STINNER: So welcome to the Appropriations Committee special interim hearing. My name is John Stinner. I'm from Gering. I represent the 48th Legislative District and I serve as Chair of this committee. I'd like to start off by having members do self- introductions, starting with Senator Clements.

CLEMENTS: Rob Clements, from Elmwood, I represent District 2, Cass County and eastern Lancaster.

STINNER: John Stinner, District 48, all of Scotts Bluff, Banner, and Kimball County.

WISHART: Anna Wishart, District 27, west Lincoln and Lancaster County.

KOLTERMAN: Mark Kolterman, District 24, Seward, York, Polk, and a little bit of Butler County.

STINNER: Yeah, we're a little shorthanded. I've got one in Hawaii and one couldn't make it from western Nebraska, but I'm not sure where the others are at. Maybe they'll-- they'll maybe filter in later. Assisting the committee today is Tamara Hunt, and to my left is our fiscal analyst, Clint Verner. Today's hearings is -- is invited testimony only. To better facilitate today's proceedings, I ask that you abide by the following procedures. Please silence or turn off your cellphones. Spell your first and last name for the record before you testify. Written materials may be distributed to committee members as exhibits only while testimony is being offered. Hand them to the page or clerk for distribution to the committee when you come up to testify; we need 12 copies. With that, we'll begin today's hearing with-- I don't have a list of testifiers, but this is going to be the beginning of the hearing on the special presentation of findings regarding the study completed on the Perkins County Canal, per Section 4, LB1020-- LB1012e. Good afternoon. Senator Vargas.

VARGAS: Chairman Stinner.

TOM RILEY: Good afternoon, Chairman Stinner and committee members. My name is Tom Riley, T-o-m R-i-l-e-y. I'm the director of the Department of Natural Resources, and I'm here today to introduce the Zanjero team. That's the independent consultants that were hired and tasked to analyze and report on the require-- requirements established in over LB1012 on-- during the 2022 Legislative Session. LB1012 established a fund for the department to use in the design and

permitting of the Perkins County Canal Project or, the "project," and provided the department limited authority to enter into options agreements for future purchase for lands for the project. Additionally, LB1012 directed the department to conduct an independent study of the project that included an evaluation of these four items: the cost of completion of the canal and adjoining reservoirs as out-- outlined in the South Platte River Compact; a timeline for completion of a canal and adjoining reservoir as outlined in the South Platte River Compact; a cost-effectiveness study examining alternatives, including alternatives that may reduce environmental or financial impacts; and, finally, the impacts of the canal on drinking water supplies for the cities of Lincoln and Omaha. To meet these directives, the department saw proposals from qualified firms. To ensure the effort was remaining independent, the department required that the selected consultants were willing to forgo future contracts for the design, engineering and permitting services for the project. Additionally, selected consultants were required to be licensed engineers in the state of Nebraska and also demonstrate that all members of the team did not have conflicts of interest which included affiliations with the state of Colorado or water projects that affect flows in the South Platte River Basin. The department received proposals, conducted interviews, and selected Zanjero and H2Options as the team to conduct this study. The consultants are here today to present their findings to the committee, as required by LB1012, And my understanding is that the full report of their findings will be available and completed by the end of the year for electronic filing with the Clerk of the Legislature, so that'll be done prior to December 31, as specified and in LB1012. So with that, thank you. And I'll turn it over to Mr. Gwyn-Mohr Tully and Mr. Michael Preszler. Mr. Tully's a JD. Mr. Preszler is a professional engineer. They're both form -- firm principals from the company of Zanjero. So with that, unless there's a question, Chairman, Mr. Tully.

STINNER: How many-- you received money for options. How many option agreements have you entered into?

TOM RILEY: So to date, we've not entered into a formal agreement. We have met with a number of landowners in Colorado, essentially, where the projected corridor might be. We were able to contact all those landowners. We held a meeting in Big Springs, Nebraska, earlier this fall and had a pretty good turnout for that, and we've had at least three letters of intent that have been returned to us, but we haven't finalized a contract option as of yet.

STINNER: OK. Senator Wishart.

WISHART: When you say three letters of intent, just explain a little

more--

TOM RILEY: So--

WISHART: --about those letters.

TOM RILEY: So these are letters of intent from those landowners in Colorado that demonstrated their interest into entering into an agreement with us. Again, it's for a land option, so the next step would be to have them work, develop that contract. We do have that set to the end of this year, the response for those. But as I said, there's been three so far and they have to the end of the year to see if we have more. And then we would work the actual land contract with that going forward.

WISHART: And you may go over this in your-- in your brief here, but would one of those landowners be enough to fulfill the land obligation for building a canal or how many-- how many of these landowners would you need?

TOM RILEY: So we threw out a wider net. We don't have the corridor nailed down quite yet. So contacting a number from where we think the diversion would be in Colorado, you were fortunate enough to be there so close to-- to Ovid, Colorado, and to the Nebraska border, so we would need some combination of all of those properties, maybe not all of them if we-- once we start to narrow the corridor.

STINNER: How do you set a price for the land? Is this because you're supposed to have eminent domain, is that correct--

TOM RILEY: So--

STINNER: --in Colorado?

TOM RILEY: The-- the compact does specify that the state of Nebraska would have eminent domain. We've kept with the willing buyer/willing seller with these options at this point in time. So the options would be-- I have to think of the number, Senator. I think it's \$120 an acre, depending on where it's at, to option land for up to 36 months. And then we could flip that option over to purchase the land.

STINNER: Do you then appraise the land and set a price or do you have to negotiate with each landowner?

TOM RILEY: So make sure I'm unpacking this correctly. We're-- so eminent domain, you know, there's a process for that--

STINNER: Right.

TOM RILEY: --for-- and we have not gone down that road and-- and wouldn't unless we can't reach an agreement with some of these landowners, which at this point in time we've got good interest with the options at least, and we'll keep working that.

STINNER: But a price has not been set.

TOM RILEY: For the land?

STINNER: Right.

TOM RILEY: No, but we would use an appraised value.

STINNER: OK. Any additional questions? Seeing none, thank you.

TOM RILEY: All right. Well, with that, Senators, if you'll let me, please, turn it over to Mr. Gwyn-Mohr Tully and his partner, Michael Preszler. So thank you.

GWYN-MOHR TULLY: Good afternoon, Senators, members of the committee and staff. Appreciate you being here today. My name is Gwyn-Mohr Tully, and that is spelled G-w-y-n, hyphen, M-o-h-r, and last name is Tully, T-u-l-l-y. I'm joined here by one of my partners in our firms Zanjero, Michael Preszler. Michael is spelled M-i-c-h-a-e-l; his last name is Preszler, P-r-e-s-z-l-e-r. We're also joined today by two colleagues, Robert Heather, who works in our firm, and Frank Kwapnioski, who's also assisted us in this project. I want to just invite today -- I'm sure it won't be an issue-- questions are in the middle of this presentation. Please feel free to ask us anything. We will keep the presentation moving and do our best, but we're open to questions for sure. I want to introduce Zanjero really quickly. We focus on complex water management issues throughout the United States and sometimes internationally. We have the unique expertise in various interstate issues and interstate water bodies, including the Colorado River, with the seven participating states, seven western states, I should call them, the Rio Grande between Texas and New Mexico, the Klamath River between Oregon and California, Lake Tahoe,

and the Truckee River in California and Nevada, among others. So I think the meeting purpose today is to discuss our independent findings on the South Platte Com-- South Platte Compact Canal Project, and we really wanted to talk about sort of three areas of our fundamental findings: (1) the availability of water supply for the state of Nebraska with this project; (2) the cost-effectiveness of building this project; and (3) the rationale and timeline to complete the project. Next slide, please. In April 2022, the LB1012 became Nebraska law, the Perkins County Canal Project Fund. There were appropriations made for designing, engineering and permitting the permit for the South Platte River Compact. It-- the bill directed the Nebraska Department of Water Resources to commissioned an independent study to address the Legislature's four directives, and Zanjero was selected through the competitive bidding process to produce those findings. Up on the slide is the four directives: estimate the cost of completion of a canal and adjoining reservoirs as outlined in the South Platte River Compact; develop a timeline for completion of the canal and adjoining reservoirs as outlined in the South Platte River Compact; examine the cost-effectiveness of alternatives, including alternatives that may reduce environmental or financial impacts; and evaluate the impacts of the canal on Nebraska water users throughout the Platte River Basin, including the drinking water supplies for the cities of Lincoln and Omaha. Next slide, please. Our analysis started in July of 2022, and we analyzed a huge volume of information for this project over the course of these months. We looked at information developed by the Department of Natural Resources through funding from 2019 through 2021. We looked at Colorado-developed information on water use and water supply planning data, planning documents, project feasibility documents for projects they intend to build in the South Platte system, a 1982 United States Bureau of Reclamation Study of the Perkins County Canal design, features and costs, and other documents that tiered from that particular document. We examined state of Nebraska data, studies and reports, including information provided by the University of Nebraska-Lincoln. And we also examined United States Geological Survey information, Colorado Decision Support System information, and other state and federal information. I think, in short, we gathered, reviewed, sorted, and synthe-- synthesized a huge volume of information for this particular project. Next slide, please. Our synthesized approach is as follows. We read the South Platte River Compact, evaluated the information that we had gathered and examined, completed a site visit throughout the Platte River system to look at different aspects of the-- Nebraska's water system, estimated the

