator Schnoor, who's not here at the moment, I believe asked what was in this wastewater. Again, we don't know. When I first started following the fracking industry a couple decades ago, it was when wholesale fracking in Wyoming started. And the ranchers could not keep those companies from coming in and drilling gas wells on their land. And I'm not sure just how the wastewater was disposed of, but there are now thousands and thousands of acres of Wyoming ranchland that are dead. Those livelihoods have been destroyed. That's one thing, but the land itself is dead from the chemicals in that wastewater. Fracking is not regulated, I'm to understand, by the federal Clean Water Act, and that should give us real pause. When this wholesale fracking in Wyoming started, it was mostly due to the corporation Halliburton. And about 15 years ago, one of the highest officers of the Halliburton Corporation was our Vice President, and he made federal energy policy in private in consultation with the oil and gas industry executives behind closed doors. And because of that, fracking has huge exemptions from federal regulatory policy and we should be awfully concerned about that. If we can't regulate it, we can't protect ourselves. I'm a lifelong Nebraskan, 58 years. I love this state. I especially love the western part of the state. I ask you to protect it, to protect the citizens, to protect our water because it is irreplaceable. Thank you so much. [LB512]

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SENATOR SCHILZ: Very good. Thank you. And for being nervous, you did a fine job. So any questions for Ms. Levine? Seeing none, thank you very much for your testimony. [LB512]

EMILY LEVINE: Thank you, Senator. [LB512]

SENATOR SCHILZ: Okay. We will now move back to Scottsbluff. Let me ask a question here first, do we have any other supporters here? One more. We'll wait. We'll move back to Scottsbluff. Two. Okay. Somebody over there. Okay. We'll move back to Scottsbluff now if you don't mind. Okay. Next supporter from Scottsbluff. Welcome to the Natural Resources Committee hearing. [LB512]

JAMES HILL: Thank you. My name is James Hill, that's J-a-m-e-s H-i-l-l. Thank you so much for the opportunity to address the Natural Resources Committee, and thank you, Senator Stinner and Senator Schilz, for proposing the current legislation, LB512. I would like to say for the record that I'm a resident of Gering and that I am employed in Sioux County and have been a resident of Sioux County until recently relocating to Gering. Both my residence and my place of employment would be about 25 miles north of the current issue before the...the project before the Oil and Gas Conservation Commission, and it was accessed via Highway 29. I agree with what most of the other testimony has been. I want to say that I do support the current legislation but feel strongly that there should be amendments. And so, again, Senator Stinner and Senator Schilz, I appreciate that you view this as a placeholder. I'll limit my particular comments as best I can to sections in the bill as it currently stands that I have concerns about. One of these was highlighted by Senator Stinner in your opening comments. I have questions in Section 3, 57-905, various places. Is the Oil and Gas Conservation Commission the appropriate entity to oversee all the permitting, regulation, and monitoring, and perhaps mitigation of accidents associated with this particular effort. I raise that question because I'm very much in support of oil and gas development, both by traditional and nontraditional means, as long as it's responsible. I think we may be taxing the Oil and Gas Commission a little bit beyond its appropriate function by putting the onus of enforcement on them. Moving along, the 20 cents a gallon or a barrel, forgive me, I, too, am very nervous, I'm not sure that that's anywhere close to what truly would be the cost that the state would incur in all in a holistic view. Again, not to waste time on the current issue before the Oil and Gas Commission, but this project that is sort of triggering our concern, if I'm not mistaken, that company has gone on record as saying that they will not carry liability insurance because it's too expensive or perhaps they haven't carried it in the past, but the point being that it's just too expensive to carry liability insurance. That's bad business practice in my book and so, again, I would ask that a reexamination of the amount that the state would assess on these companies bringing outside waste in. When I look at Section 11, Section 5...57-916.01, there's discussion of penalties. Currently, as the draft or the legislation reads, it talks about civil penalties. Penalties for not complying I guess to the collection of this levy. There's some places where it talks about a Class II misdemeanor. Again, in Sections 4 and 5, there's some talk about

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penalties. It seems to focus on monitoring and regulation and sort of, you know, skirting monitoring and regulation concerns and that the levy is basically to offset road damage. I would ask respectfully what about criminal penalties. I'm of an age that I remember very vividly the Exxon Valdez accident. I have in-laws in Montana and so I followed pipeline accidents over the Yellowstone River fairly closely, and I think that all of us would acknowledge no matter how safe an extractive industry it's not a matter of if there will be accidents, it's when there will be accidents. And so there are times that criminal charges might be necessary. So I would just ask you to consider that. One of the things that I have heard both at local, county, and other informational meetings regarding the matter before us deals with that cleanup. And the local and the county entities feel that they're not responsible for cleanup, that either the corporation that's conducting this business or perhaps the state or the federal government will be responsible for the cleanup. Nothing... [LB512]

SENATOR SCHILZ: Sir? [LB512]

JAMES HILL: Yes, sir. [LB512]

SENATOR SCHILZ: Sir, I just wanted to tell you your red light is on, so if you could please kind of wrap up your testimony I would very much appreciate it. [LB512]

JAMES HILL: Sure, sure. [LB512]

SENATOR SCHILZ: Thank you. [LB512]

JAMES HILL: Excuse me very much. And so just in wrapping up, I would say one of the last sections in the bill talks about that nothing in the Environmental Protection Act covers or applies in this case. My whole statement about that is I don't really see a lot of teeth for actual mitigation for an accident here, either on the part of the company or the use of this finance. So, again, thank you. I'm sorry I was long-winded. [LB512]

SENATOR SCHILZ: It's no problem at all, sir. Thank you very much for your testimony. Any questions? Seeing none, thank you, sir. Appreciate it. Next supporter for the bill from Scottsbluff. [LB512]

BESS CARNAHAN: Good afternoon and thank you for the opportunity. My name is Bess Carnahan. I live at 60589 County Road N, Lyman, Nebraska. And I'll spell it for you. First name B-e-s-s, last name C-a-r-n-a-h-a-n. I get all the a's. (Laughter) I'd like to speak in support of your bill with a lot of amendments. I take my hat off to you for at least coming up with something, but

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it's not even really a stopgap measure. At best, this application for this well is ambiguous, contradictory, incomplete, and misleading. I'm going to assume that you all have read the bill. I have it memorized. (Laughter) The application, I mean. The pipe that's been tested up there is common oil field pipe J-55 pipe. It's 25 years old. In the past, J-55 pipe has been known for failures, blowout, corrosion, and rust. The new specifications for J-55 pipe are looking to that so we have a whole new formula for manufacturing the pipe. The information we've had as to the testing of the pipe up there is furnished by the applicant who's done their own testing. I am not against oil at all. Nebraska, I have a little map here, I don't know if you can see, but Nebraska has very little oil play. Where's your monitor there? We only have a little bit in the Panhandle, up around the Harrison area. But yet we're being asked to take billions of gallons of water from Wyoming, Colorado, and as this application said, other places as necessary. And when you get...it starts out by asking for a permission to have a disposal well for the Spotted Tail oil play in Harrison, and then back on page 10 it says Colorado, Wyoming, and other states as necessary. The application also is open ended and asks for as many wells as necessary. They're not asking for one well; they're asking for many. Colorado and Wyoming at this time have a moratorium on their frack water disposal, trying to come up with regulations and proper disposal methods. We do not know what's in the water. We do know that there are 30 to 40 chemicals, many of which are banned by the EPA. And there are, of course, the proprietary ones that we will never know. And thanks to the Halliburton loophole, for which it's known, the oil companies are not considered...their wastewater no matter what's in it, irregardless it's not considered HAZMAT. There is some conversation in the federal legislature about changing that, but so far it's still stumbling along. The Oil and Gas Commission is another real worry of mine. We heard testimony earlier that they are probably not the right ones to oversee this operation. And I would completely agree. We have Bill Sydow down there who is...I'm not sure of his relationship with the applicant on this wastewater well, but he keeps saying the application is a good one. Yet if you read it, it is a terrible one for Nebraska. Great for the applicant. Marty Gottlob, the geologist and board member for T-Rex, who is the surviving company, not Terex who is the applicant anymore-- they've been gobbled up by T-Rex--he is quoted in the Star Herald as saying the application is poorly worded. I mean, they're finally admitting that. But why is Bill Sydow so anxious to have this flawed application passed? I'm concerned about that. And why does he keep saying that Terex, the applicant, is such a good, experienced company? They are just barely a few months old and they've never drilled a well this big. In fact, no one has a well this big in the state of Nebraska. This is going to be the largest one ever considered for this area. The only people that are in favor of the application and against your proposed bill are those who are going to make windfall profits from the whole operation. So my question is, what's in it for Sydow? I'm really concerned about the back-door part of this operation. And thank you very much again for your time. Does anyone have any questions? [LB512]

SENATOR SCHILZ: Thank you, Ms. Carnahan. Any questions? Seeing none, thank you for your testimony today. We very much appreciate it. [LB512]

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BESS CARNAHAN: Thank you. [LB512]

SENATOR SCHILZ: Next testifier from Scottsbluff, please, in support. Good afternoon.  
[LB512]

BRYAN PALM: Thank you, Natural Resources Committee. My name is Bryan Palm, B-r-y-a-n P-a-l-m. I am a father, a farmer, a rancher, a landowner, and a Sioux County resident. I also have the privilege of representing 700 signatures opposing this well. You've heard lots of testimony and very good testimony for the opposition of this well. The reason for today is to hear testimony on LB512. My testimony on LB512 would be why...it's a good start, like everybody said, but it needs to have some bite in it. Nebraska's attitude has been in the last 20 years, we'll take your waste, we'll just tax you a little. That will cover it. What we need to do is make a bite in it, make Nebraska not a dumping ground for waste from Colorado, from New York, it doesn't matter where. We don't want their waste. And if they want to dump it here, really tax them, not \$20, 28 cents a barrel. I mean, make it hurt. Thank you, committee. [LB512]

SENATOR SCHILZ: Thank you, sir, for your testimony. Any questions? Senator Schnoor.  
[LB512]

SENATOR SCHNOOR: Bryan, just a little clarification, you are in favor of this bill, because you talked about being in favor and opposed as well, so I just wanted to clarify that. [LB512]

BRYAN PALM: I'm in favor of the start of the bill. I think it needs to be stricter and amended.  
[LB512]

SENATOR SCHNOOR: Okay. So I guess I understand that you're opposed to this going on at all, but you want something to be done to regulate it. Is that kind of how I'm understanding this?  
[LB512]

BRYAN PALM: Yeah, yeah. What our concerns are, I live...I have property north and south of the proposed site. I live on the highway. I have friends, family, people that work for me that live on this Highway 29. It's not a very big highway, and it's not going to support 160 trucks a day.  
[LB512]

SENATOR SCHNOOR: Okay. Bryan, do you know who owns these wells? And I'm assuming these are old abandoned oil wells, am I correct? [LB512]

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BRYAN PALM: Yeah. It's an abandoned oil well and to the best of my knowledge Terex Company, which is now T-Rex Company has obtained the well. [LB512]

SENATOR SCHNOOR: Okay. So these aren't owned by local ranchers? They're owned by a big corporation? [LB512]

BRYAN PALM: No. The well itself to the best of my knowledge is owned by Terex Corporation. [LB512]

SENATOR SCHNOOR: Okay. Thank you. [LB512]

SENATOR SCHILZ: Thank you, Senator Schnoor. Any other questions? Seeing none, Mr. Palm, thank you for your testimony. [LB512]

BRYAN PALM: Thank you. [LB512]

SENATOR SCHILZ: Next testifier in support from Scottsbluff. [LB512]

ROSEMARY ENLOE: Good afternoon. [LB512]

SENATOR SCHILZ: Good afternoon, ma'am. [LB512]

ROSEMARY ENLOE: My name is Rosemary Enloe, R-o-s-e-m-a-r-y E-n-l-o-e, and unlike the other persons who have testified today I'm a transplant. So you can take whatever attitude towards that you choose. (Laugh) I like Nebraska. I liked it from the first day I came here and I prefer to live here till the day I die. I think it's a wonderful place to live and that's my first reason for being a proponent to the oil companies. I want to thank Senator Stinner and Senator Schilz for the rapid response they have given us to when we notified them as to what was happening, they stepped right onto the bat and started a bill. My stance is that we need to finish it. It needs more depth and more investigation before it's completed. But I think it's a good start. I would like to suggest, well, first of all I'm in agreement with the moratorium. I think that that is an absolute necessity for this state to develop more stringent rules and more investigating devices to see what is actually happening and going to happen. In the past, I have been part of citizen groups that the government would put together to help them do some investigating and bring popular opinion into the circle. And I am a very strong proponent of that. I have seen wonderful things come out of these citizen groups, and we would like to present ourselves as a citizen group that would help you to come up with some of the devices and some of the ideas that need to go into this moratorium. I think we've already done quite a bit of research and you have limited time. So it



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could be a win-win for everyone. We would volunteer our time for you. I think that the application has so many errors that, first of all, as an educator I look at it first as the grammatical errors and think who put this thing together. And, (laughter) second of all, I look at the why would someone accept this in this condition to be such an important factor for our state and citizens to have to comply with. Next on the line I think that when other companies apply to this area for permission to come in and opportunity to provide jobs and blah, blah, blah, we have such stringent regulations and we go over it with a fine tooth comb, yet the oil company is expecting us to give them carte blanche and not have any stringent, you know, oh, it's too expensive for us to produce anything if we have to pay a tax or if we have to provide a bond. Every company that operates in this Panhandle has rules and regulations to comply with and they're all trying to make money just like the oil company is. That's the purpose of business. I think that we should start putting oil companies on a standard that simulates a business that has to make money, it costs money to make money, and you regulate it accordingly. If this is too expensive, then you do research to find other avenues for this water that are acceptable. Now there is an auto industry that is starting to develop cars that will run on saltwater. They say this is clean saltwater. Let's expand it. I think that our concerns for our area, our state, are so genuine and so needed and so well-expressed that we implore you to give us that credential. I thank you for your time. [LB512]

SENATOR SCHILZ: Thank you, ma'am, very much. Any questions? Seeing none, thank you for your testimony. We appreciate it very much. Next testifier in Scottsbluff, please. [LB512]

PATTY GOODSCHMIDT: Good afternoon. My name is Patty Goodschmidt, P-a-t-t-y G-o-o-d-s-c-h-m-i-d-t. I am also a Sioux County landowner. I live right on Highway 29. I'm not 75 feet off of the highway. And that little two-lane road with no shoulders cannot support 160 trucks running up and down it today. And as Terex has applied...told their investors, there could be as many as 115 trucks a day. And everybody that's for it says it's just saltwater. Well, if it's just saltwater, why are these saltwater disposal wells catching on fire? There was one in Cheyenne, Oklahoma, last week. And also within the last month, there has been one in Williston, North Dakota. A man was up on the well tank and we was welding and it blew up and he lost his life. Fires from lightning, we are in a prairie region. A lot of lightning flies out there. We have like a neighborhood watch during storms. If anybody sees a fire, everybody is on the phone calling neighbors to help come fight it. The human error is high. There has been truck companies that could not unload. They have dumped their loads down dirt roads. And if a lady wouldn't have been in her yard in North Dakota, they would have never known, but she saw him dump it. There is a million barrels of oil in the Wattenberg Field. And this is where they propose the wastewater will come from. How many trucks will that be? If we let this first well in, we will be the dumping grounds for Colorado, Wyoming, Utah, and other states. I oppose this well and I thank you for trying to put in some kind of regulations so that we don't have to be the dumping grounds for the U.S. There is also a two-year waiting list on wastewater disposal well applicants in Wyoming,

