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Transcriber's Office

Agriculture Committee  
May 05, 2015

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[CONFIRMATION]

The Committee on Agriculture met at 1:30 p.m. on Tuesday, May 5, 2015, in Room 2102 of the State Capitol, Lincoln, Nebraska, for the purpose of conducting a public hearing on gubernatorial appointments. Senators present: Jerry Johnson, Chairperson; Mark Kolterman, Vice Chairperson; Dave Bloomfield; Burke Harr; Tyson Larson; Merv Riepe; and Ken Schilz. Senators absent: Ernie Chambers.

SENATOR JOHNSON: Okay. We will...started at about 14 minutes ago and we're back to open up the hearing, confirmation hearing, for Dr. Joeckel. And if you want to come over here to the chair and I'll introduce our committee members. Senator Chambers is...would be down there. I'm not sure if he will be here or not but...and Senator Bloomfield to my left, Senator Riepe to my left, Senator Burke Harr. To my right would be Senator Larson who is not here yet, Senator Schilz is here, and Senator Kolterman. Go ahead and sit down. Excuse me. [CONFIRMATION]

ROBERT MATTHEW JOECKEL: It's nice seeing many of you again and meeting some of you for the first time. (Laughter) [CONFIRMATION]

SENATOR JOHNSON: To my right is Rick Leonard, research analyst for the committee. To my left is our clerk, Travis Moore. So first of all, welcome to the committee. [CONFIRMATION]

ROBERT MATTHEW JOECKEL: Thank you. [CONFIRMATION]

SENATOR JOHNSON: And we'll ask you to give your name and spell it and then you may begin your testimony as to why you would like to be part of the Climate Assessment Response Committee. [CONFIRMATION]

ROBERT MATTHEW JOECKEL: (Exhibit 1) Thank you. My name is Robert Matthew Joeckel, J-o-e-c-k-e-l. Please, address me by Matt, if you would, please. May I begin? [CONFIRMATION]

SENATOR JOHNSON: You may begin. Thank you. [CONFIRMATION]

ROBERT MATTHEW JOECKEL: I guess this is off the cuff. I think the first thing I need to say is that I'm very happy to be here always. Thank you for the opportunity even to come to an appointment such as this. I always like to have the opportunity to thank as many Nebraskans as I can for having a job at our great university in our great state. And I know all of you play a large role in keeping the university going. So you have my thanks for that as well. I'm a geologist. I'm not a climatologist. I'm not a meteorologist. I do have a little bit of coursework in meteorology. Why should a geologist be on this committee? A number of reasons: Number one, there is some historical precedent. The

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former director of the Conservation and Survey Division, of which I am in charge now, which is the state's geological survey--please, remember that if you need anything from us--he was on this committee. His name was Mark Kuzila. Perhaps some of you remember him or you've at least seen the name. He was a soil scientist in charge of a geological survey. Geologists have a great deal to offer to our understanding of climate. I think the first thing that comes to mind is our general understanding of groundwater. And indeed, at the Conservation and Survey Division, one of the chief tasks in which we engage is the studying of Nebraska's groundwater and its monitoring. I hope you've seen our annual water level reports. If you'd like to see those and you haven't seen them yet, I'll be happy to bring the whole pile of them down to you. We have some very fine young people who work very hard at assessing, studying, monitoring, and protecting, inasmuch as it is their charge, this state's great groundwater resources. So that...there's one good reason. A second good reason, if you will, for a geologist such as myself being on this committee: I think geologists also have a unique perspective on climate change through long-term, what we would call, geologic time. Now, that seems like egg-headed stuff, and it probably is in some ways. But we're uniquely equipped to understand the bigger picture of climate over various time scales ranging back tens or even hundreds of millions of years. And, yes, we are in tune with more recent patterns of climate change, let's say during the Holocene and Pleistocene epochs of earth's history going back to about 2.588 million years. So there are three reasons right there. Geologists are down-to-earth people. I guess that's a fourth one. (Laughter) Let me speak a little bit to some of my qualifications. I'm typically uncomfortable and reticent to do that, but we're all business here. As I've indicated, my degrees are in geology. I do have some background in soil science. I have had some experience in meteorology. I actually taught a basic course in meteorology twice and that was enough for me. I have some background in biology and ecology, some coursework in that both at the graduate and undergraduate level. And also in physical geography, to some degree, I've had some coursework, and fluviology, the study of rivers. So I understand something about groundwater. I understand something about surface water. I understand something about the overall geological aspects of climate. Is that sufficient, Senator?  
[CONFIRMATION]