water supply available to Nebraska, developed project alternatives, and created costs and benefits for those alternatives. Our site visit was particularly enlightening as it showed us sort of the interconnected nature and complexities of Nebraska's water system. And shown on this slide is a -- a small section of the 32-mile-long Sutherland Canal. And this water-- this canal moves water downstream Keystone Dam and Lake McConaughy in this-- in this system. It's interesting because the water used-- or shown in this slide has been used already for recreational purposes, used again for hydroelectric power generation purposes, moves down through this canal, connects-joins the South Platte River supply canal, and then is available for additional uses, power plant cooling, for example, irrigation, environmental, municipal uses down the system. But our tour really emphasize the interconnected nature of Nebraska's system and the importance of-- of how the system functions and the complexities in managing it. So I think, in short, we're thinking about the multiple purposes that can be available for captured and stored water in uses in Nebraska's water system. We developed project alternatives that tiered from the 1982 study. They incorporated water availability scenarios, and these scenarios addressed hydrologic and climatic variability, as well as increased diversions in the upper section of the South Platte River by Colorado in the future. We created two alternatives, one for 500 cubic feet per second diversion and conveyance facility and one for 1,000 CFS diversion and conveyance facility. If you think about that, sort of a way to-- to think about that volume, that -- that amount of water, 500 basketballs passing you every second. All right? Please go to the next slide. I think sort of a fundamental question is, why did Nebraska enact LB1012? When we were thinking about this, there was clearly a recognition by the Nebraska leadership about the risks associated with Nebraska's water supply, so we developed a little itemized thing here. The following risk factors were taken directly from Colorado's water plans, laws and policies. I'm going to read them out loud. Colorado's population is projected to grow by up to 10 million people by 2050. Colorado needs 600,000 to 1 million acre-feet of water of additional supplies to meet this growth. Ninety percent of Colorado's population lives in the Front Range, with 70 percent of that population living on the Platte watershed.

CLEMENTS: Excuse me. Clerk, Senator Erdman would like to be able to connect.

TAMARA HUNT: So I'm not sure what's happening with the phone system. I'm talking with Cathy right now and--

WISHART: Can we just call and put him on speaker right by the speaker?

TAMARA HUNT: Yeah, if someone wants to call him and just hold the phone.

VARGAS: Or he can ask you the question. You can ask the question on his behalf.

CLEMENTS: All right, I can-- I'll go ahead and call him. Just hang on a minute.

WISHART: Yeah. Rob, if you just want to call him and then put the phone there.

CLEMENTS: Or I can put it here.

WISHART: OK.

STINNER: Put it by your ears. That oughtta help.

CLEMENTS: It's not going through. He must be trying to call or something. I'm not sure.

KOLTERMAN: McDonnell's on-- McDonnell told me he's on hold as well.

VARGAS: It's OK.

KOLTERMAN: I'll-- I'll call him.

TAMARA HUNT: OK.

STINNER: You may have to put the cell phones with the speakers up there--

WISHART: Yeah, so they can hear.

STINNER: --because otherwise they're not gonna hear him.

KOLTERMAN: Hello, Mike?

CLEMENTS: Well, OK.

KOLTERMAN: I'm going to put you--

STINNER: Otherwise, I don't think he'll be able to hear.

KOLTERMAN: [INAUDIBLE] stay connected to my phone. I'm going to put you on speaker and put you by my microphone so if you have questions. We're having a hard time connecting you. Yeah. You still there?

McDONNELL: Yes, I'm here.

WISHART: I don't think he's going to be able to hear the speakers, though, unless you put it over there.

STINNER: You gotta put it up there by the speakers.

CLEMENTS: All right. I'm just going to put my phone up by the presenters and he'll have to just listen through this way. McDonnell's having the same problem.

STINNER: This is a workaround on technology.

GWYN-MOHR TULLY: Absolutely, just fine, workarounds work.

WISHART: Talking about 100-year-old compacts in a 100-year-old building.

STINNER: We're going back to the eighties now.

GWYN-MOHR TULLY: You do what you have to do to make it work and I appreciate that. That's great.

KOLTERMAN: I hope I have enough battery.

WISHART: I know I don't have enough; otherwise, I would have done it.

GWYN-MOHR TULLY: I'll project my voice a little bit more if I could do that.

WISHART: OK. OK.

GWYN-MOHR TULLY: Mr. Chairman, you OK with me continuing?

STINNER: Please.

GWYN-MOHR TULLY: OK. All right, great. Good to have you on. Thanks for having us today. Good to have you by phone. So I was on the fourth bullet here of the risk factors. We've gone through some risk factors.

WISHART: I'm sorry, can I apologize? Gentlemen, I know we want to include you, but you're going to have to put your phones on mute so that the recorder isn't picking up your movement.

STINNER: Thank you.

KOLTERMAN: How'd you know about that?

GWYN-MOHR TULLY: OK. All right. So we're briefly going through the risk factors that Colorado has provided in various documents that they have developed, including laws. And we went through three of them. We're going to hit number four here. Colorado House Bill 16-1256 declares the intent of Colorado to use the South Platte River water supply. Want to try and mute that?

WISHART: Yeah.

GWYN-MOHR TULLY: Who's on this?

WISHART: I think that's--

____: That's [INAUDIBLE]

: That's our number--

WISHART: Steve is causing too much noise.

KOLTERMAN: Just mute that one.

GWYN-MOHR TULLY: Oh, I think he shut it off. I think he's good.

WISHART: He's good.

GWYN-MOHR TULLY: OK, fair enough. All right. Colorado House Bill 16-1256 declares Colorado's intent to use the South Platte River supply.

WISHART: Can you clarify, on this, have they passed this legislation?

GWYN-MOHR TULLY: Yes.

WISHART: Is this law?

GWYN-MOHR TULLY: Yes.

WISHART: OK.

GWYN-MOHR TULLY: Other sources in Colorado, like the Colorado River, are running low and Colorado plans to take Nebraska's South Platte River water to meet its demands.

WISHART: And what's the public documents that you're looking at that would— that leads to this last bullet point?

GWYN-MOHR TULLY: Yeah. I'm going to read you a quote here, if I may. Give me a moment. I think it's slide 26. Income Here you go: statement in Colorado Water Plan on page 3-29. There are no restrictions on Colorado's use on South Platte River water flow--South Platte River flows from October 15 through April 1. This is the time period where we consider the diversions.

STINNER: Just the Upper Platte or the Lower Platte?

GWYN-MOHR TULLY: It uses "South Platte River flows" as the words.

STINNER: Even though they'll be in violation of the law, the compact [INAUDIBLE]

GWYN-MOHR TULLY: It would seem, if they were diverting from the Lower Platte, that that may be the case.

STINNER: OK.

GWYN-MOHR TULLY: And otherwise, it may be the case if the water certainly belongs to the state of Nebraska.

STINNER: But the compact says 120 cubic feet per second of water during that period of time. That's what it says in the compactor, right, during that time?

CLEMENTS: It's 500 during the winter.

STINNER: Five hundred during the winter? OK.

CLINT VERNER: If the canals [INAUDIBLE] and that's during the summer. Sorry.

STINNER: That's the summer. OK.

GWYN-MOHR TULLY: Yeah.

STINNER: Sorry.

GWYN-MOHR TULLY: It's no problem. Yeah, the compact gets confusing. The 120 CFS is the minimum flow during sort of the irrigation season, the way I like to think about it, and then during the winter season, the 500 CFS is really the— the key component for this project. So before passing this presentation on to Mr. Preszler, I just want to hit sort of our— deliver our fundamental conclusions for— for this effort, because I think that's really— we want to drive it home. Number one, Colorado plans to take Nebraska's water without this canal. Number two, water in the South Platte is available for Nebraskans for future use. By constructing the project, number three, Nebraska will secure its water supply. And number four, the benefits of constructing the project outweigh the costs. So, Mr. President, now we'll provide additional details based on LB1012's directives.

MICHAEL PRESZLER: Well, thank you for having us here today. I feel we're really privileged to be supporting the state on this important project. And whoever ordered up the warm weather, want to thank them as well. And I wanted to go over each of the directives, one at a time, starting with directive number one, which is estimation of the cost of the completion of the canal and adjoining reservoirs as outlined in the South Platte River Compact. Excellent. In order to determine the cost of the project, construction of the project, we focused on the following tasks: number one, research and reviewed historical documents. As Gwyn-Mohr mentioned, we spent quite a bit of time looking through what studies have been completed, information that has already been analyzed, and built upon that information to not only understand the project, but in development of a modern version of this project. Number two, refine the canal layout and its elements. We refined the project by shortening its length. We terminated the canal at the existing South Platte River Supply Canal to piggyback or take advantage of existing infrastructure, as opposed to extending the canal to Lake Maloney, which was originally envisioned for the project, so this shortened the project quite a bit, which affects-- reduces the cost. Number three, we created a conceptual design of the diversion canals and the diversion canals and reservoirs. And we-- one of the things we did was we looked at the original envision of this project, which included six reservoirs, and we reduced that to two reservoirs, sort of the most westerly reservoir and then Roscoe Draw Reservoir, which is the major storage capacity for this project, and reduced the number of reservoirs from 6 to 2. And number four, operize-- opt-- optimized operational flexibility of the project. So one of the things we did for Roscoe Draw Reservoir water is divert it out of the South Platte, diverts

into Roscoe Draw Reservoir, and then of course is released from Roscoe Draw Reservoir for-- to meet downstream demands and needs. And we upsized the capacity out of Roscoe Draw Reservoir. We looked at both a 500 CFS diversion canal capacity and a-- and a 1,000 CFS capacity, and we maintain those capacities downstream of Roscoe Draw Reservoir, where the original envisioned project reduced those capacities to 250 CFS. And that modification to the project will improve water management and flexibility, especially-- especially in coordination with existing projects on the Platte River system.