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and that's why they are looking for other places to dump. My first water level is 25 feet. Like I said, I'm not 75 feet off the road. If one turns over with the chemicals that are in it to saturate through the ground, that will be the first one. The next one is 60 feet. The next one is 80 feet. And my well sits at 100 feet. And as the Gas and Oil Commission has so thoughtfully done, they forwarded our letters that we sent to them to Terex Oil Company. And they sent us out a letter. I was just wondering why the Gas and Oil Commission would forward our letters to the applicant so they could respond to us. Some of the chemicals that I have researched that are in this wastewater is lead, toluene, uranium, mercury, ethylene glycol, methanol, hydrochloric acid, formaldehyde, iodine, ammonium bromide, radioactive radium, and chloramine. And that's just a few. I have a list of 600 from different concoctions that they use to drill the wells. California right now is proposing to shut down 140 waste wells from injecting wastewater fluids. They have contaminated seven aquifers and they hope to have them all shut down by October. And I can't understand why they're waiting until then. The spills are increasing. In the Bakken Fields, they have at least one or two, maybe three spills a day. And the people of Williston, South (sic) Dakota, want their town back. Don't wait until it's too late and we have to say we want our water back. Thank you. [LB512]

SENATOR SCHILZ: Thank you, Ms. Goodschmidt. Any questions? Seeing none, thank you very much for your testimony. At this point, we will move back to Lincoln. And I think we've got just a couple more testifiers here. So we'll take those and then we'll move back to Scottsbluff again. Other supporters here in Lincoln. There she is. [LB512]

RONDA RABE HASENAUER: Hi, my name is Ronda Rabe Hasenauer, R-o-n-d-a R-a-b-e H-a-s-e-n-a-u-e-r. I'm a resident and a landowner in Sioux County. And I'd like to show my support for a moratorium on wastewater injection wells and fracking. The problems with LB512, the average over nationwide is 50 cents a barrel. This bill does not cover trade secret chemicals. One percent of the injected water can be chemicals, and with over 650 chemicals that could be used in fracking and end up as carcinogens in our ground. Per day, if they put in 40,000 barrels a day which is what they're talking about, 1 percent comes up to over 14,000 gallons of chemicals per day. And also the spills, right now without...with the trade secrets, if a person gets hurt or gets chemicals splashed on them, the ER doctor has to call a member of the Oil and Gas Commission. And he would call a member of the company to find out what's in there. Meanwhile, the person could be dying, the people who treat the patient could be in trouble also. And I think that the companies need to take total and complete responsibility for spills, accidents, and contamination. I don't think they should be able to use the Governor's HAZMAT emergency fund if it's over \$10,000. They should be totally and completely responsible. Road repairs, we would need an extra lane. Who pays for that? It reduces tourism. We have the National Agate Fossil Beds on that road also. There's no seismic monitoring required. Injection wells can and do cause earthquakes. So who pays for the damages to our houses or, God forbid, a death or an injury. The Oil and Gas Commission should not oversee the oil wells because they have a conflict of

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interest. Monitoring wells monitor basically for chloride, conductivity, and alkalinity which would show if there's an excursion, or in other words, that the water has moved. In Crow Butte, in February, there was an excursion. It's a Class III well. There's no way to clean this up. They did have monitoring wells so they knew it happened. But this cannot only happen when they inject it, it can happen years later. It can happen generations later. So we could be endangering generations, our grandchildren. I guess in conclusion, in 2011, there were 1,000 cases of contaminated groundwater caused by injection wells in six states. Can we learn from these other states' mistakes or do we have to make these on our own? The only way to avoid this is a moratorium on fracking and injection wells. And thank you very much. [LB512]

SENATOR SCHILZ: Thank you, ma'am. Are there any questions? Seeing none, thank you for your testimony. We appreciate it. At this point we will move back to Lincoln for testimony. So we will invite the next supporter here in Lincoln. Thank you, ma'am. Come on up. Welcome, good afternoon. [LB512]

KRYSTLE CRAIG: Hi. Thank you. My name is Krystle Craig; it's K-r-y-s-t-l-e C-r-a-i-g. And this is my son. This is my oldest son. I have four children. This is Anthony. He is 15. And I brought him here for a couple of reasons. One is because this is directly affecting his future. And I want him to understand the process. I want him to be involved, especially when we are making the decisions for his future. And I want him to understand that there are ways that he as a citizen can legally take part and let you guys understand his opinion and feelings on things. Okay, so first and foremost, I am in support of this bill and I am very much appreciative that there was any sort of initiative to form regulations and to help us out. But I second Ken Winston's comments. I think that we need a lot stronger enforcement. There are a lot of concerns and, you know, all of these people have done a very good job of addressing. I guess I am here mostly as a mother. And I thought that maybe it'd be a good visual representation and reminder of the future generations that are also going to be affected by this. So Nebraska is a great place right now. You know, if we keep dumping things, especially unregulated, and Nebraska does become the dumping ground, it's not going to be so nice. People are not going to want to come here. People come here and they come to the city for jobs. But the majority of the state is rural and is for agriculture. And it is the nation's breadbasket. So we need people to come here and farm and create food to feed the world, right, because that's what we're saying we're doing. But nobody is...if the land is dead and it is poisoned, then nobody is going to be able to do that. So if we open the gates here for this, for other states to come and dump their waste here, then who is to say like where it's going to stop? And it's absolutely irresponsible to make this decision without thinking long term. It's a permanent decision that's going to affect a lot of people. And we know that it's dangerous. Our water is scarce as it is right now. So it's very important that we protect the water that we have because once a mistake is made, it cannot be undone. With the hundreds of different chemical possibilities that could be in this water that we are not even aware of, like, it's just horrific to me that that's even...but since we are dealing with that, then we're going to have to do what we can to

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protect ourselves because if they don't have to tell us what's in it, well, then we don't have to accept it. You know, it's really as simple as that. So I am very much opposed to this well in the first place. But I am very in support of this bill. But it needs to be a lot stronger. You know, there's a lot that needs to be done to it. But I appreciate this is a start and we very much need to regulate everything that is going to be put into our land. And the soil is very porous. It absolutely will become a problem. And the brine, it's very corrosive. So there's not really anything that I believe has been developed that can 100 percent keep it under control. And once contamination has occurred, it's--like I said--it's undoable. So let's...please, I would really appreciate it if you would consider the future and the permanence of this decision when you are deciding. So thank you. [LB512]

SENATOR SCHILZ: Very good. Thank you very much for your testimony. Any questions? Seeing none, thank you both for coming in today. Have a good day. [LB512]

KRYSTLE CRAIG: Thanks. [LB512]

SENATOR SCHILZ: Next supporter, proponent, here in Lincoln. Good afternoon. Welcome. [LB512]

KYRIA SPOONER: Good afternoon. My name is Kyria Spooner; it's K-y-r-i-a S-p-o-o-n-e-r. I've spent most of my life living between Lincoln and Omaha, Nebraska. I just wanted to mention there is a fracking well in Clarington, Ohio, that is right next to a stream that feeds into a major drinking water source. A couple of years ago, several trucks caught fire triggering over 30 explosions. These toxic chemicals, of which, many as has been said are unknown, but there are quite a few that are listed as hazardous by the federal government that can cause kidney, liver, heart, blood, and brain damage. These chemicals were leaked into this stream and into the water supply in Ohio. After this happened, the Ohio Environmental Council worked to try and educate citizens and to get laws passed for more regulation and also for more information on what exactly all of the chemicals that are used in fracking so that the fire department, the first responders, the Ohio EPA, and the drinking water authorities could know what they're up against because when this accident occurred, they had absolutely no idea. And I just think that if any good or blessing can come from this terrible thing that happened, it's that it can serve as a warning to us. I think that in Nebraska we're in a unique position where we can...we have the opportunity to create these laws and this legislation for regulation for more information before an accident like this occurs and not after our drinking water has been poisoned. And you don't have to look very far to see firsthand accounts of the direct correlation between hydraulic fracturing, groundwater contamination. Ohio, Wyoming, Texas, Oklahoma, Pennsylvania have all been drastically impacted by this already. And I think that if there is any chance, and obviously from even just the testimonies today we've seen that there is, if there's any chance of contamination to

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our drinking water, we need to put a hold on everything until further information can be provided. So to conclude, I just want to say that as a concerned citizen, I'm completely in support of Ken Winston's proposition for a moratorium on the issue to look into it. [LB512]

SENATOR SCHILZ: Very good. Thank you, Ms. Spooner. Any questions? Seeing none, thank you very much for your testimony. [LB512]

KYRIA SPOONER: Thank you. [LB512]

SENATOR SCHILZ: Do we have any further supporters here in Lincoln? Good afternoon and welcome. [LB512]

RICHARD SAUER: My name is Richard Sauer, S-a-u-e-r. I did want to just say I've been born and raised here in Nebraska. I've lived here my whole life. I love this state. I still vividly remember my 7th grade science teacher talking about the amazing geological feature, the Ogallala Aquifer. I've always had a great sense of pride in this state. And that was a time for me where I had a scientific point of view of why I was so proud of the state. It was a feature I'd never heard about. And it seemed like this underwater ocean of pure fresh water and it was something that was really interesting to me. We've already heard from previous educators. In fact, one mentioned that she was retiring. I'm the opposite end of that spectrum. I'm just getting started. I'm a student teacher getting started here in Nebraska, hopefully teaching science starting in the fall. Really excited about the topic in general, but I just think that accepting wastewater from neighboring states, produced water as they say, without knowing exactly what these chemicals are and a mixture of chemicals, we've got a lot of laws of nature that are working against us, and I would really like to see stronger enforcement. I'm in support of the bill, but like many have said, I echoed my concern and would like to see harsher and stricter regulations on this acceptance of produced water. Most notably, I also would like to call for support on the moratorium on the hydraulic fracturing process before it is encouraged any more here in Nebraska. Thank you. [LB512]

SENATOR SCHILZ: Very good. Thank you, sir. Any questions? Seeing none, thank you for your testimony today. [LB512]

RICHARD SAUER: Thank you. [LB512]

SENATOR SCHILZ: Appreciate it. Anyone else in support here in Lincoln? Come on up. Good afternoon. [LB512]

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MARK HEFFLINGER: (Exhibit 7) Good afternoon, Senators. My name is Mark Hefflinger, H-e-f-f-l-i-n-g-e-r. I'm here representing Bold Nebraska, a statewide nonprofit group. I'm here to read into the record a petition from Bold Nebraska and the Nebraska Sierra Club signed by over 3,600 people. The petition reads: I oppose the granting of a permit for an out-of-state oil company with a questionable track record to export their toxic drilling wastewater into Nebraska, to be injected into a disposal well that would endanger the precious Ogallala Aquifer and our drinking water for thousands of years. The company wants to move 80 truckloads carrying 10,000 barrels per day of pollution destined to be dumped into a disposal well in Sioux County, transferring all the risk onto Nebraska farmers and ranchers. The well would be by far the largest of its kind in Nebraska, dwarfing any of the other 115 existing injection wells in the state. Wastewater from the fracking process would be pumped down directly through the Ogallala Aquifer, posing a perilous danger to this precious underground water source that provides drinking water for millions of people and irrigation for our agricultural economy. Not only does the process of fracking for oil and gas consume huge volumes of water, as many as ten gallons of wastewater created to drill out every gallon of oil, but after it's used in this drilling process, the water is then contaminated and must be disposed of with similar precaution as radioactive waste. In fact, fracking wastewater is often radioactive itself due to solids it picks up underground during the drilling process. What's worse, when it does spill, this wastewater is particularly damaging to agricultural land where the effects can last decades or even generations. The outline of a New Mexico wastewater spill from the early eighties is still visible on satellite photos. Terex, the Colorado-based company trying to...applying to drill the well in Nebraska, wants permission to pump 10,000 barrels of this toxic wastewater down through the aquifer every day. Nebraskans depend on clean water from the aquifer for our lives and our livelihoods. We cannot risk to afford our grandchildren's future by allowing the injection of exported pollution into our soil and through our aquifer. In California, we should note officials ordered an emergency shutdown of these similar fracking wells after it was discovered that regulators permitted nearly 3 billion gallons of wastewater from injection wells to contaminate underground aquifers containing drinking water that was protected under the Safe Drinking Water Act. Nebraska has almost no standards to regulate disposal of fracking waste, which is the reason out-of-state corporations want to dump their wastewater in our state. We say the Nebraska Legislature should halt the dumping of fracking wastewater in our state until we have adequate standards to protect our land and water, Nebraska's lifeblood and key to our productive future. I'm sure folks have spoken about danger of earthquakes. In frack-friendly states like Oklahoma which had 574 earthquakes with a magnitude of 3.0 or greater in 2014 actually eclipsed the state of California for the number of earthquakes last year. A new study from the U.S. Geological Survey also finds that these smaller earthquakes could also be putting fracking zones at risk for major ones. Finally, in addition to the concerns outlined above, local landowners have expressed serious concerns about the volume of toxic wastewater that will be exported in Nebraska with 80 of these truckloads per day passing schools, putting enormous burden on rural county roads these folks depend on for their livelihoods to get their produce and livestock to market. I'm sure you're already aware that

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the county boards of both Scotts Bluff and Sioux County have sent letters voicing their opposition to the proposed fracking well to the Oil and Gas Conservation Commission. And that concludes my testimony. I will be sure to e-mail all of you folks copies of this petition and the signatures and comments that folks submitted. [LB512]

SENATOR SCHILZ: Very good. Thank you, Mr. Hefflinger. Any questions? Senator McCollister. [LB512]

SENATOR MCCOLLISTER: Yeah, thank you, Mr. Chairman, and welcome. The difference between an injection well and a fracking well, what can you tell me is the difference, if you know. [LB512]

MARK HEFFLINGER: Well, I think fracking generally refers to the process of hydraulic fracturing or where you're drilled down and you're doing a horizontal drill like that basically. An injection well is what's created to store all of this wastewater that's produced in the fracking process. And so you're going to end up with about a ten-to-one or some other ratio of water that is used in the process, the original fracturing process that then must be disposed of in some way. And these injection wells then are used to permanently store the water underground. [LB512]

SENATOR MCCOLLISTER: Do you typically have any danger of earthquake with injection wells? [LB512]

MARK HEFFLINGER: I think it really depends on the pressure that's going on. You know, this water will be pumped at a high pressure underground. And I think that any time that you're injecting anything with pressure underground, it has an effect on the fault system and could potentially have seismic activity. [LB512]

SENATOR MCCOLLISTER: Can you give us some analysis of the composition of the fracking waste? [LB512]

MARK HEFFLINGER: You know, that's really difficult. And actually fracking companies try to keep that a trade secret. And the EPA hasn't really even been able to determine with any degree of certainty the exact chemicals that go in. Each company uses kind of a different mixture. But essentially there are chemicals, there's sand, and there's water. And they keep that proprietary. [LB512]

SENATOR MCCOLLISTER: The reason I ask is you characterized it as toxic. [LB512]

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MARK HEFFLINGER: Um-hum. [LB512]

SENATOR McCOLLISTER: And I'd like to see some evidence of that if you have it. [LB512]

MARK HEFFLINGER: Well, it's definitely been shown that benzene is one of the chemicals that they use. And that is pretty well known to cause cancer. [LB512]

SENATOR McCOLLISTER: Yeah. Well, I'd like to...if you've got some analyses of what some of the fracking compounds consist of, I'd like to see them. [LB512]