SENATOR JOHNSON: That's a good opening. Open it up for questions from the committee. Does anyone have any questions? [CONFIRMATION]

SENATOR HARR: I'll ask. [CONFIRMATION]

SENATOR JOHNSON: Senator Harr. [CONFIRMATION]

SENATOR HARR: Thank you, Mr. Chairman. So what exactly does your committee do or what can we look for to avoid the situation so Nebraska doesn't become the next California? [CONFIRMATION]

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ROBERT MATTHEW JOECKEL: That's a loaded question, Senator, and I'm...  
[CONFIRMATION]

SENATOR HARR: And I don't mean it to be. If you want to...take that however you want. But I would like...yeah. [CONFIRMATION]

ROBERT MATTHEW JOECKEL: Well, I'm hoping Nebraska never is like California in many ways. I made a similar comment at a hearing at which I testified about the state of Oklahoma. That was mostly in jest but this one is more serious. So I think we need a variety of different kinds of people to help us understand the onset of draught and how we deal with it in multiple ways in terms of surface water, groundwater, the state's economy, which is highly dependent on both ground and surface water. I don't...and I think we need a variety of scientific backgrounds represented on the committee. And from the composition of it and the document that I retrieved online, it sounds really like you have most of the bases covered. I'll reiterate that I think it is highly appropriate to have somebody with a geological background to understand the aspects or to speak to the aspects of which I spoke earlier. I think we need to be eternally vigilant about our water resources. We have seen what happens when we're not. We've seen the conflicts we have within our state. We've seen the conflicts that we've had with other states so it's important to have people who understand the scientific perspective of climate and water, etcetera, at work on this committee. And it shows great foresight that, indeed, we have this committee in the state of Nebraska. Aside from that, I'll also add that it's important to have more than--as I put it earlier--eggheads at work on this. Scientists don't make the decisions. The people and you all do. And I think that's really good. I think that's part of the beauty of government in America is that it's not just a technocracy and we have multiple voices coming to a consensus but hopefully always paying attention to the facts. And I think, where climate is concerned and to some degree where water resources are concerned, we have a tendency to emotionalize matters and not consider facts as facts. In some earlier testimony that I provided on the subject of climate change, I urged everyone to consider that this is not a belief system. This is science. And I can't say that enough because I hear people say, well, do you believe in climate change? Do you believe in this? Do you believe in that? Science isn't a belief system. There's a place for science. There's a place for belief systems. There's a place for all of the ways that human beings have of knowing things: art, music, etcetera, etcetera. So I say that because I do believe that we need to approach issues such as climate from a purely factual basis and do our best to rationally make decisions on the basis of available facts. I hope I answered your question. [CONFIRMATION]

SENATOR HARR: Yeah. That's great. [CONFIRMATION]

ROBERT MATTHEW JOECKEL: It's a big one. [CONFIRMATION]

SENATOR HARR: Yeah. Thank you. [CONFIRMATION]

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ROBERT MATTHEW JOECKEL: It's the best I could do in the moment.  
[CONFIRMATION]

SENATOR JOHNSON: Senator Bloomfield. [CONFIRMATION]