GWYN-MOHR TULLY: Can I stop you really quick?

MICHAEL PRESZLER: Yes.

GWYN-MOHR TULLY: Not that I have a question for you. People trying to call back in. It looks like they got kicked off.

MICHAEL PRESZLER: OK.

KOLTERMAN: Just go ahead and answer it.

GWYN-MOHR TULLY: OK. He just hung up. Darn. I just didn't want to be-- I didn't know if I was the correct person.

KOLTERMAN: It's just McDonnell.

GWYN-MOHR TULLY: If they call again, I will make sure I answer, so I'll put these over here.

MICHAEL PRESZLER: They're both off?

GWYN-MOHR TULLY: They're both -- they both checked out

VARGAS: There's a lot of "Mike McDonnells" out there.

STINNER: Senator -- oh, Senator Clements might call him back. Well, wait till they call back.

GWYN-MOHR TULLY: OK.

STINNER: Go ahead.

KOLTERMAN: He might have hung up intentionally.

MICHAEL PRESZLER: It's too boring, so just-- [LAUGH] yeah [INAUDIBLE]. Number five, we updated existing information on project

costs based on updated— this updated design that I mentioned, and we updated construction costs to account for not only the— our new vision of the project, but we— as well, we added costs for permitting, licensing, environmental clearance and water rights. So I didn't see those in any of the past documentation, so we— we included those costs as the real costs that the state would incur under this project. And then you'll— as you'll see on the slide— on our slide, alternative one, which is the 500 CFS diversion canal, ultimate cost is the \$567 million; and alternative two, which is the 1,000 CFS diversion and capacity canal is \$628 million.

KOLTERMAN: I have a question.

STINNER: Senator Kolterman.

MICHAEL PRESZLER: Yes.

KOLTERMAN: Thank you, Senator Stinner. On the-- you-- you said earlier just a few moments ago that-- that the existing canal that would go into Lake Maloney can handle part of it, so you'd utilize that--

MICHAEL PRESZLER: So the original--

KOLTERMAN: --so it cuts the cost down?

MICHAEL PRESZLER: Yeah. When I-- we talk about the original vision of the canal. In 1982, the Bureau of Reclamation did pre-engineering feasibility design of the canal system and diverted the water out of the South Platte, ultimately put it into Lake Maloney. So what we did was not do that. We-- we looked at taking the canal, instead of taking the water into Lake Maloney, we take it into the South Platte River supply canal quite a ways upstream.

KOLTERMAN: So it wouldn't-- it wouldn't have a negative effect on Lake Maloney.

MICHAEL PRESZLER: No.

KOLTERMAN: And then my question is, if you do it upstream, is the canal that you're putting it into capable—has it been updated? Is it capable of handling that going forward in the future, or are we going to have to put more money into that canal as well?

MICHAEL PRESZLER: Yeah, so-- yeah, good question. We-- I think it is capable. And we-- what we did is we-- we looked at that and terminated the South Platte Compact canal below the confluence to make sure that we have enough-- build a confluence of existing canals that the-- on the South Platte River supply canal to be sure that we're in-- you know, be sure that we have adequate capacity to-- to handle this-- this supply. Also, there's a-- keep in mind, there's a timing component to this that we mentioned earlier that the 120 CFS that's diverted out of this system occurs in the irrigation season, and our project is diverting water completely opposite of that in the winter season when capacity in those reservoirs would be more likely available. You-- you probably see that this year. If you go out there, some of these canals are bone dry, so.

KOLTERMAN: One-- one final question if it's all right, Mr. Chairman.

STINNER: You bet.

KOLTERMAN: Are we-- you talk about Colorado's going to use our water, at least they say they're going to use it. Are we getting our share of what we're supposed to get right now at the present time?

MICHAEL PRESZLER: Yeah, that's a great— that's a great question. So we— our analysis, we focused on the winter months, so this October 15 through April 1. We— because that's the water that's entitled to Nebraska for this project. We didn't focus on this, although we did look at the remaining part of the year, and it's not clear that the—it's not— I don't know if— it's not clear that that's occurring, put it that way, that—

KOLTERMAN: So we don't we don't know if we're getting the water that
we're supposed to get--

MICHAEL PRESZLER: Yeah.

KOLTERMAN: -- at the present time.

MICHAEL PRESZLER: Correct.

KOLTERMAN: OK. Thank you.

GWYN-MOHR TULLY: Let me-- and may I add to that just a little bit?

STINNER: I-- I-- I have--

GWYN-MOHR TULLY: OK.

STINNER: We were supposed to have had a baseline study of water flow, and that is what we allocated, that million-fifty that you alluded to. That was a study to establish kind of a baseline of water flow to ensure that we got the water that was designed in the compact. Now I've never seen the results of that study, but that may be what you're going to allude to.

GWYN-MOHR TULLY: Yeah, I think that's a great point. And I think part of our analysis here is— is talking about the water availability at a future point in time, and that's important. I think the senator's question was really asking a little bit about the water availability right now and is it coming across— across the line. I think it is, just generally speaking, and that's really based on the fact that Colorado hasn't taken the steps to develop that water supply and capture it and use it for their own uses. So what we're looking at is we're receiving that water, but in the future, that water is not going to be there unless an action is taken. And then your— your question, excellent question, and— and Mr. Preszler will get to this, too, the availability of the future condition is what we're looking at. Once they start to build and things change, potentially climatologically and hydrologically, what does it look like then? Our charge is to help figure that piece out.

STINNER: Let me ask you this. Is the land acquisition cost in the cost estimated--

MICHAEL PRESZLER: Yes.

STINNER: --in your cost?

MICHAEL PRESZLER: Yes. So land acquisition's in there. Did you do any analysis on the operating cost of the canal after it's built or--

MICHAEL PRESZLER: No, we did not. Yeah.

STINNER: -- and who's going to own it and things of that nature so--

MICHAEL PRESZLER: No, we did not.

STINNER: OK.

CLEMENTS: Mr. Chairman?

STINNER: I-- I do have a question for you, and-- and it's a legal question. If Colorado passes a law that you perceive will impede or-certainly a run-- certainly is a problem with water flow in the future, which apparently they did pass that legislation, why haven't we reacted? Our AG's Office says, whoa, wait a minute, Colorado, you can't pass that type of legislation without the acknowledgment of the compact that guarantees our water flow. Now, why hasn't that happened?

GWYN-MOHR TULLY: Well, let me-- I--I-- I certainly wouldn't want to speculate on things that are sort of beyond the purview of our job here to analyze the-- the supplies and I'm-- I'm certainly not the state of Nebraska's attorney. I know that there are active-- there are actions and activities to help address questions related to the compact, because it's not a simple document to just work through. There's been a lot of time that's passed since its enactment. So I guess the long and short of it is, I think there are a lot of people really working hard on questions like you're asking and thinking about those questions, but we haven't really delved into that in the context of our-- of our study.

STINNER: One of the risk factors that should have been looked at is the risk factor of lawsuit between us and Colorado. The length of that lawsuit, the cost associated with that lawsuit and, oh, by the way, if you have that lawsuit, does that open up the compact to where a water master comes in and redetermines what the compact's going to look like, that is a major risk and that's the-- one of the things that I'm most fearful of. As we move down the road, we're begging for a lawsuit, there's no question about that. And if I'm Colorado, I'd tell you, build it, I'll sue you later, but that's-- Senator Clements, you wanted to ask a question.

CLEMENTS: Thank you, Mr. Chairman. You said alternate two would have a thousand cubic-feet capacity. What was alternate one designed at?

MICHAEL PRESZLER: Five hundred.

CLEMENTS: Five hundred CFS?

MICHAEL PRESZLER: Five hundred CFS, yes.

CLEMENTS: And if we--

STINNER: I'm sorry to interrupt you.

CLEMENTS: So that's a-- looks like a large increase for not-- double the capacity for the 20 percent increase in cost. All right, thank you.

WISHART: I have a follow-up question.

STINNER: Senator Wishart.

WISHART: Following up what Chairman Stinner was saying, when we're looking at updated existing information on project cost, do we take into account litigation?

MICHAEL PRESZLER: No, we did not take into account litigation.

WISHART: OK.

STINNER: We probably didn't take in the cost of a permitting process, did you?

MICHAEL PRESZLER: We did. We did--

STINNER: Did you?

MICHAEL PRESZLER: --add a cost-- add cost for permitting.

STINNER: I hope it's large enough.

MICHAEL PRESZLER: Well, we'll see.