MARK HEFFLINGER: Sure. I'll look for that. But like I said, these companies don't want to release that information specifically because of the fact that it would cause alarm and folks would not want this to be underneath their homes. [LB512]

SENATOR McCOLLISTER: Well, I would think if we can probably regulate what the materials are disposed of. I mean, it's the responsibility I think of the regulating agencies to take a look at the material. And so we should know that. [LB512]

MARK HEFFLINGER: We absolutely encourage the senators and the Oil and Gas Conservation Commission, the DEQ and everyone to try and get this information from the companies that do this because they've been very reluctant and not forthcoming with that information. [LB512]

SENATOR McCOLLISTER: Thank you. [LB512]

MARK HEFFLINGER: Thank you. [LB512]

SENATOR SCHILZ: Thank you, Senator McCollister. Senator Schnoor. [LB512]

SENATOR SCHNOOR: This kind of, I guess, adds on to Senator McCollister, his questions. You know, this fracking material, it's...and I have no idea what's in it other than what I've been told here, but we are led to believe that this is hazardous waste. Is that true or not? [LB512]

MARK HEFFLINGER: Well, in my research here, you know, we found that toxic...fracking wastewater can be radioactive because of the fact that it's drilled underground. And when it's under this high pressure, it breaks up rock formations underground that have naturally occurring radioactive elements that are down there would never else come up out into the natural environment. But since the water comes down and it comes back up, this radioactivity is



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naturally brought up with it, along with whatever chemicals are used in the fracking process. [LB512]

SENATOR SCHNOOR: Okay. These...and once again, I'm assuming that these are just tankers that are hauling this. If this is hazardous waste, they're going to have to be placarded in a certain way based on the requirements right now for hauling hazardous waste, you know. Do you know, is that being done already? [LB512]

MARK HEFFLINGER: I'm not sure on that, not for this state, no. [LB512]

SENATOR SCHNOOR: You know, because that kind of stuff helps us make a better decision if we have good, solid facts like that to know if this is truly hazardous waste or not. [LB512]

MARK HEFFLINGER: I mean, you know, I feel like the scientific consensus on this is that what is used in the fracking process is not just water and sand. There are chemicals that go in with that. And typically speaking, these chemicals have been shown to be carcinogenous and other...you know, hazardous to health otherwise. [LB512]

SENATOR SCHNOOR: Okay. Thanks. [LB512]

SENATOR SCHILZ: Thank you, Senator Schnoor. Any other questions? Seeing none, thank you very much for your testimony. Is there anyone else here in Lincoln that would like to testify in support of the bill? Anyone else? [LB512]

\_\_\_\_\_: I've already... [LB512]

SENATOR SCHILZ: Yeah. I'm sorry, sir. You've already testified. Thank you very much. Seeing none here, we will move back to Scottsbluff. And we will finish out the supporters there in Scottsbluff now. Thank you for your patience. [LB512]

JENNY HUGHSON: My name is Jenny Hughson, J-e-n-n-y H-u-g-h-s-o-n. My comments will be very brief. I just want to state that I agree with and thank all those who testified today for their very well-researched comments. My husband and I own property that adjoins the proposed disposal well. The Hughson Flying A Ranch was established over 100 years ago. During those 100 years, each generation has pledged to protect our fertile soil, our unique grasslands, and our irreplaceable surface and groundwater. As we prepare to pass this land on to fourth and fifth generations, we depend on you and appreciate your efforts to protect our precious natural resources. Thank you. [LB512]

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SENATOR SCHILZ: Thank you very much, ma'am. Any questions? Seeing none, thank you for your testimony. Next supporter in Scottsbluff. [LB512]

JOE EADS: My name is Joe Eads and I live at 1515 18th Street in Mitchell, Nebraska. My family has some property about six miles south, southeast of the proposed well. [LB512]

SENATOR SCHILZ: Excuse me, sir. I don't mean interrupt you, but could you please spell your name for the record. [LB512]

JOE EADS: Spelling of the last name is E-a-d-s, first name, Joe, J-o-e. [LB512]

SENATOR SCHILZ: Thank you very much. Please continue. [LB512]

JOE EADS: I first of all want to thank you very much for this proposal for the moratorium in LB512. I'm very much in support of this for a number of reasons. And forgive me if some of my comments appear random, but what I'm attempting to do here is not to repeat some of the other people's concerns, but more to focus on some of the issues that haven't possibly been already mentioned. You know, one of the senators mentioned something about toxicity, if this could be...if this water would be toxic. In my opinion, it is. And if someone is stranded on the ocean without fresh water and they are forced to drink saltwater out of the ocean, they will soon die. And the waters that are being placed into this well are several, several times more concentrated in salts than the ocean waters. Another one of my concerns on the well itself is that the well was drilled for a different purpose. It was drilled to extract the oil that might be there. Now they want to use the same well to inject water through it. One concern and one issue that I don't think I heard anyone mention, and that is that the depth of this well, the casing of...the depth of that well's casing is only 604 feet. While the bottom of the lowest freshwater zone is 550 feet; 550 subtracted from 604 leaves about the same distance it is from my front door to where my car is parked. I don't think that's adequate in any way, especially considering the fact that this water is being injected at high amounts of pressure. At the bottom of that casing, there...for every action, there's a reaction. And that water is not only being forced down, but after...down at the bottom of the casing, it's going to try and get out this way. And I'm suggesting to you that 50-something feet of difference there between the aquifer and the bottom of the casing is too much risk to take. You know, having this moratorium I believe is very important that we consider a lot of things in this area. You know, we're being asked to import other states' problems. And they're not even allowing it in their state. I don't see why we should be considering allowing it into our state. And just in the event that it was approved, I certainly believe that it's not unreasonable to ask that the state limit the amount of waters that are imported into the state of Nebraska to be no more than the amount of the waters that are taken from Nebraska and exported to those states. That's all the

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time allows for me. But I thank you very much for the opportunity to tell you of my concerns. [LB512]

SENATOR SCHILZ: Thank you, Mr. Eads. Any questions? Seeing none, thank you for your testimony. Next supporter in Scottsbluff, please. [LB512]

JUDY CHALOUPKA: My name is Judy Chaloupka, J-u-d-y C-h-a-l-o-u-p-k-a. Thank you so much for having this hearing so that we can participate here in Scottsbluff. One of our testifiers talked about the story from the Bible with Joseph and how we had to plan for our future. I would like to tell you a little bit about something that happens in my yard on a regular basis. When I get a leak in my sprinkler system, and it comes out and it bubbles out around this sprinkler. And then as it gets worse, it leaches into the soil and it continues to make a mud hole or bringing out some of the things in my...and ruining some of the things in my yard. And I feel that this is just something that we aren't going to have control of if it's a mile underground. Things like that could happen before we would know that it was happening. And this kind of wastewater wells for our state is not a way for Nebraska to make any money. It's a way for a few people to make money. It's not going to affect Nebraska other than adversely. And I don't see any advantage to our state or our citizens for having something like this within our state of Nebraska. If we were to stop any future fracking wastewater well permits and work to put much more stringent strings on the current ones, then none of this widespread components of the enforcements would have to...would be necessary. We wouldn't have to do that. I don't know why we would bring other states' wastewater or any waste like that into our state. I don't see any reason for it. And I support a moratorium and a great deal of further research on this. [LB512]

SENATOR SCHILZ: Thank you very much for your testimony. Any questions? Seeing none, thank you ma'am. Have a good afternoon. Next supporter from Scottsbluff, please. [LB512]

B.J. PETERS: Anybody else? Come forward, please. [LB512]

PETE GARL: Good afternoon. My name is Pete Garl, G-a-r-l. And the question I had was, they take the wastewater that they're going to put in the ground. If it does contaminate the soil and the water...and out here we have a lot of pivots, a lot of groundwater that gets used for irrigation. We need some hard study; if that groundwater goes into the vegetables, the corn and so forth, and the cows eat it, and does that get passed on down the road to us as consumers of those products? I think that really needs to be addressed, make sure that everybody is safe throughout the United States or wherever that meat would go. That's the only questions or things that I have for you all. [LB512]

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SENATOR SCHILZ: Thank you, sir. Appreciate your testimony. Any questions from the committee? Seeing none, thank you for your testimony. Appreciate it. Further supporters in Scottsbluff. [LB512]

PATRICIA SHUMWAY: Hello. I am Patricia Shumway, P-a-t-r-i-c-i-a S-h-u-m-w-a-y. And forgive me for speaking quickly, but here it goes. I really appreciate this bill, but I do believe it needs a lot of amendments. I'm worried about who would pay the cleanup costs if a breach in the containment occurs, the cleanup costs if a trucking accident occurs. I believe a moratorium is very much needed. I am aghast that hearing today that the Oil and Gas Commission sent copies of letters of opposition they had received to the applicant. That's outrageous. They are obviously biased. I believe that based on this action alone, that commission doesn't deserve the authority to approve this request. It's stated that this committee doesn't need to consider the input of the people in the area. And that's just not the Nebraska way. That really is something that I feel you guys need to change. Concrete degrades, it breaks up over time. I'm thinking that this containment involves concrete. And we all know it crumbles. Pipes break down. This well wasn't made originally for what this is supposed to be doing. What will be done for cleanup when the inevitable occurs? Something is going to happen eventually. It's just not going to be pristine forever and stay the way that this applicant is thinking it might or hoping that it might. I'm worried about the groundwater. If you go to this area there's streams, above ground streams all around in this region. And there was testimony from a gentleman at I believe the Scotts Bluff County commissioner meeting that said it would be truckers, private contractor truckers hauling this stuff. I might be wrong. That's just what I heard. And bless their hearts, I mean, people that have their own businesses is great. But what liability would one business owner be able to cover if something happened near a stream. A gentleman in favor of this, the same gentleman I believe, at the Scotts Bluff County commissioner, he spoke about, okay, this is below the aquifer, the containment. And he said, no one has ever seen water run uphill. Have any of you seen water run uphill? And another gentleman testifying at the county commissioner meeting in Sioux County spoke of how in the 1800s there was a huge earthquake and the Missouri River reversed itself and was going backwards. Sure, that happened in the 1800s, but I am from Chadron originally. I felt the ground move when an earthquake happened. And things can occur. This encasement is 50 feet below where the water is, the aquifer, I mean approximately. That's not a lot of leeway for what's really important for not only our children, but our children's children. And you guys have a lot of responsibility in putting measures in place to have this be, I don't know, something correct and legitimate and that's environmentally sound. And last, I'll say common practice. The gentleman from national resources district, someone, one of you asked if it's common practice. And he said, yes, in other states. Well, common practice doesn't mean that it's a good thing. And I'm just picking something out of the air here, but 50 years ago, it was common practice to have segregation. And that doesn't mean that then it was a good thing. So please do amendments to this bill. And thank you so much for proposing it. [LB512]

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SENATOR SCHILZ: Thank you, Ms. Shumway. Any questions for Ms. Shumway? I see none, so let's move on to further proponents. [LB512]

B.J. PETERS: Anybody else? They're coming. You fill a sheet out? [LB512]

CRICKET SIMMONS: It's back there. [LB512]

B.J. PETERS: Okay. [LB512]

CRICKET SIMMONS: Hello. My name is Cricket Simmons, C-r-i-c-k-e-t S-i-m-m-o-n-s. I'm going to make this short. I didn't intend on speaking, but I've been very agitated about this situation. I feel that water issues are going to be in the forefront in the next hundred years. And I feel as if we are sitting on top of a pot of gold. I feel like our water is even more important than oil. I also feel like, in talking about some of these things, we're considering selling Nebraska's soul. That's how deeply I feel about this. Even when we talk about regulations, higher fees, you know, the companies have to pay more for the roads. I don't even care about that. I don't think this should be allowed at all. I think we should just say no. I've appreciated all the speakers. I've learned a lot today. I really hope you take our thoughts into consideration. Thank you. [LB512]

SENATOR SCHILZ: Thank you very much. Any questions? Seeing none, next proponent, please. [LB512]

B.J. PETERS: I think we're done with that group. [LB512]

SENATOR SCHILZ: Okay. Thank you very much. Are there any more proponents here in Lincoln? Okay. Mr. Peters, are there any opponents to the bill in Scottsbluff? [LB512]

B.J. PETERS: Yes, we do. [LB512]

SENATOR SCHILZ: Okay. Let's go ahead and take some. Do you have a count of how many? [LB512]

B.J. PETERS: And I know we have a couple neutrals as well. [LB512]

SENATOR SCHILZ: Okay. [LB512]

B.J. PETERS: I think it's only one or two opponents. [LB512]

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SENATOR SCHILZ: Okay. Very good. Thank you very much. Please, sir. Welcome. [LB512]

DAVE HAACK: Thank you. Thank you for the opportunity to speak with you today. My name is Dave Haack, D-a-v-e H-a-a-c-k. I've been in the farming and the oil and gas business for probably over 40 years. And the reason I oppose this bill is there's a number of reasons. I don't think that it's really necessary for what we have in place already. As I understand LB512, the reason for it is to generate revenues to assist in monitoring wells and for road repairs for truck damage. I think I need to give you a little bit of background so that you know where I'm coming from on this. The oil business has been in Nebraska since the late fifties, early sixties. Drilling oil wells and fracking of wells has been...this isn't the first well that's been a disposal well in the state of Nebraska. The Sioux County one brought a lot of this to light. And I think a lot of it is from media, a lot of...they have made it fashionable recently to make the oil and gas industry a whipping boy. There's a lot of misinformation that's out there. And to start with, every time you drill an oil well, there's not 100 percent of what comes out of there is oil. Probably there's one barrel of oil and there's probably ten barrels of produced water that comes up with every barrel of oil that's produced. So this water has to be maintained or disposed of in some manner. In Nebraska, in Kimball County, Scotts Bluff County, Banner County, Cheyenne County, a lot of our water is considered fresh that's produced by these wells. However, some of it, once it reaches 10,000 parts per million, that's when it then...they cannot put it in an evaporation pit and it has to be put down a disposal well. As I said, these disposal wells have been around for decades. I own a disposal well, a commercial disposal well in Kimball. I've operated one in the city limits of Kimball for over 20 years. And I have one now that's south of Kimball that I've operated for probably four or five years. These wells are monitored by the Oil and Gas Commission. And the Oil and Gas Commission, they answer to Nebraska Department of Environmental Quality and the federal department through RCRA. These wells are monitored. You have to take pressure readings. You have to keep track of where every barrel of water comes from for those wells. We fill out reports regularly that go to the Oil and Gas Commission. And then they do mechanical integrity tests on those wells regularly to ensure the integrity of these wells. Since the oil and gas industry has been in Nebraska, and that's been since the early sixties, late fifties, there has not been one evidence of one iota of groundwater contamination in all those 60-some-odd years, not one. I don't think I can get through all this in one minute. Okay, the next part of LB512, road repair. If the agreement where every truck that drives on our roads, they would have to pay their fuel tax for every mile that they drive. They pay 25.6 cents per gallon. Now trucks get about four miles to the gallon. So each truck taking a trip across Nebraska pays \$25 to \$28 for each trip that they take. And I don't know if any of you have been on the interstate lately, but you figure how many trucks per day travel that interstate, there is quite a bit of revenue there for road construction, road repairs. And that doesn't include trip permits, oversize permits, load fees, taxes for repairs. So in my just looking at the numbers, the well that I have down there, we dispose probably 400 to 600 barrels of water per day, five days a week. Half of that comes from Wyoming. I'm right in the corner there. Half of it comes from Wyoming, so we're looking at 300

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barrels per day. At 20 cents per day, we're talking \$60 a day, \$1,800 a month, or \$21,600 per year that you'd generate from this bill. And I don't think that's going to even come close to even hiring somebody to monitor these wells, which I don't think we need. Nebraska Oil and Gas Commission, they've had a record of 60-some years with not one, one report of any kind of groundwater contamination. [LB512]

SENATOR SCHILZ: Sir, I see your red light is on. If you could just sum up and finish up with your testimony, very much appreciate it. [LB512]

DAVE HAACK: Okay. Quickly, the company that proposed this well, I talked to the vice president of it. And I says, you know, on my well down there, I don't have people knocking down the doors to come to put water in our disposal well down there. I said how many customers do you have? He said I don't have one customer yet. I said, well, why did you tell all these people that there's going to be 80 trucks a day going up and down this road and putting 10,000 barrels of water down it? And he says, well, they told me that I had to put some numbers, so I plugged a number and I hoped that maybe in a number of years that it might work up to that. But as of right now, they don't have one customer that will be transporting any water to this disposal well if it's approved. [LB512]

SENATOR SCHILZ: Thank you. Sir, let me just stop you there. I know that some of the senators here have a question and maybe that will get some of your other stuff out there. Senator Hughes. [LB512]

SENATOR HUGHES: Thank you, Mr. Chairman. Dave, thanks for coming in and sharing your thoughts with us. I've got somewhat of a technical question. [LB512]

DAVE HAACK: Sure. [LB512]

SENATOR HUGHES: And if you can answer, fine. If not, that's fine. [LB512]

DAVE HAACK: Yeah, I'd be glad to. [LB512]

SENATOR HUGHES: Can you tell me how many pounds of pressure it takes to force this water down a well. [LB512]

DAVE HAACK: It varies per well. Now you know, I can't speak for all of them. There's only, as I understand, there's four commercial wells in Nebraska. I don't know where the other three are. All I know is about ours. And on our well when we initially started, it took everything on back.