SENATOR BLOOMFIELD: Thank you, Mr. Chairman. Matt, being as you are the geologist here, I'm going to...a few years back--and it's quite a few; I'm going to go back to the late '70s, early '80s, and I think Senator Schilz will probably remember this--we went through a drought and we were told that the Ogallala Aquifer would take 30 or 40 years of normal rainfall before it ever got back to being normal. Two years later, it was back to normal because we got some rainy years. Just a couple years ago in 2012, we were told the same thing, that it would be a generation before the aquifer is back. How does that aquifer, in a very brief synopsis, how does that recharge so quickly when we do get adequate rain and is it a problem right now? [CONFIRMATION]

ROBERT MATTHEW JOECKEL: That's a good question. I appreciate it. And I'll beg your pardon for saying that that isn't quite the whole story in that...and I submit that respectfully. You know, we make measurements of water levels in the High Plains Aquifer which is the most...the more inclusive sense of this aquifer that we have in the Great Plains of the United States. We make point measurements on water levels in that we don't make continuous measurements of the water level. It's impossible to do that. So all of our data, all of our maps, are made based on point data, that is, numbers that represent the water level in individual wells. Now, conditions in terms of rise and fall over the water table vary from point to point across this state and, indeed, across the Ogallala Aquifer...the High Plains Aquifer, excuse me. I made the mistake myself. There are places in which water levels have risen. There are places where they've consistently dropped for a long period of time. And I'll point out in particular Box Butte County which has sizeable declines in water level. We're just in the process of actually reevaluating data going back to the 1930s. And the interpretation of those data has differed as we've applied more modern techniques such as techniques within a geographic information systems environment. But our interpretations still show substantive declines in water level. In some places, water levels in wells, monitoring wells, have risen. And sometimes that can be due to wet years. It depends on local aquifer conditions. Thinking of the High Plains Aquifer as an absolutely monolithic entity in terms of the sediments and rocks that make it up and in terms of its thickness, is a grave mistake because it's a different animal, in effect, across the state of Nebraska alone from west to east. It differs in thickness. It differs in the materials that make up the skeleton for the aquifer. In some places, it would be possible, I suppose, in a few wet years, to elevate the water table a little bit. But in some other places, it is going down and it continues to go down in general. And another place where that would be true would be the southwestern Nebraska. However, overall, Nebraska is still relatively fortunate. About 70 percent of the volume of water perceived to exist within the High Plains Aquifer is in

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Nebraska alone. And that...the 100 percent of all the water would be equivalent about to the volume of Lake Huron which still doesn't make it the largest aquifer in the world but it's one of the best we have. About 30 percent of all irrigated agriculture in the United States is performed on top of the High Plains Aquifer. So if one were to travel down to Kansas, if one were to, God forbid, travel down to Texas--that's a joke; I apologize (laughter)--one would see a much more dire situation because they started out with less water. And in western Kansas and in the Panhandle of Texas and into eastern New Mexico, there are certainly places where a drawdown has proceeded well more than 150 feet. And it's not coming back in our lifetimes. I mean, there are people who have abandoned the notion of trying to irrigate from the High Plains Aquifer in that area. I'm not big on scaring people to death. I don't think that accomplishes anything. I think the fear factor that scientists sometimes slip into using probably mostly makes people numb if it doesn't make them angry after hearing about it enough. I think the way we need to approach this is, again, in a factual, scientific manner to make sure that we have the right data that are represented effectively and in a way such that we understand that there are local rises and local falls that depend on multiple conditions. And I'll just point out one of those conditions in terms of the rises in the water table. The most prominent rises in water levels in monitoring wells and in other wells associated with the High Plains Aquifer is in places where we have leakage from irrigation canals and also places where we have heavily irrigated lands in central Nebraska. So that, in effect, is artificial. I could probably go on for a while but I don't think that would be...that would help all that much. [CONFIRMATION]

SENATOR JOHNSON: We'll see if there's other questions. Senator Riepe.  
[CONFIRMATION]

SENATOR RIEPE: Thank you, Senator Johnson. This isn't a scientific question. This is more of a political one because with confirmations it might come up. Do you have a position on the TransCanadian (sic) Pipeline? [CONFIRMATION]