STINNER: I looked at your timeline, and actually the timeline does not reconcile in my mind with the timeline that I've experienced in Colorado. And I do have businesses in Colorado, and I'm well aware of some of the projects that they have, and all of their projects have taken in excess of certainly 10 years, but in excess of 20 and 25 years to complete because of all of the environmental impact and all the rest of that kind of stuff. So I'll-- I'll be quiet. I'll listen to your pre-- prepared comments, but I will say, I will be shocked if we can get this done inside a 10 to 15 to 20 years.

MICHAEL PRESZLER: Yeah.

STINNER: That's my own opinion. And frankly, my opinion doesn't count because I'm a lame duck, so. [LAUGHTER]

Speaker 5: All right, next slide. Directive 2: development of a timeline-- a good seque-- for completion of a canal and adjoining

reservoirs as outlined in the South Platte River Compact. Next slide. We developed an overall timeline of the project. We separated the project into these four major tasks, as shown on the left of this slide: public outreach, environmental clearance, engineering design, and construction. And we show about three years completing the first— those first three tasks, which are getting approval to construct the project, and with the construction beginning in 2026 and extending through 2033, and it's with a kickoff, if you will, of the second quarter of next year, 2023, so this— this is an 11-year timeline. And, Senator, you're— you're right. This is— this is a timeline developed by an engineer, so we're going to push through those environmental clearances, but yet there— there's any—anything can affect this timeline. It could be lengthened by— with a lawsuit or it could be shortened. We've put a pretty conservative length for construction of this, so [INAUDIBLE]

STINNER: Well, I presume you've dealt with the Army Corps of Engineers?

MICHAEL PRESZLER: I have, yes.

STINNER: You'll be dealing with them on this, as well, I would presume.

MICHAEL PRESZLER: Yeah. Yes.

STINNER: So--

MICHAEL PRESZLER: So this is our-- you know, this is our planning-level timeline for this pre-engineering feasibility, right. It is-- it can-- it can be variable, for sure.

STINNER: Senator Clements.

CLEMENTS: Thank you, Mr. Chairman. The-- is there a difference in the timeline between alternate one and alternate two?

MICHAEL PRESZLER: No, no. We--

CLEMENTS: OK.

MICHAEL PRESZLER: --used the same time line for both of them, yeah.

CLEMENTS: And is the size of the storage reservoir the same in alternate one and alternate two?

MICHAEL PRESZLER: Yes.

CLEMENTS: It is only the size of the canal that would change? Is that it?

MICHAEL PRESZLER: Yep, the size of the canal and the diversion structure from the South Platte, correct.

CLEMENTS: Thank you.

KOLTERMAN: Stinner.

STINNER: Senator Wishart, sorry.

WISHART: Have you been able to break out the total cost into these phases? Trying to get a picture of--

MICHAEL PRESZLER: Yes.

WISHART: -- over the years what the state's going to need to fund.

MICHAEL PRESZLER: Good question. So for-- well, yes. However, it's-- it's pretty blocky. So for public outreach, environmental clearance, we put in \$10 million.

WISHART: OK.

MICHAEL PRESZLER: Just lump those together in our cost, costing amount. And then the engineering design, we're thinking that is covered by the monies already allocated to this project; then the construction is, of course, the bulk of this cost.

STINNER: Is the canal going to be lined with concrete or is it going to be pipe, or what's your thoughts on that?

MICHAEL PRESZLER: Yeah, so the whole canal will be open-channel canal, no-- no pipe. The first section of the canal from the diversion dam will be concrete-lined, and then it transitions into an earth ditch without a concrete lining. It extends for some period of miles and then it transitions in-- back into a concrete canal, so it's-- the answer is both. Some of it's concrete lined; some of it's earthen.

STINNER: That begs the next question that I have, is, have you contemplated seep?

MICHAEL PRESZLER: Yes.

STINNER: Now you lose water flow as it goes through this process and--

MICHAEL PRESZLER: Yes, exactly. Yes, we have, and— and that's why we have— a portion of the canal is concrete—lined to minimize that seepage. And we looked at also maintaining only a concrete—lined canal the whole distance and decided it does seep at the earthen line, which does seep more than a concrete—lined project would, but that recharges your groundwater aquifer, isn't really lost, right? It's just by— it just returns into your— into your aquifer and it's just cheaper to build a—— I'm sorry, to—— it's cheaper to build a earthen ditch for—

STINNER: But it does affect the 500 coming in at the front end, what it shows up at— at the reservoir—

MICHAEL PRESZLER: Yes.

STINNER: -- site and how long it takes you to fill that bathtub up.

MICHAEL PRESZLER: Yep.

STINNER: OK.

MICHAEL PRESZLER: Yes, it does.

STINNER: You need to do that calculation for me--

MICHAEL PRESZLER: Yes.

STINNER: -- to show me how this is going to fill up.

MICHAEL PRESZLER: Yes, and we-- and we also included a value for, you know, diversion efficiency out of the river, which reduces our water supply availability into our project, as well as evaporation on the canals and the reservoir, so we-- we accounted for that as well.

STINNER: Senator Wishart.

WISHART: Do you include a value for rainfall that is cost within this bathtub, as the Chairman refers?

MICHAEL PRESZLER: Not-- we-- we did not account for rain falling or directly falling on the--

STINNER: It doesn't rain in western Nebraska. I live there.

WISHART: So that's the-- so the-- it would be nominal.

MICHAEL PRESZLER: So, yes, we did, zero. [LAUGH] No, we did not.

WISHART: OK.

MICHAEL PRESZLER: Well, we had our first moisture in western Nebraska since May. We had six inches of snow, so-- I'm not kidding about that.

GWYN-MOHR TULLY: Way overdue.

MICHAEL PRESZLER: OK. Next slide. Directive three, examination of the cost-effectiveness of alternatives, including alternatives that may reduce environmental or financial impacts. Cost-effectiveness: In considering cost-effectiveness, we looked at the following items: 1. Analyzed water supply availability. This is an important element for this project. You know, determining the amount of water that is available in the future for this project, you know, directly affects the quantified benefits of this project: more water, more benefits; less water, less benefits. So we spent quite a bit of time looking at the amount of water that is entitled to flow into Nebraska and entitled to be diverted by this project. And in determining that water supply availability, it's fairly complex but generally accomplished by, one, reviewing the state compact to see what-what-- what the state's entitlements are under that compact. And then we compiled and quantified the senior water right holders that, you know, take water ahead of the compact, if you will. And then we looked at the natural variability of the flows that Mother Nature provides on top of all of that, and we conservatively estimated that on average about 78,000 acres of water per year is available to the canal in alternative one, or the 500 CFS canal, and about 113,000 acre-feet per year is available under alternative two. And it-- it was important to note, too, that water is available every year, and more in wet years, less in dry years, and those are the averages of-of the period that we looked at.

STINNER: So you're telling me that on average you're going to be able to fill those reservoirs every year?

MICHAEL PRESZLER: So the-- the Roscoe Draw Reservoir is about 150,000 acre-feet, so if we're-- if we're able to divert 78,000-- I'm sorry--

yeah, 78,000 under alternative one, or the 500 CFS, so it would take multiple years to fill that reservoir--

STINNER: Right.

MICHAEL PRESZLER: --on an average year.

STINNER: I'd like to--

MICHAEL PRESZLER: But it could fill in one year for sure.

STINNER: I've-- I've seen that happen in Lake McConaughy with flooding and the like of that when they said it would take 20 years for it to fill, so I agree with you there.

MICHAEL PRESZLER: Yeah.

STINNER: But in terms of looking at stream flows over the last 25 years, it varies so much that— and again, you're using it for irrigation, so the minute that you fill it, you're emptying it back out during that season.

MICHAEL PRESZLER: Yep.

STINNER: Then you have to fill it again. So there is a good chance that this-- reservoirs would lay dormant almost for a good portion, say over a ten-year period of time. Half that time, there would be no water--

MICHAEL PRESZLER: Yeah.

STINNER: --or minimal.

MICHAEL PRESZLER: Well, I think that the way I--

STINNER: --just on stream flows--

MICHAEL PRESZLER: Yeah.

STINNER: -- and this is before Colorado takes all the water, according to what you're telling me.

MICHAEL PRESZLER: Yeah, I think, the way I envision the operation of the project is water would be captured during the winter, during this diversion season, and then stored for use in the irrigation time. So there's this inter-seasonal storage component to this-- to the

reservoir, the Roscoe Draw Reservoir. Then in addition to that, we're able to move water from wet years, where it fills up in one year, and carry it over to dry years to make it available in dry years as well for irrigation. So there's this-- the-- the-- the benefit or value of that storage is twofold. You know, it's one inter-seasonal storage movement from the winter to the summer, to the irrigation season, and then also from the wet years to dry years.

GWYN-MOHR TULLY: And I'm going to add to that too. I think it's important to recognize the interconnectedness of this particular piece in the Nebraska water management puzzle. Right? So you may be able to hold more water here, for sure uses in these other reservoirs and bring water out of Lake McConaughy, or vice versa, depending on what's happening with the system. So it's-- it's another aspect of better management of a complex system that's really well integrated, frankly.

STINNER: Go ahead.