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Right now, we probably put around 300 to 500 pounds of pressure for each...for the water that we put down. According to the Oil and Gas Commission, we can put down enough water until it gets to the fracture gradient, which is probably between 3,100 and 3,300 pounds. So we're way below what it would take to get to that point. [LB512]

SENATOR HUGHES: Okay. Thank you. One last question... [LB512]

DAVE HAACK: And I would be happy to answer any questions regarding fracking, the fracking materials that are in there. I have all that information, the difference between an injection well and a disposal well or a...you know, there's not really a thing as a fracking well. There's been a lot of miscommunication there. And I'm hoping that maybe I can answer some of your questions. [LB512]

SENATOR HUGHES: Just one more question if I could, what is the bottom of the water table at your well and what is the top of the oil well? Or what was the top of the oil level in your well when it was active? [LB512]

DAVE HAACK: Our is a disposal well. The water table in our area generally runs around 200 feet. Now on these disposal wells--and, here, I'd like to explain this a little bit--there are three layers of pipes. There's the surface pipe, which that, on every well that's drilled in the state of Nebraska whether it's an oil well, disposal well, whatever, they'll put enough surface pipe to go well below whatever the freshwater zones are. That's one of the things that are checked by the Oil and Gas Commission before they'll even let you drill a well is where the fresh groundwater is. So you start off with a surface pipe that goes down well below the groundwater. Then there's cement pumped into the ground and cement all the way up the outside of that casing. They might drill a hole, eight and five-eighths hole and have a seven-inch piece of pipe in there. And so that void that's in between there is where they cement that up. Then inside of that they have casing that goes down to the zone where they dispose this water in or produce the oil in. And that, most cases in our area, it runs anywhere from 6,000...well, in Cheyenne County, probably 4,500; our area, 6,000; and the further west you go, the deeper the oil is. Then inside of that, there's tubing which this...the tubing is where the water is pumped down into the ground. They have a packer. They perforate the zone. All the water that comes out of the oil wells will go back into the same water zones that it came out of on these oil wells. Or in a case of a disposal well, it will go into the zones where production water normally comes from. It will be injected right back into the same zones. [LB512]

SENATOR HUGHES: Okay. Thank you. [LB512]



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SENATOR SCHILZ: Thank you, Senator Hughes. Any other questions? Senator McCollister. [LB512]

SENATOR MCCOLLISTER: Yeah, thank you, Mr. Chairman. Can you tell us what the typical certificate of analysis, or tell us about the material that you're putting in your well. [LB512]

DAVE HAACK: In our well, I would say...I don't...you know, the chemical composition...you know, when you frack a well, that happens initially when the well is drilled. I'd like to explain a little bit about fracturing, but the water that...I would say 95...probably 99 percent of the water that we put in our well which we truck from Wyoming, we brought it in from Colorado and Nebraska, most of it is production water, which that water is, like I said, it's water that's over 10,000 parts per million and it's considered salt water and it will range anywhere from 10,000 to maybe 80,000 parts per million, which is a lot less than the chlorides and sodiums that are sprayed on highways for ice melting operations on state highways that they're spraying up and down the roads, a lot less. And I don't see anybody with hazardous teams going out there every time it snows to go up there to try and clean up this waste that they're calling toxic waste. If you'd like, I would like to explain a little bit about the fracking process. [LB512]

SENATOR SCHILZ: Sir, hold on one second. Let's see. I know I've got other senators that have questions. Senator Schnoor. [LB512]

SENATOR SCHNOOR: Thank you. If you could, I'd like to hear that a little bit, you know, because I guess we're sitting here in Lincoln in the Capitol, we don't understand what's going on out there. And we don't...I myself don't understand fracking at all. So if you can help us, help to explain it so we can understand this process better so we can make a more informed decision, I'd appreciate it. [LB512]

DAVE HAACK: Okay. Well, the fracking process is not new. Like I said, in Nebraska it's been going on since the early sixties. Basically what fracking is, fracking is the short term for fracturing. What they do is they pump water up to several thousand pounds which will fracture the zone, the oil-producing zone. So what it does is it puts cracks in there. And then they pump sand along with a silica sand. Ninety-one percent of the water that they use in this fracking...of the fluid that they use in this fracking process, ninety-one percent of it is fresh water, seven percent of it is silica sand. So once they get those fractures popped open, you pump that sand in there and that holds the fractures open so that the oil-bearing sands will allow the oil to go to the well bore to be pumped out of the well. Now 2 percent of that water or that fracking fluid, 2 percent of it are other chemicals. They consist of materials like friction reducer which is like a mineral oil, 11 percent of it is KCl, which is potassium chloride, that's to keep the formations from swelling. Eleven percent is guar gum which a lot of you may or may not know a lot of that

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can be purchased at nature food stores and that's used in ice creams and different foods. Probably the harshest thing that's put down there is...there could be some hydrochloric acids. And what those are used for are to dissolve the limestone. And then 1 percent of it is bromine which some of you may or may not know is used in swimming pools or in hot tubs to keep the pH level up. There's another...there's surfactants which are detergents for washing out the well bore. And then 2 percent is borate which some of you may know is borax, is like a laundry booster-type thing. Like I said, the harshest are probably the acids which, you know, you have in household chemicals. CLR or LIME-A-WAY that you use right in your household has acids in it. There's some amines which those are used for like pest controls and, oh, they use it to tan leathers and that sort of thing. And then some soda ash which also is used in detergent. So they keep saying that benzene...basically where the benzene comes in is, when that water, the water that's disposed of, there may be a little bit of hydrocarbons in there, which hydrocarbon have benzene. But so does coffee. You drink coffee every day and it's got benzene in it. And there's some citric acid, you know, equivalent to lemon juice and maybe some inhibitors for corrosion like Clorox and that sort of thing. So basically that's what's in fracturing water. When they frack an oil well, you know, to enhance the oil, a lot of that is dispersed out into the formation. So by the time it comes back to the well bore it's been diluted so it's...there's minute quantities in there. I know that one of you had mentioned something about trucks have to be placarded for hauling this. Basically, it's salt water. It doesn't have to be placarded. You don't have to wear rubber gloves or special suits to haul this stuff. If it did spill, you know, what are you going to do with salt water? Maybe you could put a little lime on it or scoop up the dirt and go haul it off to a landfill. But I mean it's not considered hazardous. DOT doesn't require you to placard your trucks that's hauling produced water. [LB512]

SENATOR SCHNOOR: Okay. And that was my question. And for me, that's more to help give me an idea, get a picture of what's going on out there because like I say, we're sitting back here. I'm not seeing this firsthand, so that's why I was asking those questions. So I appreciate that clarification. [LB512]

SENATOR SCHILZ: Thank you, Senator Schnoor. Any other questions? Seeing none, sir, thank you very much for your testimony today. We greatly appreciate it. [LB512]

DAVE HAACK: Thank you. [LB512]

SENATOR SCHILZ: Next opponent in Scottsbluff, please. [LB512]

B.J. PETERS: I'm not seeing any other opponents, Senator Schilz. [LB512]

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SENATOR SCHILZ: Okay. Thank you, Mr. Peters. Any opponents here in Lincoln? Good afternoon, sir. [LB512]

BRUCE BOETTCHER: Good afternoon. Bruce Boettcher, B-o-e-t-t-c-h-e-r. I'm opposed to this project and I'm opposed to this bill. I don't think it's necessary, just what that guy was saying, to even have the ability to put this wastewater down into our soil. You know, in the Sandhills here, if we have a well that goes bad, we have to cap it. We have to put clay, whatever, down there to keep contaminants from going down here. And these people here are putting wastewater back down into the ground. And I don't think that's right. So I oppose the bill and I oppose this project totally. [LB512]

SENATOR SCHILZ: Thank you, sir. Any questions? Seeing none, thank you for your testimony. Appreciate it. Further opposition. Good afternoon. [LB512]

DANA WREATH: (Exhibit 8) Thank you. My name is Dana Wreath, D-a-n-a W-r-e-a-t-h, and I'm from Wichita, Kansas, and I have a handout. And just very quickly, my background is I'm vice president of Berexco LCC. We're the largest producer of oil in Nebraska. And it says here I have a bachelor's degree in petroleum engineering from the University of Kansas and a master's degree in petroleum engineering from the University of Texas. And we operate in a lot of different states including Nebraska, Kansas, Oklahoma, Wyoming, Montana, Arkansas, Texas, and Colorado. And I believe since I've listened to all the testimony, that I'm the first person to testify so far that actually has a technical background. And I think it points out one of the great difficulties of a legislature trying to resolve industrial policy, especially when there's already existing precedence and existing regulatory authority that's actually very effective. And I wonder if you could turn to the second page. And I think a critical point is right now in Nebraska, there are already a large number of disposal and injection wells. And further, there is a large number of those same wells in Kansas and Oklahoma, Colorado, Wyoming. And further, the company I work for, we operate wells in all those states. And I've personally been involved in permitting injection and disposal wells in every single one of those states. And I will tell you, and I've said it here, the rules and regulations in Nebraska are identical underground to all the other states. And the reason is they're all subject to the rules of the U.S. EPA. There is nothing different in the mechanical considerations, the underground setups in Nebraska versus any other state. And I think what's really hard from what we've heard here today is there's so much confusion and lack of information. I made a list. I have two pages here of things that people said today that are just simply wrong. They lack information. And one of the things that's very hard for people to understand about the oil and gas business if they don't have an actual background in it is how extensive it is, how much precedent there already is, and how much rule-making and process is already in place. The Nebraska Oil and Gas Commission is really the place that folks should be protesting a disposal well. If they don't like this particular disposal well, rather than trying to have the Legislature decide industrial policy on a specific well, what they really ought to do is

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show up at the hearing, the hearing at the Oil and Gas Commission and present scientific testimony why this well is bad or that well is bad. And in a more general sense, disposal and injection wells are essential for production in the state, period. And in fact, the largest producing area in the state is in Senator Hughes's district. We operate an ethanol plant in that area called Trenton Agri Products. We use freshwater right from the immediate area of where the largest oil production and injection operations are in the whole state. And we have intensive injection operations ourselves. Without those kinds of wells, oil production would cease in Nebraska. And all the jobs that go along with it would cease as well. And a lot of people may say, yeah, there's not that much oil in Nebraska. Nebraska produced about 8,000 barrels a day. If you multiply that times the average price last year, that was over \$200 million worth of oil produced. That means jobs, royalty, tax payments to the state, to Hitchcock County, to Dundy County. It's essential that we continue on with the existing operations the way they are, and they're in fact already highly regulated and very competently regulated. I have personal experience and I can tell you that state regulators in Nebraska are not letting us do things that are inappropriate. And it's the same way in other states. And frankly, I was appalled earlier when a witness claimed that Director Sydow might be on the take. That's just absurd. People lack information. And I would encourage people to actually go on the Internet. Read the rules. Look and see how many injection wells there are. And instead of staying back east in Omaha, if you drive out to Benkelman, Trenton, you'll see a lot of wells and you'll see that these operations are, in fact, safe. [LB512]

SENATOR SCHILZ: Thank you, sir. Any questions? Senator Johnson. [LB512]

SENATOR JOHNSON: Thank you, Senator Schilz. I used to live in McCook back in the eighties. And at that time, there was a lot of wells shut down. The price of oil was a factor. Now because of my hometown, Holdrege, there's a lot of oil being transported south of Holdrege from that area. Are these new...the new boom in the industry, is it because of the price of oil or is it because of fracking? [LB512]

DANA WREATH: Okay, I think it probably ought to be clarified a little bit. When you say a boom, it depends on where you're talking about. Within the state of Nebraska, there has been an increase in production in the last few years. That may be what you're referring to. It has nothing to do with fracking, zero. [LB512]

SENATOR JOHNSON: Okay. [LB512]

DANA WREATH: It has to do with improved technology through 3D seismic, to be able to image underground reservoirs and find pools that were previously undiscovered. Now it's certainly true that in Colorado and Wyoming, the advent of modern horizontal wells coupled with fracturing has increased a lot of production. There the fracturing techniques are causing a

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boom. And as another witness said, fracturing has been around since the forties. It was actually invented in Kansas, in southwest Kansas in the late 1940s. So it's not really anything new either. [LB512]

SENATOR JOHNSON: Okay. To clarify, the boom I was referring to is what I've heard from people with the wells in Hitchcock County. And I was just searching for why. So thank you. [LB512]

DANA WREATH: And it really is seismic, not fracturing. [LB512]

SENATOR JOHNSON: Okay, thank you. [LB512]

SENATOR SCHILZ: Thank you, Senator Johnson. Senator Hughes. [LB512]

SENATOR HUGHES: Could you tell me how many injection wells there are in the state of Nebraska currently? [LB512]

DANA WREATH: I believe the total of the injection and disposal wells is around 600. And I'd like to add in Kansas, the number is 16,000, probably half of which penetrate the Ogallala Aquifer already. [LB512]

SENATOR HUGHES: Okay. And they're all basically abandoned oil wells that the oil has been pumped out of and now they're used to put the water back in, is that a fair statement? [LB512]

DANA WREATH: I would say in the vast majority. There are times that people will drill a well specifically for injection or disposal. However, another misconception that we heard today is that that might be constructed differently. But in fact, it would be constructed the same, same mechanical setup. [LB512]

SENATOR HUGHES: So in your background and in your business, I'm assuming...do you ever know that there's been a leak into the aquifer from pulling the oil out of the well or putting disposal water back into the well. [LB512]

DANA WREATH: Okay. To my knowledge, we've never had a leak into the aquifer. But we would know and let me explain why. And it was already alluded to by a prior witness, an opponent. When an injection well is constructed, the first thing that's done is there's larger diameter pipe set typically 400 or 500 feet deep cemented in place. And then within that five-