ROBERT MATTHEW JOECKEL: Do you mean as an employee of the university of the state of Nebraska or as an individual? [CONFIRMATION]

SENATOR RIEPE: As an individual. I'm more concerned about that. And I...being an Iowa grad and I know you are as well... [CONFIRMATION]

ROBERT MATTHEW JOECKEL: I am. [CONFIRMATION]

SENATOR RIEPE: ...I have a high regard for your opinion. (Laughter)  
[CONFIRMATION]

ROBERT MATTHEW JOECKEL: Well, I would hope you have higher regard for my opinion as a native Nebraskan, something of which I'm very proud. (Laughter) In any

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case, part of the reason why I would not make a good politician, in addition to not being quite so smart or quite so articulate, is that I'm going to sit on the fence here, but I'm compelled to do so. Originally, as a person, as an individual citizen, I didn't have much of an opinion about the pipeline and I felt, well, we already have a lot of pipelines. We're going to be burning fossil fuels no matter what and we are for some time into the future. We're not going to get off of that overnight. And if we did, we'd have catastrophic effects that hardly anyone, I'm sure, wants to see except the worst misanthrope among us. I didn't have any problem with it from a scientific viewpoint because I assumed that there would be appropriate political oversight, that there would be cooperation with all parties involved towards the rapid and successful remediation of any spills. But then I actually bothered to hear what the people of Nebraska had to say. Sometimes they said that very loudly. Sometimes they said it more softly. But I came to understand their concerns and I came to appreciate that underneath it all was a question of property rights. And it isn't up to me to decide what happens to the property of my fellow Nebraskans. My opinion as an individual at this point is largely irrelevant but it has converged with my opinion as a scientist which, in the end, is the same old story. Get the facts. Present them correctly. Try to get people to understand them and try to get lawmakers to make effective decisions accordingly. I don't...to close, I don't think that building the pipeline is the end of the world. I do think that if it is not monitored properly and if we lack the resolve to enforce regulations that we will have a problem on our hands. Do I think it will save any...did I think it will remedy any energy problem that we may or may not have? No. And in fact, it's a drop in the bucket in terms of global fossil fuel supply. But it is marketable and it is relevant. The other issues are big enough, they go well beyond the state of Nebraska. I hope I answered your question. [CONFIRMATION]

SENATOR JOHNSON: Thank you. Any other questions? Senator Harr.  
[CONFIRMATION]

ROBERT MATTHEW JOECKEL: Yes, sir. [CONFIRMATION]

SENATOR HARR: Just a quick one: Are you a reappointment, Doctor? Or is this the first time? [CONFIRMATION]

ROBERT MATTHEW JOECKEL: No, this is the first time. I was nominated or whatever for the position, I think, by my predecessor who was also the former director of the geological survey. And, please, call me Matt. (Laughter) [CONFIRMATION]

SENATOR RIEPE: Dr. Matt, right? [CONFIRMATION]

SENATOR HARR: And where are you from? Do you live here in Lincoln then?  
[CONFIRMATION]

ROBERT MATTHEW JOECKEL: I do, yes. [CONFIRMATION]

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SENATOR HARR: Okay. Thank you. [CONFIRMATION]

ROBERT MATTHEW JOECKEL: In fact, I was born here in Lincoln, came back.  
[CONFIRMATION]

SENATOR HARR: Excellent. [CONFIRMATION]

SENATOR JOHNSON: Any other questions? Seeing none, thank you.  
[CONFIRMATION]

ROBERT MATTHEW JOECKEL: Thank you. [CONFIRMATION]

SENATOR JOHNSON: You may step down and I'll ask if there's any proponents. Your daughter is sitting with you. I would assume she's...might be a proponent but (laugh) seeing none, I'm assuming you're not an opponent. (Laughter) [CONFIRMATION]

SENATOR HARR: Today. [CONFIRMATION]

SENATOR JOHNSON: Okay. There's no one in the neutral position, I'm sure. So with that, we will close the hearing. Matt, we appreciate you coming in. [CONFIRMATION]