MICHAEL PRESZLER: OK-- OK, number 2: assessed future no project. We-we talked a little bit about this but we-- we-- without the canal project, Colorado takes water from the South Platte River that is currently flowing into Nebraska and Nebraska is left with less water. That's our no-project alternative future. So when we look into the future, Colorado takes water out of the South Platte, no longer flows into-- into Nebraska. We developed cost. I mean, I talked about that previously. Number 4: Identified and quantified benefits of the project. So we've-- we identified a specific-- we call benefits of the project and quantified those in dollars to understand the financial impacts to Nebraska if Colorado -- if Colorado reduces flow in the South Platte River. So this is important to think about. We call them benefits. I struggle with that a little bit. It's really the-- the construction of this project produces these benefits, but it really keeps water flowing from Colorado into Nebraska that otherwise, without the project would be kept in Colorado. So it's-yeah, that's what we call benefits. And number 5: Develop-- Define timeframe for the analysis. So we used in a-- in our financial analysis, we used a timeline of 50 years. You know, benefits keep accruing each year, so we capped it at 50 years. That's a typical lifespan for a major project like this before it needs, you know, major overhaul or repair, maintenance. But while this bill or this 50-year horizon caps the benefit calculations in dollars, we do recognize that benefits continue to accrue, you know, after that 50 years. We just didn't include those in the benefit numbers.

STINNER: Go ahead, Senator Wishart.

WISHART: So when you outlined that, you looked at alternatives that may reduce environmental impacts. What are the environmental impacts associated with building this canal?

MICHAEL PRESZLER: Yeah, we do have a slide on-- specifically on that. But the-- we haven't done an environmental review of the project. But what we see, we see it -- this happening in -- in a couple of ways. One, the footprint of the-- of the project itself. So there's some wildlife or land-side effects of this project, so whether there's significant impacts or not, I don't know. That would be determined through the environmental review process. And then there's also-- by capturing this water in the storage reservoir and making it -- this surface diversion by the state, you're able to release that water in a time that provides environmental enhancement to-- to the PRRIP, for instance, or provide sediment movement in your -- in your channel or, you know, we haven't gone into the-- to the details on how the project would be operated to enhance the environment like that. But it-- it's-- it's not-- it's not-- this particular project, it's not all one way, so there are environmental effects, for sure, of building a project of this nature and dewatering this system. But it also-- the flipside is, is it makes water available to meet identified, you know, environmental needs.

GWYN-MOHR TULLY: Let me maybe add to that too. I think taking from the six-reservoir project to reducing it down to two reservoirs is just a footprint for our own purposes, as--

MICHAEL PRESZLER: Yeah.

GWYN-MOHR TULLY: --as Mr. Preszler was saying, as well as the reduced financial component from reducing just the volume and size of the overall project.

STINNER: Any additional questions? Go ahead.

MICHAEL PRESZLER: OK. I think we can move on to the next slide. Here we have the overall cost and benefit for each of the canal alternatives, the 500 CFS and the 1,000 CFS canal alternatives. And we mentioned before, the cost for the 500 CFS canal we've estimated at \$567 million, and the cost of the 1,000 CFS canal at \$628 million. And then the benefits we calculate, of course, are different for each size of the canal, each alternative. And for the 500 CFS canal, we

calculate benefits ranging from \$698-754 million; and for the 1000 CFS canal, we calculate benefits ranging from \$802 million to \$986 million. And we have these ranges here, too, on the benefits to account for the variability of water in the system available to our project. So we didn't feel comfortable, you know, selecting one number for the benefits, so it's-- we see it as a range. It would be something in there depending on how-- how water availability shows and how Mother Nature behaves and what-- frankly, what Colorado does. And then if-- in terms of cost-effectiveness, we looked at a benefit-cost ratio, which is simply the-- the cost-- I'm sorry, the benefit of the project in dollars divided by the cost in dollars. And so typically people like to see 1.0 or more, which means, you know, our benefits outweigh our costs. And in general, the higher number, the better, so--

STINNER: You're going to have to provide the committee and the Legislature with the background between the 120-- you gotta support the benefit a whole lot better than giving me a number--

MICHAEL PRESZLER: Sure.

STINNER: --or at least, I think this committee will agree, they want to have-- they want to find out what the benefit, what-- what that entails. And I'm looking at your environmental and financial impacts, which you're going to get to, and I'll comment on several sections of that, as well, so--

MICHAEL PRESZLER: Yes [INAUDIBLE] very good.

STINNER: Anyhow, that— that might be a project for you to work on, because I don't think anybody's going to accept just the benefit of \$1.25 versus a buck that we spend. That's— that just doesn't pass muster with me—

MICHAEL PRESZLER: Yeah.

STINNER: -- and I don't think it does with the committee.

MICHAEL PRESZLER: Yeah, we-- in-- in developing these benefits, we do have quite detailed-- I'm giving you the bottom line.

STINNER: I'd love to see the detail.

MICHAEL PRESZLER: The-- yes, we have the details and you will see the details, yes.

CLEMENTS: Mr. Chairman?

STINNER: Senator--

CLEMENTS: Thank you.

STINNER: --Clements.

CLEMENTS: Regarding the benefit, is that the 50-year benefit?

MICHAEL PRESZLER: Yes.

CLEMENTS: Over 50 years?

MICHAEL PRESZLER: Yes--

CLEMENTS: Thank you.

MICHAEL PRESZLER: --over 50 years, correct.

STINNER: That's a long time, my friend. Go ahead. Senator Vargas, Go ahead.

VARGAS: Along the same lines as Chairman Stinner, because I-- you include these activities that you are part-- this is part of the analysis of cost-effectiveness, right?

MICHAEL PRESZLER: Yes.

VARGAS: It would be very helpful to get, along with whatever is the follow up is the weight of-- I don't know how you formulate these. Is-- there's a formula you use for similar projects that you've worked on for analysis of other projects in other states that you've worked on. It would just be really helpful because, I mean, it's really not enough right now [INAUDIBLE]

MICHAEL PRESZLER: OK. And we-- we do have that, and we have a couple of slides that we'll talk about kind of the elements that went into that, those benefit calculations. But ultimately, we do have equations that looked at, you know, basically the unit value of water for every beneficial use of that water and what that volume will be under this project for each alternative, come up with these numbers. So we do have-- that's where-- that's where these benefit numbers came from. We just summed all those up and that's the big number, but yeah.

VARGAS: OK.

MICHAEL PRESZLER: Next slide. Talked a little bit about the environmental and financial--

STINNER: By-- by the way--

MICHAEL PRESZLER: --impacts.

STINNER: --I would like somebody to put the operating cost associated with, you know, maintaining the canal, maintaining the system, and compare that also with the benefits. So I think that would-- over a 50-year period of time, the operating costs have to be contemplated too. You just can't look at this one-time cost and say, here's 50 years of benefit--

MICHAEL PRESZLER: Right. Yeah.

STINNER: --without taking a look at and subtracting the operating cost associated with that. And I'm not even sure we've worked out who is going to run this thing, so.

MICHAEL PRESZLER: Yeah. Yeah.

GWYN-MOHR TULLY: Yeah, your point is absolutely well-taken and it's extremely important in the context of this. And when we look at the water projects throughout the West, you know, in a lot of ways, and I'm not saying how this is how this would be managed, but the delivery of water to an end user generally costs that end user some amount of money to help main-- do the operations and maintenance of the system. So it's-- it's usually a sort of a second-tier assessment. You build a project, you sort of think about what this operation and maintenance costs are going to be as they get going here, and then we have cost and things associated with delivering [INAUDIBLE]

STINNER: So I'm-- I'm going to say this. OK, you put the-- you put the reservoirs in place for irrigation purposes. You haven't contemplated that irrigation district tying into those reservoirs so that they can use it, so that they can pass the cost off to the end user, which will be the dollars flowing. I don't know how much-- how much-- how many acres are going to be covered by this irrigation. OK? I mean, it might be only a thousand acres. So if the operating cost is millions of dollars against the thousand acres, that don't work, not for that producer.

MICHAEL PRESZLER: Right.

STINNER: That's why I think you have to look at not only this-- OK, we're going to build these wonderful ponds to hold water for irrigation -- but you have to think at the end user, which is the farmer. How many acres are you going to irrigate and what's the benefit of that? Now, that might end up being a pretty good-sized benefit, but to stop the analysis right where we're at, I-- I don't know how to quantify it, frankly. You got the cost? OK, I'm-- I'm OK with the way you put the cost together, the way you're thinking about the benefit side, and the extra cost associated with the rest of this and how it's going to be-- how this water is going to be delivered to the end producer who pays for it. That's where-- that's where I-- I haven't seen anything relative to that, but it is for irrigation purposes according to the compact. Now you can throw out a whole bunch of environmental stuff that it benefits, wildlife, recreation, all the rest of that stuff. That's not the game. The compact says irrigation, and that's what it's for, is irrigation. So hook up to the landowners, hook up to the end users, and then now start giving me what-- what this looks like from an economic impact. So, end of sermon, sorry.

MICHAEL PRESZLER: Very good. Thank you. Yeah, we also--

STINNER: Just-- just complete the-- complete the analysis, is what I'm--

MICHAEL PRESZLER: Right.

STINNER: --asking you to do.