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inch pipe, let's say, down to 4,000 or 5,000 feet, and then within that tubing that the actual water goes in, well, the state, all states require that the mechanical integrity of that injection system be tested on a periodic basis both before any injection can begin and then on a periodic basis thereafter. Depending upon the well's situation, the frequency may vary. That's up to the state regulators. So we would know if there were any leaks because either we would observe something ourselves through our monitoring of the wells, or when we mechanically integrity test the well, it would not pass. Further, the reason there's never been an incident in Nebraska is the surface casing itself which is covering up the groundwater is three layers removed from the water. There's no way for the water to get into the aquifer anyway, and that's why. That's why there are 16,000 of these wells in Kansas, well over half of which penetrate the Ogallala Aquifer. And you know, I couldn't even tell you how many there are in Texas, maybe 50,000 or 100,000 of them. [LB512]

SENATOR HUGHES: So an injection well is a new hole with new pipe. It's not the existing...the old oil well hole is not used. [LB512]

DANA WREATH: No, that's not correct. [LB512]

SENATOR HUGHES: Okay. [LB512]

DANA WREATH: For example, if you were to go out north of Trenton where there's a lot of water floods, what's going on there is, if you have a group of wells, we drill up a field and maybe there's 50 wells in the field. Then after the initial oil production has waned, you would go in and convert various wells to injection. Let's say every other well. And you would inject water down those wells which would then push oil over to the existing remaining oil wells where it would be pumped out. And that's what's going on north of Trenton right now. So in those cases, we converted the existing older oil wells to injection. However, we did run in new tubing, plastic-lined tubing within the casing designed to resist corrosion from the salt water. So another, among the many erroneous things you heard today, is that salt water is in contact with bare steel. That's false. It's in contact with a plastic-coated steel designed to resist corrosion and then it's mechanically integrity tested to boot. [LB512]

SENATOR HUGHES: Thank you. [LB512]

SENATOR SCHILZ: Thank you, Senator Hughes. Any other questions? Senator Schnoor. [LB512]

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SENATOR SCHNOOR: How is the...you're talking about these lines are frequently pressure tested. How is that done? [LB512]

DANA WREATH: Okay. The way an injection well is mechanically integrity tested is a water truck is brought out and pressure is applied to the annulus between the tubing and the casing. Then it's pressured up to 300 PSI and held there for 30 minutes. And if there is any reduction in pressure then there must be a leak. If it will hold 300 PSI, then you know there are no leaks. And I want to make sure you understand the mechanical construction. So we have a large diameter pipe down to 500 feet cemented in. Then we have 5.5 pipe down to say 5,000 feet cemented in. And then within it, 2.5 inch diameter pipe, that's the tubing. And then down at the very bottom of the well there's a device called a packer which is a sealer so that the water goes down the tubing and it cannot come back up into the annulus between the tubing and the casing. Does that make sense? [LB512]

SENATOR SCHNOOR: Yes. [LB512]

DANA WREATH: So when you apply pressure to the annulus, you're effectively testing the mechanical integrity of both the tubing and the casing. And if that holds, then you know there's no leaks. And that is regulated by U.S. EPA. And it's done in every single state, not just Nebraska. [LB512]

SENATOR SCHNOOR: Okay. I have another question, but I can't remember it now. [LB512]

SENATOR SCHILZ: Maybe it'll come back to you. Senator McCollister. [LB512]

SENATOR MCCOLLISTER: Thank you for appearing. Thank you, Mr. Chairman. We've been talking about the material that we want to import into Nebraska and dispose of. It's been characterized either as toxic or hazardous waste. And the gentleman from Scottsbluff gave us his rendition of what that material is. Would you care to comment on what the material is? [LB512]

DANA WREATH: Certainly. And I would encourage you to ask the Nebraska Oil and Gas Commission this exact same question. And the reality is it's salt water produced from oil wells. And I believe that it is already classified as nonhazardous by the federal government. And the Oil and Gas Commission representative can tell you that. And it is, I suppose like one witness said, if you drink salt water, probably pretty unhealthy. But that does not mean it's hazardous waste, nor does it mean that it were spilled that it would...you know, that people would be out there in white suits any more so than they are when people are applying salt water to the roads here in Lincoln. And I should also say since there's another point of confusion, disposal wells

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like we're talking about here possibly additional regulation of which is I believe not necessary because they're already adequately regulated, is really a different subject from fracturing. Fracturing is a stimulation method that happens over the course of about one or two days in a well's life. The next 30, 40, 50 years, it produces oil and salt water. And that salt water has to be disposed of. And I'm not here saying that we should or should not approve the application for this injection well. That is a subject for the Nebraska Oil and Gas Commission hearing, not the energy (sic) committee of the Legislature. [LB512]

SENATOR McCOLLISTER: Do other states have similar legislation similar to the one, LB512, the bill that's being offered? [LB512]

DANA WREATH: I do not believe so. I'm certain Kansas does not and I'm not aware of such a thing in Colorado or Wyoming. And I would also add that one of the sad facts of this whole case is that I believe that the water-hauling needs to get water out of Colorado and Wyoming have essentially disappeared. They've disappeared because of the oil price downturn. And I'm not just speculating. I actually know for a fact because the company I work for is effectively a competitor of the prior gentleman. And we have a facility in Colorado just south of Kimball along Highway 71 where we want to have water hauled into us because we're starting a water injection project where we have old oil wells and we're trying to put water in the ground to sweep oil out to the other wells, and we're short of water. We got cut off last week. They won't haul us any water. We've spent the last four days calling around trying to find somebody to bring us water into northern Colorado because we can't find any water. So you know, kind of the irony of this whole thing is I would imagine Terex is probably wiped out because I doubt they'll be able to find anybody to haul water into their facility and charge them a fee to take that water because we're prepared to take water for free. And we can't get anybody to bring us water right now. [LB512]

SENATOR McCOLLISTER: Thank you. [LB512]

SENATOR SCHILZ: Senator Schnoor. [LB512]

SENATOR SCHNOOR: You can't bring any water because there's none available? Or you know, we heard some of the testimony from out west that there's a moratorium in Colorado and Wyoming. [LB512]

DANA WREATH: Yeah. Again, more misinformation. There is no prohibition on disposing of water into existing injection wells in Wyoming and Colorado. We're doing it right now today. Now whether or not they're delaying approving new applications, so maybe it's a matter of being precise in your language, that I do not know. What I do know is that there seems to be ample disposal available in southeastern Wyoming, northeastern Colorado right now to the point that



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when we tell people we'll take your water for free, no fee, we cannot get water hauled to us. And that is because there's closer disposal options. They don't want to pay the money to truck it as far as they are. And again, I don't really want to say a whole lot about the immediate...the disposal well, whether it's a good application or a bad application other than to reiterate, that's really something the Oil and Gas Commission should be regulating and there should be scientific testimony at that commission about the merits of that application. [LB512]

SENATOR SCHNOOR: Okay. And you keyed me into what I forgot. You talked about misinformation and you said you have a couple pages. Now we don't need to sit and listen to two pages worth of stuff, but can you share with us a couple of the key elements that will help us to better make our decision... [LB512]

DANA WREATH: Sure. [LB512]

SENATOR SCHNOOR: ...of what you feel we're being misinformed about? [LB512]

DANA WREATH: You may regret asking me this question. (Laughter) [LB512]

SENATOR SCHILZ: If it gets too busy, we'll make sure and cut you off. [LB512]

DANA WREATH: Somebody said it's relatively new, these kinds of wells. That's false. There's been disposal wells since the fifties. The types of materials are new. That's false. It's the same kinds of material. Testing of the pipes, there's nothing new about that. Somebody said it was new, that we needed training for oil and gas regulators. That's false. The oil and gas regulators in this state are highly educated, as they are in other states. Somebody said there's a lack of regulation overall. That's false. The oil and gas business is a highly regulated business and I would encourage you to go on the Web site and read the Oil and Gas Commission's rules. There was an implication that the shallow Ogallala is in communication with the saltwater zone 6,000 feet deep. That's false. They're clearly not hydraulically connected and you can do a...if you look at the pressures in those zones, you can see that they're not. And further, obviously the salt water is not filtering up into the Ogallala otherwise it would be salty already. Goodness, I could just carry on here. We talked about...well, somebody said that these disposal wells could cause earthquakes. That's absurd. The geologic setting in this area is not appropriate to say that there would be earthquakes, otherwise you would have already had some, right? Somebody said that cars run on salt water. That's absurd. In general, one that I marked here, somebody said that Nebraska has almost no regulations to regulate disposals which is why they want to haul that water in. And that is one of the most crowning falsehoods. In fact, the regulations for underground disposal are the same in all these states. If there was--and there was for a while--a lack of disposal capacity in Wyoming and Colorado, and that was simply because the geology

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was poorer, the geology was poorer for being able to make good disposal wells in those areas so they had trouble getting rid of all their water. Now that there's less water, they're able to get rid of it all. And so the notion that somehow we need more regulations because Nebraska is different than some other state, that is false, period. [LB512]

SENATOR SCHNOOR: Okay. Thank you, sir. [LB512]

SENATOR SCHILZ: Thank you, Senator Schnoor. Any other questions? Seeing none, sir, thank you very much for your testimony. Appreciate it. Further opposition for the bill here in Lincoln. Good afternoon. [LB512]

JILL BECKER: Good afternoon, Senator and members of the committee. My name is Jill Becker, spelled J-i-l-l B-e-c-k-e-r, and I appear before you today representing Black Hills Energy. I would like to reiterate our support for the previous testifier, but also talk about a few issues that he didn't cover. First, we believe that Nebraska does have sufficient regulations regarding oil and gas drilling within our state. And I guess I'll back up and talk a little bit about Black Hills Energy. In Nebraska, we are only a natural gas distribution company. But we do have an oil and gas business as part of Black Hills Corporation. A couple of years ago, we did have a few wells in western Nebraska, but we no longer do at this point. We do currently do drilling in Colorado, New Mexico, and Wyoming. So that's kind of the background where I'm speaking from, but certainly don't ask me those engineering questions because I won't be able to answer them. But I'll try. Just a couple points about this specific piece of legislation. I guess I'm going to talk a little bit more about the actual green copy of the bill. We're concerned that this may pull some of our wells that are actually on federal lands in other states into this type...this piece of legislation, and this bill may actually be preempted. There's just some question about how the bill is drafted, that whether those lands that are actually governed by the Bureau of Land Management would actually fall under the...purport to fall under this, but actually the state would be preempted. Secondly, we wonder if this is actually a violation of the commerce clause because it's actually treating out-of-state wastewater differently than the state-generated wastewater. There was some discussion about involvement from DEQ, the NRDs, and the Oil and Gas Commission. And while I can't really speak to that specifically in great detail, I would just mention that certainly in some of our other states, there are multiple entities involved. There may be regulations that you have to follow from the Oil and Gas Commission, but a permit that you have to get from an entity like DEQ. So I think to suppose that they are totally separate is probably actually not accurate. And then I'd also mention something that we are in the process of doing right now in the Piceance Basin. We have filed our applications and received approval for and secured all permits for a process that we will actually be recycling the majority of the water involved in our drilling projects so that the water that we use in one drilling project, we will try to use as much of it into the next drilling project too. So that was just a note that I got here. And my phone is totally dying so I can't read any more of the details about it. But certainly if the

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committee is interested in this issue, I would like to be involved in that process. We would be opposed to this bill being...amendment to put a moratorium on fracking, to do anything really that is too far afield of the green copy of the bill. I don't know how many opponents we may have on the bill. But frankly, if there's only a few of us, I question whether if we go too much further afield that the producers in the oil and gas industry would have had notice of what some of the proponents would really like to do regarding that issue of fracking. So with that, I would be happy to answer any questions and certainly offer to the committee that if you would like to talk to anybody within our company that does the oil and gas drilling, I've got videos on fracking and a lot of pictures about our facilities. I'd be more than happy to offer them to you to provide information. So with that, I'll be happy to answer any questions. [LB512]

SENATOR SCHILZ: Thank you, Ms. Becker. Any questions? Seeing none, thank you for your testimony. [LB512]

JILL BECKER: Thank you. [LB512]

SENATOR SCHILZ: (Exhibits 9 and 10) Further opposition here in Lincoln, opponents. Okay. Seeing none, we do have a couple letters: one from Stu Luttich from Geneva, and one from George Cunningham from Omaha. Just one last time, are there any other opponents in Scottsbluff? We will now move to neutral testimony, so if there's any neutral testimony in Scottsbluff, we will ask them to come to the testifier's table, please. Good afternoon, sir. [LB512]

STEVEN SIBRAY: My name is Steven Sibray spelled with a V; last name is S-i-b-r-a-y. I'm a geoscientist with the University of Nebraska-Lincoln. My home office is here in Scottsbluff, Nebraska. I'm a certified petroleum geologist. I'm also a professional geologist, and I've been recognized as an expert witness in three states: Nebraska, Wyoming, and Oklahoma. I am here today only to talk about the hydrogeology of the site. The university is neutral in this matter in regards to both the legislation and the proposed saltwater disposal well. I'm with the Nebraska Geological Survey, and our job is basically to study the geology of the state. Most of the work we do is in relation to hydrogeology in the high plains aquifer. In 1977, our organization drilled two test holes in southern Sioux County. The closest one...actually, we probably drilled more than that. But near this particular site, we have a well, a test hole that was drilled less than a mile away. It's in the same section. It did not encounter the Ogallala Formation. It did encounter the Arikaree Formation. And that particular formation bottomed out at 280 feet. The Arikaree Formation is different from the Ogallala Formation. It has less permeability. But it is part of the high plains aquifer system which is also known to the public as the Ogallala. But it is different from the Ogallala Formation. Also in this test hole the depth of water was 240 feet. These two factors, the fact that it's the Arikaree Formation with low permeability...or relatively low

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permeability for an aquifer, and the fact that the depth of the water is 240 feet means that a spill at the surface would have to be of fairly large magnitude to reach the water table. In addition, I looked on the well bore diagram that's available at the Nebraska Oil and Gas Commission. And surface casing is set at 600 feet, well below the base of the aquifer. In addition, there's an intermediate string of casing set at--inside this casing--at 7,904 feet. Both strings of casing were cemented to the surface. So if the steel tubing should leak in there, there are at...there's multiple layers of protection. There's at least four layers--two of steel, two of cement--that would protect the aquifer. Okay. In my professional opinion, the risk of contaminating the aquifer is very minimal. In addition, I would say that also the danger of earthquakes is very minimal. And I've worked with the Nebraska Oil and Gas Conservation Commission on and off for 25 years. And I think they are competent enough to regulate this. Currently now, I'm working with the commission and with the NRD on a project and a grant in order to help protect groundwater. Any questions? [LB512]

SENATOR SCHILZ: Thank you, sir. Any questions? Seeing none, we very much appreciate your testimony. Thank you. Any further neutral testimony from Scottsbluff? [LB512]

B.J. PETERS: Anybody left? No hands are going up. [LB512]

SENATOR SCHILZ: Okay. Do we have any neutral testimony here in Lincoln? Good afternoon. [LB512]

STAN BELIEU: (Exhibits 11-13) My name is Stan Belieu, S-t-a-n B-e-l-i-e-u, and I'm here representing the Nebraska Oil and Gas Commission in this matter. I kind of feel like I need to probably give this committee somewhat of a resume of who I am and who we are. So I will begin with that if you don't mind. I've been employed by the commission for 24 years. And I've had the title of deputy director, also UIC director. So my direct responsibility is the UIC program. During the time that I worked for the commission, I've had the opportunity to serve on many national committees that oversee the national UIC program. In fact, the Groundwater Protection Council is the overall association that looks at issues involving the Safe Drinking Water Act. And I've had the opportunity to serve as president, chairman of the UIC committee. And I'm currently serving as president of the research foundation for that. Throughout this role, I've had the opportunity to testify certainly in front of this committee as well committees, the U.S. Senate, U.S. House, and presentations have been made to almost all facets of government on the topic of how oil and gas regulations that come from states are designed to protect drinking water sources. The Nebraska Oil and Gas Commission has been regulating these kind of wells, saltwater disposal wells, for over 50 years. We've had primacy from U.S. EPA since 1986 to do this. We have that for the state of Nebraska. This is our delegated program from the U.S. EPA that we take care of for Nebraska. To do that, we annually negotiate a work plan with Region 7.