MICHAEL PRESZLER: Yeah. Thank you. We also considered ways to reduce environmental and financial impacts to the project, and we did this by reduction of the number of reservoirs. We mentioned this from the original envision of the project, with six reservoirs to two, mentioned reduce-- reduction in total canal length and-- and the associated footprint, both the canal and the reservoirs, and we recognized that there's an enhanced water quality aspect to this project, and that we also recognize that there's an increased waterfowl habitat, especially on the flat-water reservoirs that are be-- would be constructed. And then mention this, too, I guess, provide consistent Platte River base flow, so by carrying over water from wet years to dryer years, as well as from winter months to summer months, we're able to provide that with this project and

ultimately protect, preserve, and enhance groundwater recharge and return flows to the Platte River system.

STINNER: Those are two elements, the last one, that I'm having a hard time getting my head around.

MICHAEL PRESZLER: Yeah.

STINNER: You're going to stop water flow at 500 cubic feet per second in Colorado, right? That flow is not going to go up to North Platte, where it is today. You're going to divert that to southwest Nebraska and put-- hold it in a pond. That-- I get the fact that it may have a longer term benefit because of the storage capabilities, but you've encroached upon the flow of the Platte River. Now if I'm a irrigator downstream, like in Kearney or-- or Gothenburg or wherever, all of a sudden that flow isn't there to recharge the aguifer--

MICHAEL PRESZLER: Yeah.

STINNER: --and what's the effect of this going to be on the aquifer? I didn't see any analysis relative to that.

MICHAEL PRESZLER: Yeah, you-- this is-- this is important.

STINNER: I'm-- if I'm-- if I'm a farmer downstream, this--

MICHAEL PRESZLER: No, you're right on. And this goes to the somewhat unique nature of this project. So if we look at our no-project alternative moving forward, just what you described as-- as downstream farmers in Nebraska as getting less flow from our project, that is on the table to occur without this project. So what this project does is it insulates us against what you're describing. It doesn't exacerbate it.

STINNER: It-- you forgot one thing.

MICHAEL PRESZLER: Yes.

STINNER: You've got a compact that says 500 cubic feet per second is supposed to flow, and that's what you depend on now. That's what you have in hand today. Now, all of a sudden, you're going to take a more aggressive approach and say, OK, you pass these laws, you're going to have another ten-- all the things that you say are true, but you still have a compact that they have to abide by. Now, most of the water projects that I saw in Colorado were really to save water as

opposed to use of water, but that's-- that neither goes here nor there. The fact of the matter is, you got a compact today. By-- by doing what you're doing, you're asking for a lawsuit right out of the bat, or after you're constructed you'll have a lawsuit between you and Colorado. And I-- I just, for the life of me, can't see the benefit of spending taxpayer money for \$600-700 million for something that, frankly, I-- you know, it impedes the flow of water, and the idea that it's going to preserve Lincoln and Omaha's water, Lincoln and Omaha doesn't get a dime's worth of water out of western Nebraska. There are studies that show that water coming across the Wyoming border, where I live, is fully dissipated by the time it hits Kearney. Lincoln and Omaha's watershed is the Elkhorn, it's the Blue, it's the other river systems. So, you know, throwing all this stuff out that -- it's just political garbage, is what it is. Now, what we have to do is, as a Legislature, say, is \$500 (million), \$600 (million), \$700 million the right number, and do we have benefit relative to the end producer, do we have benefit long term to the state? And the test of that has to be how strong that compact is, because the minute that we enter into a lawsuit and you open that compact, the water master is going to-- we're going to-- we're going to lose. We're going to lose like we did in Kansas. Or we have-- you know better than I do. You're a-- you're a lawyer. But everybody I ask that knows a lot about water said, you never want to touch the compact, never. And that's what we're doing here. Now why-- why this-- well, go ahead. It's-- I find it to be something that we could lose big time over, as opposed to winning, so anyhow, Senator Wishart. I'll be quiet for the rest of the session.

WISHART: Can you--

STINNER: Or maybe I won't.

MICHAEL PRESZLER: No, the--

WISHART: Can you-- you're the Chair. Can you drill down further into how, if we're diverting water before it gets to Nebraska, how that isn't going to impact those farmers downstream, like in North Platte?

MICHAEL PRESZLER: Yes. Our project diverts water in Colorado upstream of those farmers downstream in Nebraska. And if we-- if we didn't-- well, a couple things. If we didn't build this project, Colorado is planning to divert that same water. That will impact those farmers downstream in Nebraska. So by the state of Nebraska constructing this project, it uses the-- this surface diversion and allows that water

to be used in Nebraska to meet those farmers' needs. And the way it would— the plumbing would work, if you will, is this water would be used to infiltrate and recharge the groundwater basin where those farmers pump water. So it would be— I would think it would be important to make sure that senior right holders in Nebraska, for lack of a better term, whole, kept whole, that their water supplies are not impinged upon with this project in place. So, I don't know, does that answer?

WISHART: Yeah, I guess that— it goes to the water rights. If you're diverting it to another area of Nebraska for irrigation, is that going to cause conflict with a certain part of the state against another part of the state that is— that is anticipating a certain flow?

MICHAEL PRESZLER: Yeah.

GWYN-MOHR TULLY: And let me-- let me just add to the question. I mean, I appreciate this question. So we're looking at diversions of water under this project in the nonirrigation season, October 15 through April 1, and that's an important point. Those flows during that season, just depending on what they do, can be high and low, then there's the potential to divert additional flows during irrigation season, should they meet all the other needs in the system. That hasn't been determined, and that's not part of our analysis here. Our analysis is about capturing those wintertime flows as they're available, and that's based on changing hydrology. Some years will be lots of flow and some years, like this year, there's not very much flow.

STINNER: And I agree with you. That's—that's specifically what you all have to deal with. What I'm trying to do is bring up the other factors that are maybe outside this study or maybe in conjunction with. Further analysis needs to be done on down—downstream users' operating costs. Diverting 500 acre—feet— or cubic feet per second of water during the wintertime, that's our recharge sea— season in western Nebraska. And, oh, by the way, the environmentalists over in Grand Island, the crane people, they have a call on water anytime they want, and that's 400,000 acre—feet of water, and that generally happens in the wintertime, which means if you cut some more flow out of the Platte, you have to basically get it out of Lake McConaughy. If you've ever been around Lake McConaughy, it goes up and down, folks. So that's probably more—more than you need to know. Another risk, and this came out of our study of the compact, and I don't know

if you got into this or not, but Section 6 of the compact highlights Colorado's right to build a 35,000 acre-feet reservoir to, quote, in addition to the water now diverted from the lower section of the river by present perfected appropriations, Colorado hereby reserves the prior and preferred superior right to store, use, and have in storage, in readiness for use, on or after the first day of April, so on and so forth. But basically they're— they have the ability to build a 35,000 acre-feet reservoir today, which I don't think they've done yet, have they?

MICHAEL PRESZLER: They have, yeah, the ability to divert 35,000, yeah.

STINNER: They have the ability to do that. And interestingly, what are they going to use it for? They're going to use it for irrigation to people who are inferior to our position to—— in the irrigating cities, and I find that interesting.

MICHAEL PRESZLER: Yeah, and-- and [INAUDIBLE]

STINNER: But wouldn't that be your response if you're in Colorado, let's build this 35,000 acre-feet reservoir and trap that water here?

MICHAEL PRESZLER: Yeah, I would think they would want to do that. Yeah.

STINNER: I would think so, too--

MICHAEL PRESZLER: Yeah.

STINNER: -- as one of the responses to this, the idea of the canal.

MICHAEL PRESZLER: And-- and to be clear, yeah, our analysis, we assumed that they would do that, so we didn't rely on that 35,000 to-- to-- to [INAUDIBLE]

STINNER: OK, so you've contemplated the 35,000.

MICHAEL PRESZLER: Yeah.

STINNER: All right.

MICHAEL PRESZLER: Yeah. All right, next slide. Directive 4: Valuation of the impacts of the canal on Nebraska water users throughout the Platte River Basin, including the drinking water supplies for the

city of Lincoln and Omaha. Next slide. These are the benefits that-specific benefits that we quantified in our analysis-- we talked a little bit about this -- so municipal, agricultural, environmental, industrial, recreational, hydroelectric, water quality. And we-- we--I don't if we were-- say read it the same way, but all of this water is -- is first used for irrigation. All of this is irrigation water, we assumed in our -- in our analysis, and it's important because the-the value for these-- for these elements, municipal, agriculture, environmental, industrial, and so forth, vary-- vary in terms of dollar benefits to the state. And so we were careful or very conservative not to stack the deck, if you will, and show that water would be used to-- to maximize in the most, you know, cost-effective way. So instead, we didn't do that. We-- we took a conservative approach and determined how much water would be available to each one of these different elements and put to use to each one of these elements to come up with our overall benefit of the project. And. In addition to these benefits that we quantified as we went through this process, we also realized that there are additional benefits that occur from the project that we didn't quantify, but we wanted to recognize and mention here today and Gwyn-Mohr will describe some of those on the next slide.

GWYN-MOHR TULLY: [INAUDIBLE] right. We wanted to just make sure we identified additional benefits that are not incorporated into our benefit calculations, and that's a really important component here. I think, as you all are well aware, I think it's approximately one in four jobs in Nebraska is somehow related to agriculture. And-- and this is -- you know, these benefits that we've been talking about, ex-- extended benefits, so to speak, might include, you know, the tractor salesmen, the nurseries, the things like that, that tie into agriculture. We also capped our benefit timeline at 50 years, and we talked about that. That benefit will likely last much longer than that. And even if it were double, it's a significant amount of time to be considered, so 100 years, and here we've put in a longer period. Now, yes, there are inputs and capital costs that go into determining those benefits, but it is possible the projects last longer than 50 years, and it's not just possible, it's probable. Reliability of supplies and managed supplies and drought resiliency, this is about, again, ties into the management of this system and the ability to capture water in high water years, right, and deploy that water in drought years, like this year, is an important component of this. Tying that into the overall management of Nebraska's system makes it just one more effective piece of sort of additional

benefits, the management structure related to this. There's a potential that we did not analyze for another small hydroelectric power-generation facility, and there's also potential for increased hydroelectric generation on the current system, again, mostly tied to management strategies of the water supply's connectivity. And then the last item there, the value of water. And we really didn't tie too-- too much into this, but there are places in-- in the Platte River system where water supplies are probably worth north of a billion dollars per year. And we weren't trying to overestimate and overemphasize this particular point, but it is a valuable asset. It belongs to the state of Nebraska, and deploying it in the ways and-and means that the-- the-- the state should is really protecting something of great value to the state.

STINNER: Senator Wishart.

WISHART: Speaking of the value of water, I don't know if you know, but Lincoln is undergoing a process to look at a second water source as we grow as a city, so I wanted to go back to the slide where you said municipal benefit. Can you walk through the calculations that you've done to show, is there a benefit to Lincoln, and how did you arrive at that calculation?

MICHAEL PRESZLER: Yeah, yes-- short answer-- and the way how we arrived at it is we-- we take all of-- conserve all of this water for irrigation and we assume a 20 percent return flow, which is water that would be returned after application of irrigation water on crops, return to the groundwater system or even to the South Platte/Platte River system itself. And that 20 percent of the water available into this project, we calculated as being available for municipal, so 20 percent of the water available to each alternative, if that makes sense, and then-- then used a cost foregone or cost to develop that amount of municipal water, in this case, city of Lincoln.

WISHART: So taking into account what Chairman Skinner said, where when you look at river flow, it's-- it, from past studies, shows that very little of the South Platte flows to support Lincoln's water consumption. How does that align, then, with looking at a benefit to Lincoln's water?

MICHAEL PRESZLER: Well, the-- the-- the benefit for water availability to Lincoln would vary each year based upon water availability of that year, so wetter years would be more water

available; dry years would be less water availability or available to the city. And also similar to what we talked about with irrigation, there's also a benefit of moving water supply through our storage operation from wet years or wet seasons, dry seasons and dry years. So the benefit to municipal in the city of Lincoln is— is— is sort of wrapped into that. So the water that would be made available from this project and irrigation return flows would be made available to municipal uses in the city of Lincoln through this applied recharge from a— from irrigation, applied water, and think of the underground aquifer as a— another reservoir, if you will. So that water isn't—the water would be available to meet the needs of the— municipal needs of the city, even though the timing may not be perfect, but it— the water would lay in the— in the groundwater aquifer, be available to take.

GWYN-MOHR TULLY: Yeah. And I'll just add to that, I mean, recognizing that the city is a mostly groundwater system, not entirely a groundwater system. I'm not perfect on whether it is. It's the management— potential ability to manage the system to improve the groundwater conditions. It might be like an exchange, so to speak. A water supply that was once pumped is not pumped and delivers surface water could be used in lieu of that. So it's— it's a longer—term view of the groundwater basin. It doesn't show up in year one. I mean, we're pretty confident with that, right? It's not like it just percolates in the ground and it is there available for the city. But the longer—term augmentation of groundwater basins, by reducing potentially even agricultural groundwater users, is a long—term benefit, and that's what we're thinking about this.

STINNER: I have a couple requests out of-- out of-- out of your computation, and we did this computation, Fiscal did for me. The South (Platte) River at the border generally has on average 76,000 acre-feet of water during the nonirrigation season. Would you do the computation of how much water you're going to divert and have to divert in order to fill those reservoirs? I'd like to see that computation. You don't have to do it right now.

MICHAEL PRESZLER: OK.

STINNER: But that's kind of the baseline that I like to deal with, is--

MICHAEL PRESZLER: Yeah, I-- I agree with you. I think that's--

STINNER: --here's where we start--

MICHAEL PRESZLER: Yeah.

STINNER: --here's how much we're going to divert, here's how much is, you know, going--

MICHAEL PRESZLER: Yeah.

STINNER: --not going to get into the reservoir, this is what we need to fill it.

MICHAEL PRESZLER: Sure.

STINNER: The other thing is, we talk about all these benefits, but one of the concerns I've had all along is, based on this, on the compact, it said it is the desire of Nebraska to permit its citizens to cause a canal to be constructed and operate for the diversion of water from the South Platte within Colorado for irrigation of lands in Nebraska only, only for the irrigation. And when we talk about all these other benefits, are we kind of screwing up our eminent domain when we have-- I mean, I presume we're going to have to go to court and litigate some of this. Is-- is that a problem as it relates to the compact? And, you know, the Governor is running around the state saying, you know, we're going to save Lincoln and Omaha's water supply. You're going to have a hard time convincing me of that, but some of that gets in there. Hydroelectric, you're talking about that. Those are other uses, and this is really-- and the compact says for irrigation only. I -- how does that square with your understanding of the law and the compact?

GWYN-MOHR TULLY: Yeah. So I might first say, again, we're not going to-- I wouldn't want to go outside of sort of our boundaries here with the project and think about eminent domain in that sense and filling the ponds. But I will say I think it's generally accepted water is used for multiple purposes and it's intended to be used for multiple purposes. I recognize the compact uses the word "irrigation," but to deliver water for irrigation, other things can happen. So we're providing habitat. That's a good thing. And so I recognize the question, but I think it's a-- it's fairly common, or so to speak, that water is used for nonconsumptive purposes as well as consumptive purposes, like you're talking about, for irrigation.

STINNER: OK. Then we have several compacts and there's numerous compacts that we have water compacts. How is this going to impact

things such as the Platte River Implementation Recovery Program that I have been dealing with for eight years, now nine years? And, you know, it's-- we've got to return flows back to the river. OK? The Republican River Compact is right there with Kansas. How does this all play into and aff-- does it affect it or-- or not?

GWYN-MOHR TULLY: And I will once again say I'm not an expert on the Republican River Compact or how the system is working there. However, what this does is add a piece to your management capabilities, potentially, right? So we utilize water to deliver--

STINNER: Or-- or it hurts it, which-- whichever way you want to look at it--

GWYN-MOHR TULLY: Sure.

STINNER: --because you are diverting water out of a normal streamflow that does recharge a portion of the state's-- and it's not going to be there anymore, although it will recharge another portion of the state. You're just reallocating water.

GWYN-MOHR TULLY: And I-- you know, I think part of that issue is looking at what this looks like in the future. If Colorado takes that water, as Mr. Preszler noted, it's not there anyway. The thought here is, you know, there's ebbs and flows and seasons and the way water works, it's never an average year, right? I mean, we all know this. And so when we can capture water supplies to create the ability to do better management for things like providing pulse flows and the PRRIP and providing habitat things, that's a good thing. I think the concern is the loss of this water and, really, Colorado's stated intent to take it. If we have the opportunity to capture and have the opportunity to use it for different functions, as though you're mentioning, that's-- that's a positive.

STINNER: OK. I appreciate all the work that you have-- you all have done. Do you know of any discussions we've had with Colorado to try to re-- reemphasize the fact that we do have a pact? It's a federal pact, I believe. They can't violate the pact today. Anybody open discussions with Colorado yet, do you know of?

GWYN-MOHR TULLY: We are certainly not involved with any of that, no, not aware of--

STINNER: OK. Thank you. Any additional questions? Senator Clements.

CLEMENTS: Yes. Thank you, Mr. Chairman. And regarding Mr. Chairman Stinner's statement that they can't violate the compact, if we don't get 500 cubic feet per second at this point now, are they violating the compact?

GWYN-MOHR TULLY: That is a-- an excellent legal question that I am not the counsel for the state of Nebraska and would certainly not want to just render a permanent decision. But the compact says deliver 500 CFS to Nebraska. The plain meaning of the compact, the plain reading says that, and I think that that's something to take to heart.

CLEMENTS: But Colorado is— their position is that we're not entitled to that unless we have the canal and reservoir system. Is that their position why they're thinking they can stop the flows?

GWYN-MOHR TULLY: I'm not sure what their position is.

CLEMENTS: OK.

GWYN-MOHR TULLY: But it certainly says building the compact in the-building the canal in the compact is part of the 500 CFS.

CLEMENTS: All right. Thank you.

STINNER: Any additional questions? Seeing none, thank you for your time.

GWYN-MOHR TULLY: OK. Thank you.

CLEMENTS: Mr. Chairman--

STINNER: If there are any additional--

CLEMENTS: --can we ask the director if he has any more comments?

STINNER: Well, I could, if-- if the director is-- is he still-- oh, yeah, Director Riley, would you like to speak again or-- or not? It doesn't matter. Is there questions that you would like to ask, Senator Clements?

CLEMENTS: No, I don't. I just wanted to give him--

STINNER: Anybody else?

CLEMENTS: -- the opportunity if he needed to clarify something.