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This work plan sets forth program goals and objectives. It talks about well inspections, permitting, all those aspects of the program that are involved in the day-to-day operations of this. The entire purpose of this program is to protect underground sources of drinking water. That's what we do. And I assure you that our rules and regulations in Nebraska, as has been previously testified to, are absolutely as stringent as any other state's. We employ a very dedicated staff that is very committed to enforcing those rules and making sure that these wells are in compliance with every part of the Safe Drinking Water Act. We as an agency are also told by statute to manage all the waste created by oil and gas activities. We, therefore, have to be specialists in that area. To meet this need we attend conferences, workshops, meetings. We participate in software development groups. We're very informed of all these emerging issues that are part of the ongoing technologies in oil and gas development. We're talking about, you know, the induced seismicity earthquakes. We're talking about stray gas mitigation. We're talking about hydraulic fracturing aquifer exemptions and NORM. I can say we as an agency support the essence of LB512. We've always thought that, in essence, it was a good beginning. And as we do, it looked towards looking at some of these emerging issues and how we would deal with these issues and how it would be appropriate. I actually had a list of different things to talk about regarding some of the questions that came up, but I think I got overwhelmed with questions. I thought let me just finish with this, that our statutory authority, the program that we regulate, the oil and gas program are constantly changing. And we believe that we have to constantly be changing to meet the needs of these new technologies and stay up with the technologies and we're here to do that. And as we've appeared before this committee before saying let's see what you guys can do in these following areas, things such as hydraulic fracturing. I think we responded with those rule changes that meet these needs, and we would look forward to respectfully helping with any evolution of this bill as it proceeds and helping in any way we could with that. [LB512]

SENATOR SCHILZ: Thank you, Mr. Belieu. Any questions? Senator Schnoor. [LB512]

SENATOR SCHNOOR: What is the difference, and I don't know if this was ever brought up: an EOR injection well and an SWD? SWD is salt water. What's EOR? [LB512]

STAN BELIEU: Yes, that's correct. EOR is enhanced oil recovery. So they're both permitted under the Class II program. And one seeks to put oil and for, enhanced oil recovery, Mr. Wreath testified about Trenton, north of Trenton. Those types of wells basically recycle water to get more oil out. Saltwater disposal wells ultimately get rid of the water when there's too much water. [LB512]

SENATOR SCHNOOR: Okay. Sorry, I don't know if they can hear me. Out of all these injection wells that are in the state, which I guess compared to Kansas it's very few, but has there ever

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been known, what will I say, known leaks or known contamination, water contamination problems? [LB512]

STAN BELIEU: The current inventory is about 670. And as you said, not nearly what Kansas has. But no, never in the history of the UIC program has one of these wells ever been shown to cause groundwater contamination. [LB512]

SENATOR SCHNOOR: And can you speak for, with any knowledge, of the many thousands of wells in Kansas? [LB512]

STAN BELIEU: I probably shouldn't speak for Kansas. I can speak in a national sense because of my involvement nationally. And nationally, I would say that almost every legitimate expert that's ever studied this would say this is the absolute safest form of disposal. And I'm not aware of any injection wells that have caused aquifer contamination throughout the United States. [LB512]

SENATOR SCHNOOR: Okay. Thank you. [LB512]

SENATOR SCHILZ: Thank you, Senator Schnoor. Any other questions? Mr. Belieu, we've heard a lot about what goes on as far as how this works and everything like that. And we heard a lot of folks talk about a moratorium. Can you give us some indication of if something like that would happen, if it were to happen, it were to come into place, what would be or could be the effect on these local economies, or what's going on in oil and gas here in Nebraska? [LB512]

STAN BELIEU: Well, quite frankly it would be devastating. I mean you have to have a mechanism to get rid of the water. Our rules and regulations require that. I mean that's something that we require and say you have to have these types of wells to get rid of the water. And so all activity, it basically would have to cease. Throughout Nebraska, if you look at the actual applicant on that, it was titled case number UIC14-14. So that was actually, that application was the fourteenth such request that was made in 2014. So this an ongoing program. It's something that's going on all the time. So it would be...it would have a major impact. [LB512]

SENATOR SCHILZ: Thank you, sir. Any other questions? Seeing none, thank you very much for your testimony and your patience. [LB512]

STAN BELIEU: Thank you. [LB512]

SENATOR SCHILZ: Any further neutral testimony? Good afternoon. [LB512]

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MICHAEL CARR: Good afternoon. Thank you for allowing me to speak. I don't really know if I'm neutral or where I am but... [LB512]

SENATOR SCHILZ: Sir, could you please say and spell your name. [LB512]

MICHAEL CARR: Michael, M-i-c-h-a-e-l, Carr, C-a-r-r. [LB512]

SENATOR SCHILZ: Thank you. [LB512]

MICHAEL CARR: I graduated from the Colorado School of Mines in 1957. And I moved to Nebraska in 1961 when the Sleepy Hollow field was being drilled, the largest field in the state. I'm mainly up here right now because I felt a grave injustice was done to the Oil and Gas Commission which I served on back in the 1970s. And they're doing a wonderful job not just because I'm an oil producer, but because they really are. And they're fully capable of doing the right thing. And I don't think you should stop looking into this. I mean I think on behalf of them, they're already doing that. Somebody said something that, don't know what's in it. But I understand there's a Web site where you can find out what's in every frack job. I know that was brought up one hearing before. Last year, I think it was. But I think the commission...and the other thing that bothered me was they talked about big oil. There are not very many big oil companies left in Nebraska. And I've got a little mom and pop organization that my wife and I run. And I take exception to calling us big oil. So that's all I got. [LB512]

SENATOR SCHILZ: (Exhibit 14) Thank you, Mr. Carr. Any questions? Seeing none, thank you very much for your testimony. Any further neutral testimony? We have one letter from Amy Prenda from the Nebraska Water Resources Association testifying in a neutral capacity. One more chance for the folks in Scottsbluff. Is there any more neutral testimony out there? Seeing none out there, too, I would like to thank everyone. And, Senator Stinner, you're welcome to close on LB512. [LB512]

SENATOR STINNER: Thank you. And I realize it's getting late, but I wanted to thank the committee once again for having the first ever videoconference. It's definitely helpful to the people in Scottsbluff and Sioux County and hopefully it was helpful to the committee as well. And I want to thank B.J. and ESU 13 for their participation in making this possible and the people of both Sioux County and Scotts Bluff County who took time out of their day to record some testimony. Thank you very much. Everybody here is for water quality and water sustainability. I mean we've got major legislation pointed that way. I think we understand that. I think there's been a lot of testimony both to and for. For me, I just want to step back, take a look at the testimony, bullet point a few items, and see what we can do as we move forward. This was...this is a place marker for us. So we just want to see what's possible and work with the oil

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and gas people, work with the people out west, bring them all together and try to get some good legislation put together if it's needed, if it's needed. So thank you for your time. [LB512]

SENATOR SCHILZ: Thank you, Senator Stinner. Hold on. Any questions for the good senator? [LB512]

SENATOR STINNER: I know there's none. (Laughter) [LB512]

SENATOR SCHILZ: Thank you, sir, very much. And I would just like to say before we sign off here, Mr. Peters does a wonderful job out there. And thank you to everyone in Scottsbluff that came along to testify today. It really is a moment in history. It's the first time we've ever done this. So thank you very much. We appreciate it. And with that, that will close our hearing on LB512 and we will move on to...oh, yeah. We need to take a break. We're going to take a five-minute break and then we'll move on to LB581. Thank you. (See also Exhibits 15-17) [LB512]

BREAK

SENATOR SCHILZ: Thank you for your patience, everyone. And we will go ahead and move forward now. Senator Nordquist is here and we will open the hearing on LB581. Senator Nordquist, you're welcome to open. [LB581]

SENATOR NORDQUIST: Thank you, Mr. Chairman, members of the esteemed Natural Resources Committee. Looks like we have three hours down and three hours to go here tonight. (Laughter) I appreciate that. [LB581]

SENATOR SCHILZ: Is there a motion to IPP? (Laughter) [LB581]

SENATOR NORDQUIST: I'm state Senator Jeremy Nordquist from District 7 in downtown and south Omaha here to introduce LB581 which would create the Nebraska Clean-burning Motor Fuel Development Act. LB581 would create a rebate program in the State Energy Office to promote the conversion of vehicles to qualified clean-burning fuels. Under the bill, qualified clean-burning fuels would include compressed natural gas, hydrogen fuel cell, liquefied natural gas, or propane. Two tiers of rebates are offered under the bill: first is for motor vehicles with a model year of 2012 or newer or later that are converted or originally equipped with a qualified clean-burning fuel. Those vehicles would be eligible for a rebate of the lesser of 50 percent of the cost, or \$4,500 per vehicle. The second tier is a rebate for new property that is directly related to the compression and delivery of natural gas from a private home or residence for noncommercial purposes into the fuel tank of a motor vehicle propelled by natural gas: for this



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type of property, a rebate of 50 percent of the cost, or \$2,500, the lesser of those amounts. We're seeking \$1 million in appropriations, one-time appropriations as a kick-starter for this. It's based off of legislation, this specific model is based off of legislation in Arkansas. And there are people here from SourceGas who played an active role in that. There are over 30 states that offer some sort of incentive program for natural gas. So while this would be new to Nebraska, there are similar programs all around us and around the country. There were federal incentives for a number of years. I think most of those have gone away. I think we're going to hear from a number of proponents today who this would impact and who are working to move this forward. I've introduced a bill related to CNG every year that I've been in the Legislature since '09. And we've...it's kind of been...the first question I remember, the first question at the first hearing was, well, if these things get in an accident, won't they just explode? And I think we've moved on from the dialogue there significantly to questions about how we can create a more favorable environment. It kind of has been for a while a chicken and the egg problem. It costs a lot to invest in the infrastructure that's needed. It also costs a lot to do conversions, which you have to have a demand to spend \$1 million or \$2 million on a public filling station and you don't...can't supply the fleets, and if people aren't going to make the fleet conversion until there are filling stations. So it's been a slow process. Last year we passed a bill, a tax-related bill to make some tax changes to liquefied natural gas and cost of compression for compressed natural gas. That was one of our first positive steps forward. And I hope that this is another step forward to advance this as an alternative. Certainly we need an all-of-the-above energy approach in our country. And natural gas is certainly a key component of that. I'd be happy to take any questions. [LB581]

SENATOR SCHILZ: Thank you, Senator Nordquist. Any questions? Senator Johnson. [LB581]

SENATOR JOHNSON: As a member of Appropriations, is this a good bill? (Laughter) [LB581]

SENATOR NORDQUIST: I certainly think it should be right up there as a priority, absolutely. It certainly would have to compete with a lot of other appropriation and revenue reduction bills that will be coming to the floor. And we've got to find a way to squeeze all those down into about \$40 million or so that's left. But I certainly would be willing to make the case for this. [LB581]

SENATOR JOHNSON: Thank you. [LB581]

SENATOR SCHILZ: Thank you, Senator Johnson. Senator Friesen. [LB581]

SENATOR FRIESEN: Senator Schilz, thank you. I just have to ask the question, when you talk about clean-burning fuels, why was E-85 like ethanol left out? Is it not as clean burning quite, or is it close? [LB581]

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SENATOR NORDQUIST: You know, I don't know the emissions component of that. I certainly...you know, we've certainly done a lot as a state to promote that and we continue to have the Ethanol Board and fund operations there. I don't know if it makes sense to talk about E-85 as a component of this or to do something similar under the Ethanol Board and under the direction of that entity that we already have established. But certainly... [LB581]

SENATOR FRIESEN: I was just curious. I mean, under "qualified clean-burning fuel," you limit... [LB581]

SENATOR NORDQUIST: Right. Yeah, I'm not sure about the... [LB581]

SENATOR FRIESEN: ...it pretty specifically. [LB581]

SENATOR NORDQUIST: You know, this was kind of a, we've got to get this off the ground. I think people would argue we probably need to do the same for access to E-85 too. But I think for natural gas I think it's getting closer to a tipping point of being able to make that change. But a lot of other states have made public investments, and I think we have. We've been a little slow to that game to make the public investments speed up, the tipping point. There are a lot of businesses that want to make the conversion. There are a lot of businesses...actually one of the biggest composite businesses that are making the fuel tanks for these things is here in Lincoln. It used to be called Lincoln Composites. I'm blanking on the name of it now. But we have a lot stake in the game here on this as well. [LB581]

SENATOR FRIESEN: Okay. Thank you. [LB581]

SENATOR SCHILZ: Thank you, Senator Friesen. Senator McCollister. [LB581]

SENATOR McCOLLISTER: Yeah, thank you, Senator, for appearing. The operating costs for a CNG vehicle are about, what, half as much as a gasoline engine? [LB581]

SENATOR NORDQUIST: The numbers I had last year certainly were about half. I don't know how with, you know, the depression in petroleum prices lately, I don't know if it's that different. But certainly I think it's still quite substantially less. [LB581]

SENATOR McCOLLISTER: There have been some discussions or at least some experiments with Class 8 trucks. Is that...is it also...would this rebate be available for trucks as well as cars? [LB581]

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SENATOR NORDQUIST: Yeah, absolutely. And I think there will be folks that speak to that. I know Werner trucking out of Omaha has been piloting a few different options. Usually they use LNG as more of the long-haul piece... [LB581]

SENATOR McCOLLISTER: Yeah. [LB581]

SENATOR NORDQUIST: ...and CNG for more short haul and individuals that would want to do it for their personal use. [LB581]

SENATOR McCOLLISTER: I think Werner was trying some of those vehicles. [LB581]

SENATOR NORDQUIST: Right. Yep, yep. [LB581]

SENATOR McCOLLISTER: Thank you very much. [LB581]

SENATOR SCHILZ: Thank you, Senator McCollister. Senator Hughes. [LB581]

SENATOR HUGHES: Thank you, Mr. Chairman. You said you've introduced this bill several times in the past. [LB581]

SENATOR NORDQUIST: Different approaches to natural gas for transportation. [LB581]

SENATOR HUGHES: Okay. So... [LB581]

SENATOR NORDQUIST: We've...go ahead. [LB581]

SENATOR HUGHES: How is this bill different from the ones you've introduced in the past? [LB581]

SENATOR NORDQUIST: Right, so our first approach that go out of committee but didn't pass was a Revenue bill that would have reduced the...basically on natural gas you pay an equivalent to what the motor vehicle...motor fuel tax is, you pay an energy equivalent per gallon. We would have eliminated that for about a five-year period to help companies that make the investment recoup their money faster. It got out of committee. I think that was the first bill that I introduced. Then one year we tried to do kind of a grant fund, maybe not structured the exact same. And we took...we have it's called the LUST Fund, the Leaking Underground Storage Tank Fund. And we tried to grab a couple hundred thousand dollars out of that. It's used to clean up old gas stations

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and such. There was some opposition from the convenience stores that didn't like us using that money. So that bill kind of stalled. And then last year we had a smaller tax bill that kind of cleaned up a few tax discrepancies related to LNG and CNG, and that one passed. So we haven't really made any substantial investment or substantial tax changes to promote this yet. [LB581]

SENATOR HUGHES: So this bill that we have before us this year is the first time you've asked for an outright General Fund. [LB581]

SENATOR NORDQUIST: Yeah, for a General Fund appropriation to set up a grant program like this. Yeah. [LB581]

SENATOR HUGHES: Okay. And then once...assume this would pass, then once the million dollars is gone, that's... [LB581]

SENATOR NORDQUIST: I think we would come back at that point and reassess where the sector is at and whether we still need to invest at all or whether we need to invest in conversions or help...I think the grant bill that I had last time that we used the LUST money proposal was to do grants to build filling stations along the interstate corridor to help because those were \$1 million to \$2 million investments. We were proposing to make grants of \$100,000 to help move those along. You know, after the million dollars is appropriated here and spent down in conversions to help build up demand, I think we need to reassess where it's at. [LB581]

SENATOR HUGHES: Okay. Thank you. [LB581]

SENATOR SCHILZ: Thank you, Senator Hughes. Any other questions? Seeing none, thanks for your opening. [LB581]

SENATOR NORDQUIST: All right. I'll see you guys in a couple hours. I'll be sitting right here. (Laughter) [LB581]

SENATOR SCHILZ: We'll take the first supporter for LB581. Good afternoon. [LB581]

LYNNE SCHULLER: Good afternoon, Senators. Lynne Schuller, L-y-n-n-e S-c-h-u-l-l-e-r, registered lobbyist for the Nebraska Propane Gas Association. I see that Chairman Schilz's nefarious plan to make it as hot in here as possible to shorten the hearing did not work. We are in strong support of Senator Nordquist's bill. Propane is slightly less expensive to install as far as refueling stations, but it's still pretty pricey. And as Senator Nordquist said, it's a chicken or egg conversation. Until you get more propane vehicles out on the road, retailers are hard-pressed to

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install those refueling units. We've got a new one here in Lincoln, so that's two in Lincoln. But I am converting the company vehicle to propane right now. And I'd be hard-pressed to make it all the way across the state, and I've got more access to finding those stations than most people do. We would advocate that this be for full conversions as well as dual fuel because of the lack of refueling access. As he stated, CNG stations are significantly more expensive to install so it takes a lot longer to get that infrastructure up and running. And if you provided these incentives, I think that that would be a good segue to get these types of fuels out in the marketplace. The average consumer is not going to be able to do that until they've got some kind of incentive to help them along. I don't know if you're aware, but Omaha currently has the largest school bus fleet in the world that's powered on propane. But it required a pretty significant investment for those refueling stations; Sapp Brothers has that, the refueling stations. They were not able to get them refueled in a timely manner immediately, so they had to double their capacity to do that-- very, very expensive. But the investment is worth it once it's there. So we would strongly support this bill. [LB581]

SENATOR SCHILZ: Thank you, ma'am. Any questions? Senator Friesen. [LB581]

SENATOR FRIESEN: Thank you, Senator Schilz. Just...I don't know if Senator Nordquist touched on it when I walked out, but could you explain how the road fuel tax is applied to propane or compressed natural gas. [LB581]

LYNNE SCHULLER: Compressed natural gas I do not know. We are required by federal law to remit back the identical road tax to the government that is currently paid for ethanol, for regular gasoline, and for diesel. So it used to be you had to pay a \$50 fee or something like that. That went away a long time ago. So we pay the exact same amount that you pay for gasoline or diesel. [LB581]

SENATOR FRIESEN: But is it based on the energy content of the gallon versus the straight gallon? [LB581]

LYNNE SCHULLER: It's just based on straight gallon. So however many...you have to separately account for refueling gallons versus residential gallons, that type of thing. Any gallon that you put into a vehicle of any kind, you have to remit the gas tax for that. [LB581]

SENATOR FRIESEN: Okay. All right, thank you. [LB581]

SENATOR SCHILZ: Thank you, Senator Friesen. Any other questions? Seeing none, thank you for your testimony. Appreciate it. [LB581]

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LYNNE SCHULLER: Thank you. [LB581]

SENATOR SCHILZ: Good afternoon. [LB581]

RICH DAVIS: Good afternoon, Chairman Schilz and committee members. I am Rich Davis, R-i-c-h D-a-v-i-s. I'm the manager of community government affairs for SourceGas in Arkansas. This bill was modeled after a bill that we ran successfully two years ago in Arkansas. The major difference is that we understand that our bill in Arkansas was both rebates for construction of stations and for rebates for either conversions of vehicles or acquisition of vehicles. But at the same time, as a company, we looked at the success that we are having in Arkansas with our building infrastructure, but also seeing conversions. And to that end, SourceGas has made a commitment to start adding additional bifuel gasoline-CNG vehicles to our fleet. Natural gas, you know, it's clean, it's safe, it's affordable, and it's abundant. Natural gas is a natural resource in the United States. And with the stability of the prices even as gasoline has come down, we're starting to see it creep back up again. And in Arkansas, on average we pay about \$1.50 a gas gallon equivalent for compressed natural gas. And as we move forward we will see that as more and more vehicles take to the road, that there's going to be a shift in an alternative fuels tax to an over-the-road gas tax. And so in Arkansas, we are actually supporting a bill this year that would, over a five-year period of time, covert that alternative fuels tax to a over-the-road tax that would incorporate both the federal and state tax, which I think it's about the same as it is here in Nebraska: 18 cents and 24 cents. We also understand that the Nebraska's Environmental Trust Fund presently provides grants for the construction of stations. And again, that's why we did not include that aspect in this bill. In Arkansas, and I also believe as it is in Nebraska, the logical target for CNG conversion is for fleets. Even though we encourage individuals to also convert, we know that as the commercial CNG stations open up, there's an expectation on that fuel marketer to be able to regain their investment. And the best way to do that is to actively recruit fleets. So we have a partnership in SourceGas, especially in Arkansas, where our marketing people, myself, work with any person who wants to install a CNG fueling station. And we help them identify the existing fleets or future fleets who are committed to actually doing a conversion to CNG. Natural gas is also important to us in terms of agricultural usage. Nebraska has really set the bar for using natural gas on pivots for irrigation and for grain drying. The areas that we serve in Arkansas goes from the Oklahoma border to the Mississippi River. So east Arkansas has a lot of agriculture, a lot of pivot irrigation. And by using newer and newer technology, we can either provide 100 percent natural gas engine for irrigation, or we can use the technology of blending fuels that's also being used for long-haul trucks to blend CNG with diesel. Because CNG is stored under pressure and the piping in the vehicle is uniquely different than gasoline or diesel, the installation of a conversion kit is required by a certified mechanic under NFPA 52. And the National Institute for Automotive Service Excellence offers an alternative fuel certificate called an F1 certificate. And after achieving that certificate, there's a five-year recertification requirement. There are approximately 30 states that provide some sort of

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incentive. And at the same time, when we looked at tax credits versus rebates, we want our government to feel safe and assured that when a rebate is issued that the person who applies for the rebate, they'll get a letter saying you've been approved for this rebate. They go and they may have to do some sort of bridge financing to make that conversion happen. They bring that back, present it to, in this case, it would be your energy office. And, therefore, that rebate helps ensure that these vehicles will be converted or a totally dedicated vehicle will be acquired. I see I'm out of time. I thank you for your time, allowing me to come up from Arkansas. And I had to come up here to find some warm weather. Thank you very much. (Laughter) I didn't realize it was going to be inside the building. [LB581]

SENATOR SCHILZ: Yeah, tell us about it. We're working on that. [LB581]

RICH DAVIS: And I am open for questions, sir. [LB581]

SENATOR SCHILZ: Any questions? Senator McCollister. [LB581]

SENATOR McCOLLISTER: Thank you, Mr. Chairman. Is there such an arrangement that we could split the cost of the rebate with a gas company? Have you heard of programs similar to that? [LB581]

RICH DAVIS: Split the cost of the rebate? [LB581]

SENATOR McCOLLISTER: Yeah. You want a \$4,500 rebate, correct? [LB581]

RICH DAVIS: Correct. [LB581]

SENATOR McCOLLISTER: How about we split it? [LB581]

RICH DAVIS: I'm sure that with your learned wisdom that you would be able figure that out. Obviously our desire is to see a commitment by the Nebraska Legislature to say it is time to think in terms of what it takes to see another alternative fuel be provided to the residents of Nebraska. [LB581]

SENATOR McCOLLISTER: You're absolutely correct. CNGs are great fuel. It's just it's hard to convert those gasoline engines, isn't it? [LB581]

RICH DAVIS: Yes, sir, because one has to be certified to do it. [LB581]

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SENATOR McCOLLISTER: Why is that? Is it inherently more dangerous? Do you have to have a certain kind of mechanic to do that? [LB581]

RICH DAVIS: Well, in my testimony I made mention of an EPA certified... [LB581]

SENATOR McCOLLISTER: Right. [LB581]

RICH DAVIS: And any time the federal government gets involved it automatically jacks up the price of anything. [LB581]

SENATOR McCOLLISTER: Is that correct? Okay. [LB581]

RICH DAVIS: Point taken. That's a personal observation on my part. [LB581]

SENATOR McCOLLISTER: Okay. (Laughter) Thank you very much. [LB581]

SENATOR SCHILZ: Thank you, Senator McCollister. Senator Johnson. [LB581]

SENATOR JOHNSON: Thank you, Senator. Let's use E-10 as a comparison. How does compressed natural gas compare in mileage? [LB581]

RICH DAVIS: Because I run a bifueled vehicle, the mileage is virtually identical. And I drive a 2014 Chevy Tahoe, eight cylinder. When I run on either gasoline or CNG, it's virtually the same. [LB581]

SENATOR JOHNSON: Okay, virtually the same. Asking for this rebate, if \$4,500 is the cost I'm assuming that's on a pretty good-sized vehicle, or is that a standard car, expense the same? [LB581]

RICH DAVIS: Say we take a light-duty pickup, whether it be a Chevrolet, Ford, or Dodge, whatever. To purchase a vehicle and have it converted after it's been manufactured at the factory costs between \$8,000 and \$10,000. So what this rebate does, it offsets about half the cost of that conversion. [LB581]

SENATOR JOHNSON: So to calculate that out, how many miles would you have to drive this pickup in order to recover \$4,500 if that's half the cost? [LB581]



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RICH DAVIS: Again, if one compared the cost of CNG versus the cost of gasoline, right now it's about two to one. So if you financed a vehicle for five years, you'd get a payback in approximately 2.3 on the investment. [LB581]

SENATOR JOHNSON: Okay. Thank you. [LB581]

SENATOR SCHILZ: Senator Hughes. [LB581]

SENATOR HUGHES: Thank you, Mr. Chairman. You mentioned the...you referenced the program in Arkansas similar to this. [LB581]

RICH DAVIS: Yes, sir. [LB581]

SENATOR HUGHES: Was it basically the same program, same price tag? Or what were the details of the Arkansas? [LB581]

RICH DAVIS: Yes, sir. Essentially the vehicle rebate dollars are the same. The only difference is that the act in Arkansas includes rebates for the building of stations. [LB581]

SENATOR HUGHES: So what was the price tag on that? What was the incentive from the state's funds, do you remember? [LB581]

RICH DAVIS: The state put in a little over \$1 million into that fund. In Arkansas, the state senators at the end of the budget session, they determine how much general improvement funds are available for those senators to take back to their districts to reinvest in their own local districts. And we had three state senators in northwest Arkansas take \$2 million of GIF funds and put it into a CNG conversion over and above what the state general revenue put in. [LB581]

SENATOR HUGHES: Interesting. I like the sound of that. (Laughter) [LB581]

SENATOR JOHNSON: It's a concept. [LB581]

SENATOR HUGHES: Thank you. [LB581]

RICH DAVIS: Yes, sir. [LB581]

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SENATOR SCHILZ: Thank you, Senator Hughes. Any other questions? Seeing none, thank you for your testimony. [LB581]

RICH DAVIS: Thank you. [LB581]

SENATOR SCHILZ: Appreciate it. Further proponents. Good afternoon, sir. [LB581]

LARRY JOHNSON: Good afternoon, Senator Schilz, members of the committee. My name is Larry Johnson, L-a-r-r-y J-o-h-n-s-o-n, and I'm the president of the Nebraska Trucking Association. I represent 1,100 trucking companies or suppliers that supply fuel, tires, insurance, and those type of amenities to trucking companies. I'm here in favor and would like to thank Senator Nordquist for his leadership on this. I'll be real brief. The trucking industry likes alternative fuel and clean air. And we are always looking forward to innovative products and types of services that we can use to trim the fractions that we deal with in terms of miles per gallon and those kind of things and our investments in equipment. So a help like this would be a great jump start for us, and I think you'd see a good return on investment from our industry. [LB581]

SENATOR SCHILZ: Thank you, Mr. Johnson. Any questions? Senator McCollister. [LB581]

LARRY JOHNSON: Yes. [LB581]

SENATOR McCOLLISTER: I have to ask you some questions. [LB581]

LARRY JOHNSON: Well, thank you. [LB581]

SENATOR McCOLLISTER: Some large fleets have undergone some testing of CNG: UPS, Werner. What have...some of those results, what have they been? What results have you seen? [LB581]

LARRY JOHNSON: Well, and I'm not necessarily speaking directly on their...of their results, but on an anecdotal basis, you know, I'm hearing that large fleets like that are fuel agnostic and they're looking at things like CNG, LNG. But the thing we have to remember is if we don't have an affordable return on the equipment, a lot of the conversions, I understand, for a Class 8 truck are somewhere between \$12,000 and \$16,000. But with \$1.90 fuel versus whatever we're going to see again in the future on diesel, the return on investment could be pretty quick. We do need that national network though. And any help that we can have on that will be good. I know they're

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very supportive of things like this. So the return on investments must be a competitive edge for them. [LB581]

SENATOR McCOLLISTER: A previous question indicated that the payback for an automobile is probably about two and a half years. What's the payback for a diesel engine, a truck? [LB581]

LARRY JOHNSON: I'm not seeing anything on that yet. But I think if you look at, oh, four to seven miles per gallon as an average the trucks are getting up to that point, versus the cost of the fuel, I think it could rapidly come up. There are some disadvantages in terms of weight loss that we may have to come back and ask about. You know, in terms of things like as we start putting additional power units on trucks, we needed that 450 pound weight limit adjusted because it does reduce your payload on it. [LB581]

SENATOR McCOLLISTER: Okay. Thanks, Larry. [LB581]

LARRY JOHNSON: Thanks. Appreciate it. [LB581]

SENATOR SCHILZ: Thank you, Senator McCollister. Any other questions? Seeing none, thank you for your testimony. Appreciate it. [LB581]

LARRY JOHNSON: Thank you very much. Appreciate it. [LB581]

SENATOR SCHILZ: Further proponents. Good afternoon. [LB581]