TOM RILEY: If— if it's OK with the Chairman, I maybe would address one— one question as— as I heard this discussion about the wintertime flow. So Colorado has no obligation for the 500 CFS without the construction of the canal. That is the plain reading. And if you think about the water supply and think of it as a pie, we have the pie and that's what we're basing the benefits on. I think that's what I've heard them say. I know that's the similar analysis that I've done. If the pie goes away, the benefits don't exist anymore, and we can only protect it with the construction of this facility. So I'd just offer that as a clarification to the discussion about at least Article VI.

STINNER: Thank you very much. Any additional questions?

CLEMENTS: Just my--

STINNER: Senator Clements.

CLEMENTS: The cost benefit analysis is the key here. Have you looked into their details of their analysis? Have you been given a chance to see the detail?

TOM RILEY: So as part of the independent analysis, we gave them the information. I've seen what you've seen. I did see it yesterday. I do know they're putting together the report with all the details, and my understanding is that backup information will all be there. So I've not had a chance to look at it, but certainly will when it's available.

CLEMENTS: All right. And there was a range of benefits from low to high. I assume that would be a range from minimal water flows to higher water flows. Is that what causes the benefit to be better?

TOM RILEY: I think that'll be in their report, but that was what I understood them--

CLEMENTS: I forgot to ask--

TOM RILEY: -- to make that analysis that they made that assumption.

CLEMENTS: OK. He's saying yes. Thank you.

STINNER: Thank you. Senator Wishart.

WISHART: So the dialogue that occurred about down-- downstream users of the water, whether it be municipal or whether it be other agricultural businesses, do you know if this report is going to drill in how we can assure those downstream users that there won't be a diversion that would negatively impact them from this canal?

TOM RILEY: So I don't-- that won't be their task, but that is my task--

WISHART: OK.

TOM RILEY: --as the director to make sure that those are kept whole during those times. And remember, this is a wintertime flow. Those users don't typically have that demand. They're not online during that time. So we would be able to store water. That's how we do things now. Senator Stinner noted that. The reservoirs and such, that's how we store water during the off season. This occurred the same way. But I think the key point is to understand that to have our June 14, 1897, water right, while it's concrete and it's in the compact, for Colorado to recognize and administer their junior users to us to that— to that date, the facility has to be there. And until that time, they'll be able to use that water and that— that is their— that— I— I've read the same information that I heard Zanjero and their team describe, and it's pretty clear that that's the intent. They're going to use that water.

STINNER: Senator Kolterman.

KOLTERMAN: Thank you, Senator Stinner. Thanks for-- for being here and making all this presentation. It is enlightening. But I keep going back to the idea, up until -- up until the last session of the Legislature, we'd heard nothing whatsoever about this compact, didn't even know it-- I didn't even know it existed, then, all of a sudden, we're asked to allocate \$600 million, \$800 million to build a canal, and we're getting all the water already that we're supposed to get, at least I think we are. That was the reason for my question earlier. How do we-- how do we justify to the taxpayers of the state of Nebraska, without dialoguing more with Colorado, that we're-- we're doing our due diligence up-front? And, I mean, would you-- let me ask you this. Would you go out and build a \$600 million canal without first exploring the possibilities of the legal actions that Colorado would bring? Have you been involved in those dialogues? Because to me, you don't enter into something like this until you've exhausted all the other possibilities. And I'm not trying to be negative about

this, but— and I supported the idea of doing the research. But the \$600 million, \$800 million, that's a lot of dollars. And we might have it now, but I'm going to tell you something. We've already had to cut a billion dollars out of our budget the second year we were here, so that concerns me. That's the only concern that I have about this. All of a sudden, boom, we've got a big problem. Until now, I didn't know there was a problem, and I'm not sure the people in the state thought there was a problem.

TOM RILEY: Let me un-- unpack a lot of-- a lot of things you said there.

KOLTERMAN: That's a lot to ask, I know.

TOM RILEY: And I'll do the best I-- I can to do that. So first, projects like this are big. And, remember, if we don't do this and don't spend it, the benefit for which the water that you reference that we get, it won't be there. It's not going to be there. There won't be that water.

KOLTERMAN: But don't we have a compact that says it will be?

TOM RILEY: No, sir. We have a compact that tells Colorado to administer water in the summer. If there's less than 120 CFS, and in the winter, unless we have the canal and facilities, they have no obligation to administer water for us. So the water that we do get at the current time, we enjoy that benefit. The benefit calculations that are made are the assumption that they go away, so we're not talking about a bigger pie. We're talking about the pie going away, and that's the benefit, to keep the pie. And the way we do that is with Article VI that allows us to construct for its people, as Senator Stinner pointed out in the compact, this canal system for those purposes.

KOLTERMAN: So do you-- can you tell me whether or not there's been any dialogue whatsoever with the policy makers of Colorado?

TOM RILEY: So to the next part of your question, the answer is yes. I meet with the state engineer and the AG's Office and— and myself will be meeting with them just next week to have the discussion, and we're talking about the four corners of the compact. We are looking at the understanding of what their juniors are. I— and juniors in terms of this senior water right. Who would they shut off? I've given them a list. They agree those are the junior users. Junior users that

use water right now during the summer in Colorado, they pump groundwater, they offset those uses in the wintertime. Today, they're diverting water to offset those uses, water that, if our canal was built, we would be diverting. So we've-- we continue to have that dialogue with them. They've told me straight away, and their policymakers have had-- it's in the-- it's in the news. They have no intent to renegotiate anything. However, they do have an obligation, and I think have been pretty clear with me, that what's in the compact is, in fact, their obligation. And the obligation is for them to regulate, to administer flows, if we have a canal built in the wintertime, if those flows are less than 500 CFS in the river.

KOLTERMAN: OK. Thank you.

TOM RILEY: You're welcome.

STINNER: Let me-- let me ask you. It's something that I've been trying to put a pencil to, trying to understand, is the operating cost associated with the canal and the reservoir. There's going to be a cost associated with that. Do you have a figure on that? Do you have an idea? And--

TOM RILEY: So--

STINNER: And then how many acres of irrigation is that going to provide?

TOM RILEY: So since the compact was developed in the 1920s, there's been about 100,000-150,000 acres of irrigation put in place downstream. We don't anticipate new irrigated acres. We anticipate this water being available for those and, therefore, in essence, pushing water back upstream. Water demands that would normally be coming out of McConaughy and down for-- down there, we can-- we can accommodate with our storage system and make it available for other uses, including the environmental uses and those type of things, but I don't anticipate new acres that we'd irrigate. We'd be applying it to lands that we already have and--

STINNER: Who pays the operating cost then? The state continues to pay the operating cost for it? I mean, somebody has to.

TOM RILEY: So--

STINNER: Say-- say there's \$200,000-250,000 of operating costs a year, which would not be unusual for something that long. Divide that

into how many acres that somebody has to pay for. When you're saying there is nobody that's going to pay for that, then the state of Nebraska has to pay for it, right?

TOM RILEY: Well, those users that would have access to this water would have-- there'd be some cost associated with it.

STINNER: So are they paying for water rights now? I mean, out west, we're at, what, \$25, almost \$30 an acre for water rights right now. If-- for an example, when the canal broke or the tunnel collapsed, 100,000 acres was irrigated, but the cost associated with fixing that to get irrigation back to them was beyond what they could possibly pay over several lifetimes, so the state had to step in and rebuild the tunnel, along with the federal government. You're well aware of how that all came together. I don't-- not preaching to you, but if they ended up with \$10 million of cost, that's another \$10 an acre. That takes them to \$35, \$40 an acre, and then, all of a sudden, you know, the cost of irrigating versus growing a crop doesn't work anymore. That has been my concern, is that what do we do? How do we connect these reservoirs to the current irrigation systems that we have, and who pays for it and how do they pay? And if they're already paying \$20, \$30 an acre, you're not going to be able to lay on \$10 to \$20 to \$30 of additional operating costs, which means it has to come back to the state.

TOM RILEY: Well, maybe-- maybe the first part of it I'd start with is that the connectivity to the system, that it is a spaghetti work of-- of a system out there. That's the good thing, right? We can tap into that existing infrastructure and connect the system together. To your question about going forward and paying for it, don't have the details worked out, but my presumption is that those water users, some of which include the state of Nebraska, to meet its own obligations for the environmental needs, we pay money for that right now, that those moneys would come for that. We'd be able to use that water to support some of those needs. And then I think you have to play that back, Senator, to the fact that it is a cost, a capital cost. There are operational costs. But the alternative is we just don't have the water to have those benefits that we so enjoy now.

STINNER: But if I'm going to analyze it today on a cost-benefit basis, I want to know how much of the tab the state has to pick up on an ongoing basis so I can evaluate the merits of this program.

TOM RILEY: So--

STINNER: That's-- that's what I'm trying to leave with the committee, is a thought process here.

TOM RILEY: Sure. Well, the first merit is Nebraska loses, if you subscribe to those numbers there, \$600 million permanently, right? The benefit, it's gone if you don't do it. You do have to play it against going forward on the cost. I agree with that. We do have a second RFP that we're doing now that looks at the design, permitting construction. That will include that analysis, as well, and what the operating costs would be going forward.

STINNER: OK. Any additional questions? Seeing none, thank you very much.

TOM RILEY: Thank you.

STINNER: That concludes our hearing for today on the Perkins Canal.