RICK KUBAT: (Exhibit 1) Good afternoon, Senator Schilz, members of the Natural Resources Committee. My name is Rick Kubat, R-i-c-k K-u-b-a-t, on behalf of the Metropolitan Utilities District to testify in support of LB581. MUD currently owns one of its own CNG stations and we're partners in two additional CNG stations right now serving approximately 350 CNG vehicles in Omaha. This past summer we recently had a ribbon cutting where we had true bipartisan support, and Congressman Lee Terry and Senator Nordquist show up. Werner Trucking has ten semis that are fueling, ten CNG semis that are fueling out of that operation. But what I wanted to really touch upon with all of you today is I want to hit this from one other angle, and that is air quality standards. In addition to incentivizing the use of alternative fuels, LB581 would assist the Omaha metropolitan area in addressing proposed federal ozone regulations. According to an Omaha World-Herald article that I'm going to pass out to you, the Omaha area had a three year rolling average of 66 to 69 parts per billion air quality standard. This also goes out to Scottsbluff, where from 2010 to 2012 they registered in at 63 parts per billion. The current federal standard that we're under right now is 75, but the issue is the EPA is

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considering new standards in the range of 65 to 70. In the Omaha metropolitan...if the Omaha metropolitan area or other parts of the state fall into a nonattainment status, results could be mandatory vehicle inspections, more expensive summertime gas, expensive municipal regulations, and most importantly, barriers to industrial growth. Compressed natural gas and alternative fuels are part of an overall solution to air quality issues. According to [naturalgas.org](http://naturalgas.org), when compared to traditional vehicles, CNG vehicles reduce carbon monoxide emissions in the range of 90 percent to 97 percent, carbon dioxide by 25 percent, nitrogen oxide in the range of 35 percent to 60 percent, and other emissions are reduced by as much as 50 percent to 75 percent. In short, compressed natural gas is a growing industry that can play a major role in assisting the Omaha metropolitan area with air quality issues. CNG and the alternative fuels that LB581 encourages tend to be domestically produced and cleaner energy sources. That's the end of my testimony. I did want to touch on one other issue, a question from Senator Friesen as it relates to compressed natural gas. We pay federal and state excise taxes on a GGE basis, or gallon gas equivalent. The same distance down the road CNG vehicles are kicking in the same rate that a gas or diesel vehicle would be kicking in. With that, I would do my best to answer any questions that you might have. [LB581]

SENATOR SCHILZ: Thank you, Mr. Kubat. Any questions? Seeing none, thank you for your testimony. Appreciate it. [LB581]

RICK KUBAT: I'm going to leave you with my handout here. Thank you. [LB581]

SENATOR SCHILZ: Further proponents. Good afternoon. [LB581]

MIKE HOELSCHER: (Exhibit 2) Good afternoon. Mike Hoelscher; it's H-o-e-l-s-c-h-e-r. I'm managing member for a company called Stirk Compressed Natural Gas here in Lincoln, Nebraska. Stirk owns and operates compressed natural gas stations in conjunction with partners across the state of Nebraska, Iowa, Kansas, and Colorado. We put our first compressed natural gas station in Lincoln in 2013. We followed up with a station in Columbus, Nebraska, in 2014. And we're in development of stations in and around Council Bluffs and Denver, but also in development in North Platte, Sioux City, Norfolk, and others. So this bill is not just an eastern Nebraska bill that would help out eastern Nebraska because what we try to do is build out the infrastructure in the corridors. So we have customers and perspective clients that are looking at compressed natural gas as far to the west as Scottsbluff, to the north in South Sioux City, down into Beatrice, and so on. So it would help out immensely for these fleets to be able to have some help on the front end to make this conversion. One important note that we'd like to kind of make, and I wish Senator Friesen was here a little bit, is we are...the history of Stirk Compressed Natural Gas is it was developed by a couple individuals out of Holdrege that used to farm. And it was based on experiences that we dealt with clients that were running natural gas in their

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irrigation motors. We since have been joined in a partnership with United Farmers Co-op which transitioned into Central Valley Ag. Central Valley Ag owns 50 percent of Stirk CNG and it was done unanimous vote from farmer-owned cooperative with the board members that were farmers that said this a good thing to bring to the table. Since then, the Columbus station was a 50 percent partnership between Stirk CNG and Frontier Cooperative based in Brainard. Frontier Cooperative looked at it the same way, as these fleets are looking for economic and environmental benefits. And they're doing so not to replace ethanol, but in conjunction with ethanol here in the state. And so we like to brag on the fact that we have multiple fleets in and around the area that are running dedicated or dual-fuel natural gas Class 8 trucks. And they are hauling corn to the ethanol plant in Columbus to produce ethanol. And they're taking the distiller grain and taking it to feedlots running compressed natural gas motors. So the benefit is beyond the reach of ethanol, especially with Class 8 motors because ethanol is not used to replace diesel fuel. CNG can be used to replace diesel fuel. So that's what we have today. Any questions?  
[LB581]

SENATOR SCHILZ: Thank you, sir. Any questions? [LB581]

SENATOR McCOLLISTER: Just one. [LB581]

SENATOR SCHILZ: Senator McCollister. [LB581]

SENATOR McCOLLISTER: Thank you, Mr. Chairman. To what extent is CNG being used for pivots, to power pivots? [LB581]

MIKE HOELSCHER: Well, back around the first part of 2000, there was a fair amount, over 15,000 wells in Nebraska that were running on 100 percent natural gas. There's pipeline SourceGas. There's pipelines all across the state, but mainly from about York to as west as, well, North Platte and such. They were running on natural gas. When the price of natural gas increased, about 2005, diesel fuel still remained relatively cheap. And so producers were changing out wells that were a couple years old over to diesel fuel wells. The sea change happened in about 2006, 2007. And diesel fuel and natural gas, the spread exploded. And so the benefit to run natural gas was eight times, ten times what it was to run diesel fuel. So these producers still had the gas lines running to these diesel motors. So what they were able to do is instead of taking a diesel well that...a diesel engine that had maybe five years left of life to it, they ran what they call dual fuel. And it's injection of vapor natural gas into a diesel engine that allows them to displace about 80 percent of the diesel fuel with natural gas. That is being done today with over-the-road motors. Over-the-road motors are able to run a dual fuel that allows them to displace about 50 percent to 60 percent of their diesel fuel with natural gas. So our...the

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clients that we have that are running into Columbus, they're running both dual-fuel engines and dedicated natural gas motors. [LB581]

SENATOR McCOLLISTER: Wow, fascinating. Thank you. [LB581]

SENATOR SCHILZ: Thank you, Senator McCollister. Any other questions? Seeing none, thank you for your testimony. [LB581]

MIKE HOELSCHER: Thank you. [LB581]

SENATOR SCHILZ: Appreciate it. Further proponents. Welcome back. [LB581]

JILL BECKER: Good afternoon, Senators. I'm Jill Becker, spelled J-i-l-l B-e-c-k-e-r with Black Hills Energy here in support of the bill introduced by Senator Nordquist, LB581. And we'd certainly like to thank the senator for his bill. As he mentioned, we've been working on this for more than a few years, so hopefully you view this bill in a very good light. I'd just like to mention a couple of things that haven't been touched on a whole lot. Some of the vehicles that we have seen being converted include vehicles like Honda Civics, light-duty vans and pickups, delivery vans, Class 8 semi tractors, and trash trucks. So as you can see, there is a very wide spectrum on the vehicles that are actually being converted. And one of our first fleet managers that converted their vehicles was actually an electrician here in Lincoln who gave a discount to his customers that had a van that was running on compressed natural gas, provide their electric services that they needed for their home. And so the fuel savings that he saw he actually passed on to his customers. And that to us is really exciting. As one of the previous testifier had mentioned, we've also seen a tremendous growth in just the sheer number of CNG stations. There are now three in Lincoln. There's one in Columbus, three in Omaha. And now, which we announced this week, a small time fill station in Wayne serving two new natural gas vehicles for the city fleet. Senator McCollister, you had a question about really what makes this pencil out. The vehicles that travel a lot of miles but don't actually go very far, they come home every night, those fleet applications are really the best ones. So those trash trucks that are incredibly inefficient in the sense of mileage are some of the best applications for conversion. So the issue and really the need for the bill is that those conversions are very expensive. And while certainly we see the numbers pencil out, it's very tough to sit across the table from somebody and tell them they need to dole out another five figures to have a great vehicle. That's the challenge, especially for entities like municipalities. They don't typically have those up-front funds that they can make that kind of stuff happen. So in many of the conversions that we've been involved in, we as the gas company have partnered with those entities to help make that happen because they just need some assistance. So with that, I'd be happy to answer any questions that you might have. [LB581]

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SENATOR SCHILZ: Thank you, Ms. Becker. Senator Johnson. [LB581]

SENATOR JOHNSON: Thank you. Factory installed so you don't have to convert, what's the differential in the price? [LB581]

JILL BECKER: Well, it depends on the type of vehicle. So if you buy a car or a light-duty vehicle, that is just cheaper than a trash truck. But even out of the factory those incremental price differentials are high, anywhere from I think the previous testifier mentioned \$8,000, \$10,000 more on one of those smaller vehicles. A garbage truck can be \$50,000. So it's very expensive to do and... [LB581]

SENATOR JOHNSON: Even if it's a factory-installed original? [LB581]

JILL BECKER: I believe so. I mean I might be a little bit high on those numbers, but there is still a significant price differential regardless of whether it's coming out of the factory or converting. And for a period of time, the number of vehicles that you actually could get factory converted was much more limited than it is now. I mean it's just...it's taken a while to gain that traction. [LB581]

SENATOR JOHNSON: Thank you. [LB581]

JILL BECKER: Yeah. [LB581]

SENATOR SCHILZ: Thank you, Senator Johnson. Any other questions? Seeing none, thank you for your testimony. [LB581]

JILL BECKER: Thank you. [LB581]

SENATOR SCHILZ: Further proponents. Good afternoon. [LB581]

LISA DISBROW: (Exhibit 3) Good afternoon, members of the committee. My name is Lisa Disbrow, D-i-s-b-r-o-w, and I'm with Waste Management of Nebraska. It seemed appropriate to follow the other presenter. Waste Management, we operate a hauling company in the Omaha area, and we also operate collection and hauling operations across the Midwest and across the country. And we have been a proponent of natural gas legislation that offers rebates and credits like Senator Nordquist has introduced here in Nebraska. And we favor the concepts that are in this bill. We would...as a fleet operator, there's a lot of cost that we incur that has been mentioned

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today about the fueling stations that we put in for our fleet. There's also a cost for the maintenance shop as you have to change your maintenance, for it's static free, and other operations. So we would support this bill. And I also brought some information that I can hand out afterwards. The investment that Waste Management is making in natural gas vehicles is in part, as someone else mentioned, is the benefit to the environment and to those communities that are nonattainment or may becoming nonattainment with the reduction in the greenhouse gas emissions and the nitrogen oxide emissions as well. [LB581]

SENATOR SCHILZ: Thank you very much. Any questions? [LB581]

SENATOR McCOLLISTER: Just one. [LB581]

SENATOR SCHILZ: Senator McCollister. [LB581]

SENATOR McCOLLISTER: Thank you, Mr. Chairman. How many trucks have you converted? [LB581]

LISA DISBROW: We've converted over 4,000 trucks. [LB581]

SENATOR McCOLLISTER: How many in Omaha? [LB581]

LISA DISBROW: Zero, zero. We've...our trucks we have to purchase new. We cannot convert the vehicles. So we would hope that this legislation would include the purchase of new vehicles, which I believe it does. But it costs around--I think somebody else had asked earlier--about \$25,000, \$30,000 to purchase a natural gas vehicle over a diesel vehicle. [LB581]

SENATOR McCOLLISTER: Of those 4,000 trucks you've converted, are they mostly in low-emission towns? [LB581]

LISA DISBROW: Not necessarily, no. We've looked at where our larger fleets are, where we've made some investments there. We've looked at...several states have made changes in the rebates or the tax credits as well. So we take both of those things into consideration as we look to change the fleet. [LB581]

SENATOR McCOLLISTER: Can you provide us a list of those rebates by state? [LB581]

LISA DISBROW: I can. Yes, sir, I would be able to do that. [LB581]



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SENATOR McCOLLISTER: That would be great. Thank you. [LB581]

SENATOR SCHILZ: Thank you, Senator McCollister. Senator Johnson. [LB581]

SENATOR JOHNSON: Of the 80 trips that go through Wahoo every day that are MBI, do you own those tractors? [LB581]

LISA DISBROW: No, we do not. [LB581]

SENATOR JOHNSON: Are any of those...have any of those been converted, do you know? [LB581]

LISA DISBROW: I do not know, sir. [LB581]

SENATOR JOHNSON: Okay. Thank you. [LB581]

SENATOR SCHILZ: Thank you, Senator Johnson. Senator Schnoor. [LB581]

SENATOR SCHNOOR: What type of conversions have you done? Are you using any compressed natural gas at all, or is it all propane or what? [LB581]

LISA DISBROW: It's all compressed natural gas that we use. We typically buy Peterbilt or McNeil vehicles. And several of the trucks have Cummins engines in them. [LB581]

SENATOR SCHNOOR: Okay. [LB581]

SENATOR SCHILZ: Thank you, Senator Schnoor. Senator Friesen. [LB581]

SENATOR FRIESEN: Thank you, Chairman Schilz. In all these conversions you've done everywhere, would it have been economically feasible to do it without any tax credits? [LB581]

LISA DISBROW: You know what, we have typically looked at those states that have the tax credits. The infrastructure cost for our fleet is running about \$2 million as we do a time filled for the vehicles. And to put in a public infrastructure as well, which we have done over...we have over 27 public fueling stations currently, those facilities run about \$3 million. [LB581]

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SENATOR FRIESEN: So is the biggest inhibitor probably the fueling stations? [LB581]

LISA DISBROW: It is. It is the fueling, the infrastructure that goes along and the maintenance shop also, to overhaul the maintenance shop. [LB581]

SENATOR FRIESEN: Okay. Thank you. [LB581]

LISA DISBROW: You're welcome. [LB581]

SENATOR SCHILZ: Thank you, Senator Friesen. Any other questions? Seeing none, thank you for your testimony. [LB581]

LISA DISBROW: Thank you. [LB581]

SENATOR SCHILZ: (Exhibits 3-10) Further proponents. We had a few letters here: We have one letter from John Davis from Happy Cab; Milo Mumgaard from the city of Lincoln; John Hansen from the Nebraska Farmers Union; Leonard Hernoud from Century Towing Inc.; Pamela Tartt from AMBAC International; Richard Munn from Central Valley Ag; and John Cyzy, I think, from Interstate Power Systems; and Josh Schmidt from Liquid Trucking. Okay, do we have any opponents, any opposition testimony? Seeing none, do we have any neutral testimony? Seeing none, Senator Nordquist, you're welcome to close. [LB581]

SENATOR NORDQUIST: I'll be brief. I think Senator Friesen's question got answered. It may have been when you were out of the room, as far as the taxes paid. It is on a gasoline gallon equivalent, so the same distance traveled is the same taxes on that. In statute we actually lay it out based on BTUs. In the bill I carried...part of the bill that changed it last year was aligning the LNG BTU to the diesel BTU rather than to a gallon of gasoline because LNG tends to offset diesel. So we made a change there. And then I think Senator McCollister asked about, you know, could there be a match component by gas companies? There is. In the bill, Section 4(1) does allow for this development fund that we would appropriate money to, to also receive private donations. So if there was an effort to raise private donations in some way, there is--no pun intended--a vehicle for that money to travel. So I'd be happy to take any final questions. [LB581]

SENATOR SCHILZ: Thank you, Senator Nordquist. Any questions? Last chance. Seeing none... [LB581]

SENATOR NORDQUIST: Thank you. [LB581]

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SENATOR SCHILZ: ...that will close our hearing on LB581. Thank you very much for everybody coming in today and have a good evening. And we'll be back here tomorrow.  
[LB581]